

# Gap Analysis in relation to Quality Management for the Supply Chain Management of Genetically Modified (GM) products

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Supply chain identity preservation and  
segregation case studies

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## Acknowledgements

Due to the sensitivity of some of the information gathered a decision has been made not to identify participants.

Discussions were held with agribusinesses, departments of agriculture, research bodies/corporations and individuals/organisations with a particular interest in the GM debate. The authors wish to thank the many contributors to this paper and particularly the case study participants who cheerfully gave their time to explain processes and discuss issues related to identity preservation and segregation throughout their particular part of the supply chain.

## Caveat

The Department of Agriculture, Fisheries and Forestry commissioned the scoping study – *Gap Analysis in relation to Quality Management for the Supply Chain Management of Genetically Modified (GM) Products* undertaken by Tasmanian Quality Assured Inc.

This scoping study provides an analysis of existing quality management systems with respect to their ability to address supply chain management of GM and non-GM products, particularly in relation to segregation and identity preservation to ensure that Australia is not disadvantaged in its marketing of agricultural products.

This report is a generic review of quality management systems and is not focused on any particular system or systems developed for a specific purpose. It contains four individual case studies, each of which was chosen to provide guidance to users on how different supply chains might operate. Users can choose the case study that best fits their circumstances then undertake the analysis of each of the steps to see if their supply chain is meeting their requirements.

While the Department commissioned the study, the analysis and outcomes in the report are those of the consultants based on consultation with stakeholders in industry and government. The report is being released to promote informed discussion and to assist industry in developing appropriate supply chain systems.

# Executive Summary

The Australian Government Department of Agriculture, Fisheries and Forestry commissioned an analysis of existing quality management systems with respect to their ability to address supply chain management of GM and non-GM products, particularly in relation to segregation and identity preservation.

The specific objectives of this report and analysis are to;

- Identify the key elements of supply chain management necessary to establish traceability and/or identity preservation for GM and non-GM products for representative supply chains
- Identify what is needed at the point of exit from the supply chain to be able to verify/certify the GM/non-GM status of products (domestic or export)
- Identify existing traceability, QA or QM components or systems that could be used in such verification/certification systems up to point of exit from the supply chain
- Identify gaps in the availability of systems

The primary objective of quality assurance and quality management systems is compliance with a predetermined specification, be that a set of product characteristics, food safety requirements or other customer or legislative requirements. Supply chain product integrity and segregation can be seen as another set of customer or legislative requirements. The application of quality assurance and quality management systems to provide these assurances appears appropriate and possible.

In order for identity preservation and segregation assurances to be made and verified, a thorough understanding of the process and customer requirement at all stages of the supply chain is necessary. It is also critical that there is real commitment by all players in the chain to adhere to system, customer, market and legislative requirements.

With regard to customer requirements and market tolerances to adventitious presence, a definitive tolerance level has not been established although certain sectors and individuals have expressed their opinions with regard to this subject. For the purposes of this study it was agreed to assume some level of adventitious presence (i.e. some percentage of GM product in non-GM product or vice versa), that is, not to work to a 0% tolerance. Guidance was also taken from the Food Standards Australia New Zealand position of 1% adventitious presence. Whilst organic systems were not included in the case studies it is recognized that this sector in particular has more stringent requirements with regard to adventitious presence of GM products and work to a 0% tolerance. Version 5 of the Australian Certified Organic Standard (Biological Farmers of Australia) supports this specification through requirements for identification of all GM crops, within a minimum of 10km radius, which may pose a risk to organic production of open pollinated or "pollination contamination prone" crops.

Historically the move to a systems approach to meeting customer requirements was driven by a desire to reduce reliance on intense product inspection and sampling, which in the case of food was destructive and expensive. Quality control activities are incorporated in quality assurance and quality management systems, but are only one of a range of strategies to achieving compliance with customer or legislative requirements. Whilst some testing will be required to verify system compliance and compliance with customer and legislative requirements the frequency of testing needs

to be carefully considered. By way of example, the Australian Government Department of Agriculture, Fisheries and Forestry *Guidelines for on farm food safety for fresh produce* recommends a single annual residue test for agricultural chemicals, as this test is a verification activity not monitoring.

Given the expense associated with extensive sampling and testing, the move towards management systems to provide market assurances with respect to product identity preservation and segregation is positive. It is important to recognize that quality assurance and management systems rely on business integrity. The potential fragility of customer and consumer confidence in the assurances provided by these systems should also not be underestimated.

The challenge of providing supply chain assurances with regard to product identity and segregation is increased in the case of genetically modified products. A degree of human error is unavoidable, regardless of the process. Working with biological systems adds to the complexity with issues such as gene flow, control of volunteers and environmental impacts requiring an appropriate level of control. Similarly, customer tolerance to, and perception of, adventitious presence impacts heavily on the level of control and inspection required within the systems.

The effective implementation of quality assurance and management systems to address issues of identity preservation and segregation therefore needs to be supported by scientific data, a strong understanding of the technology and customer and legislative requirements.

Experience with the implementation of quality systems indicates that successful uptake and maintenance of the systems are directly related to;

- the commitment of management and staff,
- ensuring that the system is of an appropriate complexity for the business to manage and
- ensuring that the system delivers benefit to the business.

Systems must be appropriate to the level of risk and size of the business. The rejection of ISO 9001 on-farm and creation of systems such as SQF 1000, Graincare and customer-owned systems demonstrates this point. Requiring implementation of a system that is not user-friendly too often results in inaccurate records and poor compliance. System implementation driven by price premiums can result in increased compliance pressure, and can expose the reliance systems have on the integrity of those working within them.

To explore the extent to which existing quality management systems can be utilised to address supply chain identity preservation and segregation, four case studies were undertaken;

- Canola from paddock to production of canola oil
- Cotton from paddock to production of cotton seed meal
- Pasture from paddock to milk production
- Poppies from seed production to active pharmaceutical ingredients

The supply chains were examined to identify core elements critical to assuring identity preservation and segregation. It was considered important to assess the effectiveness of quality systems to address real issues in real supply chains.

Each supply chain was analysed for potential hazards to product identity preservation and segregation. A risk assessment of the potential hazards was carried out based on the likelihood of the problem occurring and the severity of the event if it did occur. This methodology is widely used in analysis of food safety and occupational health and safety hazards. The aim of the risk assessment was to elucidate common elements across the case studies that must be addressed in order to assure identity preservation and segregation, as well as to provide some perspective on the relative importance of different issues to achieving identity preservation and segregation.

Twelve core elements were identified as fundamental management issues that must be addressed to achieve identity preservation and segregation.

- Is the system subject to some form of external audit/inspection? (C1)
- Does the system ensure that management understand the business responsibilities and requirements related to the application of GM technology? (C2)
- Does the system require management to be committed to issues of identity preservation and segregation? (C3)
- Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)
- Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer/finished product specifications? (C5)
- Does the system require clear customer specifications, particularly regarding GM status and tolerance levels? (C6)
- Does the system require verification that product meets customer specifications? (includes inspection and testing at an appropriate laboratory)? (C7)
- Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)
- Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)
- Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)
- Does the system require that there is product identification at each process step? (C11)
- Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results). (C12)

A number of other issues were found to be common across the case studies and have formed the basis of generic checklists (cropping production and livestock production). However, generalisation of the risk profile for these elements was not possible, rather the case studies highlighted the importance of carrying out a supply chain specific risk assessment. In a number of instances different businesses at the same stage in the supply chain had different risk profiles based directly on their particular operational practices. For instance, some processing operations were easily able to segregate products due their design or peculiarities of the process, while others ran a single line that all product had to pass through thereby increasing the risk to identity preservation.

It is acknowledged that the case studies do not cover all potential supply chain combinations or activities. However, the generic checklists provide a set of criteria for different supply chain steps which can be assembled in any order to fit particular supply chain requirements for instance, export of grain can be covered by repeating the transport and handling steps for wharf activities. Similarly the generic checklists can not be seen as an exhaustive list of potential issues and compliance with these checklists will not guarantee product integrity. Rather they reflect current understanding and are an extrapolation from issues identified by case study participants.

In each case study, an analysis of currently operating quality assurance systems, quality management systems, Codes of Practice and licensing agreements was undertaken to determine how effectively the systems addressed the identified issues.

Documents analysed include;

- Monsanto ROUNDUP READY Canola Technical Manual and Crop Management Plan
- Graincare On-Farm Quality Assurance Manual
- Great Grain
- SQF 2000<sup>CM</sup> Quality Code
- SQF 1000<sup>CM</sup> Quality Code
- Australian Oilseeds Federation Codes of Practice
- BMP Cotton
- General Terms and Conditions of Technology User, Crop Management Plan, Resistance Management Plan, Technical Manuals – Cotton
- ISO 9001:2000 Quality Management System
- Dairy Food Safety Victoria – Code of Practice for Dairy Food Safety
- Tasmanian Dairy Industry Authority – Code of Practice for Dairy Food Safety
- Warrnambool Cheese and Butter Company – Quality Plus & Milk Suppliers Policy and Quality Standards Manual
- Bonlac Foods Limited – Total Farm Program and Milk Supply Handbook
- AQIS FPA and AQA
- Poppy Advisory and Control Board
- OECD Scheme for the varietal certification of Crucifer seed and other oil or fibre species seed moving in international trade

Whilst this is not an exhaustive list, the documents analysed are broadly representative of a variety of approaches to quality management.

## Conclusions

Quality systems generally include the key elements of identification and traceability, principles that are fundamental to identity preservation and segregation.

The case studies highlighted the differences between prescriptive, or fixed scope, and principal based, or flexible scope, systems. Prescriptive systems, such as BMP Cotton, Graincare and Great Grain have strengths in that their requirements are clearly detailed. These systems provide good coverage of issues they were designed to address, but do not readily accommodate other issues. Therefore it is unrealistic to expect a system designed to address food safety or environmental issues to also address identity preservation. Principal based systems, such as ISO 9001:2000 and the SQF systems have more flexibility in the range of issues they can address. These systems therefore provide a more thorough immediate fit with identity preservation and segregation throughout the supply chain. Both ISO 9001:2000 and SQF 2000<sup>CM</sup> are able to be applied at all stages of the supply chain, further improving their immediate applicability. A shortfall with more flexible systems is that their effectiveness in addressing issues relies heavily on the skills of those developing, implementing and auditing the system. Issues can be overlooked and there is perhaps more room for interpretation. This has certainly proved the case in food safety and quality on farm and has resulted in the need for guidance documents, or Codes of Practice, to be created to provide a firm foundation for system development.

The project also evaluated a number of Codes of Practice and licensing or legislative requirements, such as the AOF Codes of Practice, Technical Manuals, Crop and Resistance Management Plans created by GM technology providers and legislative systems such as the Poppy Advisory and Control Board. These "systems" usually did not provide coverage of the core elements, but did provide detailed and specific information relevant to the particular activities at that stage of the supply chain. This is not surprising and is not a criticism of these systems. It merely reflects the different purpose for which they were originally designed. These sorts of documents are very important in supporting, complementing and informing the principal based systems.

A combination of approaches (formal quality system supported by Code of Practice or Technical Manual) may be required to provide coverage of identity preservation and segregation issues, the specific details of which combination needs to be determined by individual businesses.

The generic checklists included in this report can assist in the selection of appropriate system combinations through the identification of critical issues to be considered. The checklists can also be used to inform the development of systems wanting to provide identity preservation and segregation assurances.

Areas of potential system weakness include;

- Control and monitoring of contractors. Contractors are commonly covered through “approved supplier programmes” which require the customer to monitor supplier performance (ie the grower has to assess the performance of a cartage contractor). Past experience shows that this is often not possible. It should also be noted that there were few contractor specific quality systems or codes of practice operating in the case study supply chains.
- Reconciliation of seed stocks. As the starting point for the majority of case studies, the accuracy of planting records is critical. While many systems included the requirement for farm maps, a reconciliation of seed stocks was not generally required.
- In order to reduce the likelihood of significant levels of adventitious presence, supply chain partners should work together to develop robust product identification systems particularly where product changes hands.

In a number of the case studies it was evident that considerable effort could be spent on activities of little commercial impact, such as equipment cleaning. It was apparent that, while this is an area of concern, the impact of traces of product remaining in machinery was not likely to be commercially significant. Of more significance are major mix-ups resulting in whole paddocks or truckloads of product being misidentified. A balance must be obtained between the degree of product purity and the effort required to achieve compliance.

Supply chain certification will require some co-ordination mechanism throughout the supply chain. Further discussion of such mechanisms is not within the scope of this report, but alternatives include;

- Computerised identification systems
- Interlinking certified systems
- Whole chain certification and audits.

Quality systems can be used to address supply chain identity preservation and segregation.

Systems have a range of strengths and weaknesses. A combination of systems, codes of practice or licensing requirements may be required to achieve compliance.

The commitment and integrity of individual businesses is critical to achieving the desired outcome.

The level of monitoring and testing required is directly related to customer and consumer sensitivity to adventitious presence and the appropriate level of testing needs to be determined to meet these requirements.

# Contents

Acknowledgements .....	1
Executive Summary.....	2
Background and Objectives .....	9
Methodology .....	11
Risk Assessment Matrix for GM Supply Chain Project .....	13
Glossary .....	14
Generic Audit Checklists .....	17
Specific supply chain elements .....	19
Individual Case Study Findings.....	33
General .....	33
Canola.....	35
Cotton.....	44
Pasture.....	50
Poppies .....	63
Appendices (Supplied on disc).....	<b>Error! Bookmark not defined.</b>
Canola.....	<b>Error! Bookmark not defined.</b>
Cotton.....	<b>Error! Bookmark not defined.</b>
Pasture.....	<b>Error! Bookmark not defined.</b>
Poppies .....	<b>Error! Bookmark not defined.</b>

# Background and Objectives

The Australian Government Department of Agriculture, Fisheries and Forestry commissioned an analysis of existing quality management systems with respect to their ability to address supply chain management of GM and non-GM products, particularly in relation to segregation and identity preservation. Food safety is not addressed as part of this analysis, either from the point of view of release of GM product or from handling along the chain.

This report forms part of a larger Biotechnology project investigating segregated supply chain development and management to meet domestic and international market requirements for commodities and processed food.

Domestic and international markets differentiated in terms of GM/non-GM status of agricultural commodities and food products may well be a fact of life while consumer acceptance of GM food remains an issue. Once GM products with strong consumer appeal become available, identity preservation may also be necessary to recover any value-added premiums.

The capability for traceability, segregation and identity preservation and the certification of origin go to the heart of any decision to supply differentiated markets for both GM and non-GM products. It is important to be able to verify the identity of a product right along the supply chain.

Whilst identification and traceability are core quality management elements, systems currently available have generally been developed from a quality and food safety perspective. The sensitivity to co-mingling of like products is potentially heightened in the case of GM and non-GM products and associated product claims as compared to traditional food safety and quality issues, thus sharpening the focus on the rigour of identification and traceability processes. Therefore existing food safety and quality assurance systems may not adequately address the additional complexities associated with identity preservation and segregation for GM purposes. As it is anticipated existing quality management systems will be used to verify/certify identity preservation, an analysis of the strengths and weaknesses of systems, including industry Codes of Practice and Guidelines, in relation to these issues is required.

It is also important to understand that the analysis is based on process assurance, not a product content guarantee. Quality systems predominantly look at the process, issues to do with equipment, site, cleanliness and people. Some product testing is suggested, not as monitoring of performance, but as verification activity. The difference between monitoring and verification needs to be clearly understood, and is something that has often been misinterpreted when implementing quality assurance, quality management and food safety (HACCP) systems.

In practice one of the major differences between monitoring and verification is the frequency of the activity, monitoring is carried out frequently and with relative ease, for example a visual check of identification information on a bag of seed. Whereas verification activities tend to be carried out less frequently and may include detailed analysis, for example testing seed within the bag to confirm GM status. With regard to food safety in horticultural businesses, control of use of agricultural chemicals involves monitoring staff training and competence with respect to the adherence with chemical label requirements while verification activities could include a single annual residue test from randomly selected produce.

Quality management and quality assurance systems rely on frequent monitoring of activities and use verification activities as a confirmation the system is operating effectively.

Within the identity preservation and segregation discussion, we have identified issues that need to be monitored and have indicated some level of verification as being appropriate. The whole premise of quality management and quality assurance is to reduce the reliance on end point testing by incorporating or “engineering in” the particular product requirements, be they regulatory, statutory or customer driven.

The specific objectives of this report and analysis are to;

- Identify the key elements of supply chain management necessary to establish traceability and/or identity preservation for GM and non-GM products for representative supply chains
- Identify what is needed at the point of exit from the supply chain to be able to verify/certify the GM/non-GM status of products (domestic or export)
- Identify existing traceability, QA or QM components or systems that could be used in such verification/certification systems up to point of exit from the supply chain
- Identify gaps in the availability of systems

# Methodology

In recognition of the varying complexity of supply chains and therefore supply chain management, the analysis was undertaken based on four specific supply chain case studies. This approach was chosen to identify a broad range of issues and to assess the degree to which currently implemented quality management and quality assurance systems address product identity preservation and segregation issues.

The case studies chosen were;

- Canola from paddock to production of canola oil
- Cotton from paddock to production of cotton seed meal
- Pasture from paddock to milk production
- Poppies from seed production to active pharmaceutical ingredients

The case studies were chosen after consideration of a number of criteria, including;

- Complexity of supply chain
- Complexity of segregation issues (eg bulk handled vs discrete packing/distribution)
- Coverage of a range of agricultural and livestock products
- Coverage of a range of on-farm risk profiles (eg gene-flow issues)
- Coverage of major quality management systems and Codes of Practice.
- Inclusion of a supply chain currently involved with GM products (Cotton).

The choice of pasture and poppy supply chains should not be seen as an indication that genetically modified varieties or products are planned for release.

In consultation with industry, each supply chain was mapped and a risk analysis undertaken to identify issues related to identity preservation and segregation and the integrity of product claims at the end point of the supply chain. From the risk analysis, a checklist was produced and used to analyse quality systems for their ability to address the identified issues.

Consolidation of the checklists from the case studies provides an audit tool that can be used to evaluate other quality management and quality assurance systems and supply chains. Given the rapid development of additional GM products and also the evolution and creation of quality management systems, the audit tool will be of ongoing value.

## **Risk assessment**

Issues relating to identity preservation and segregation were identified through discussions with industry, research and regulatory representatives as well as farm and processing site visits. A means of ranking issues was developed to permit prioritisation of issues. A risk assessment matrix was developed, based on similar matrices used for food safety and occupational health and safety risk assessments. Risk assessments were carried out by evaluating the likelihood of the issue occurring and also the severity if the event did occur. The result of this assessment lead to the grading of the issue as a Must, Highly Desirable or Desirable to being able to assure identity preservation and segregation.

It must be stressed that the assessments were generally based on discussion and personal observations and so should be used as a guide to the relative importance of issues rather than a definitive scientific assessment.

The likelihood of a particular issue occurring can be quite crop specific, depending on issues such as level of outcrossing and pollen dispersal vectors.

The severity of issues tended to increase the closer the product was to the final customer, for instance loss of identification on farm was rated as "Rejection" in that the processor would not accept the product, whilst loss of identification during processing was rated as "Recall" because it would need to be removed from the market.

Risk Assessment Matrix for GM Supply Chain Project

**Severity**

<b>Likelihood</b>	<b>Immediate and final cessation of business</b>	<b>Recall</b>	<b>Rejection by customer (not meeting customer specifications)</b>	<b>Customer complaint</b>	<b>Not commercially significant*</b>
<b>Almost certain</b>	Must	Must	Must	Must	Highly Desirable
<b>Likely</b>	Must	Must	Must	Highly Desirable	Highly Desirable
<b>Possible</b>	Must	Must	Highly Desirable	Highly Desirable	Highly Desirable
<b>Unlikely</b>	Must	Highly Desirable	Highly Desirable	Highly Desirable	Desirable
<b>Rare</b>	Highly Desirable	Highly Desirable	Highly Desirable	Desirable	Desirable

\**Food Standards Code*, (Up to and including Amendments 64, current as at 28 January 2003) Standard 1.5.2, clause 4(1)(f) – ‘a food ingredient or processing aid in which GM food is unintentionally present in a quantity of no more than 10g/kg [1%] per ingredient’ is not by definition a GM food for the purposes of labelling.

# Glossary

<b>Agistment</b>	Take in livestock to remain and feed on pasture-land in return for money.
<b>Adventitious presence</b>	The unintended, incidental presence of product containing approved GM event in a non-GM product.
<b>Approved GM Event</b>	GM events approved by the OGTR or approved in another country using a science-based process for environmental and feed/food safety. (Canola Industry Stewardship Protocols for the Coexistence of Production Systems and Supply Chains GTGC December 2002)
<b>APVMA</b>	Australian Pesticides and Veterinary Medicines Authority, previously known as the National Registration Authority for Agricultural and Veterinary Chemicals (NRA). The APVMA is the national regulator of agricultural and veterinary chemicals.
<b>AQA</b>	Approved Quality Assurance – legislated within Schedule 8 of the Export (Processed Food) Orders, is an alternative inspection arrangement between AQIS and the export establishment.
<b>AQIS</b>	Australian Quarantine and Inspection Service. AQIS provides quarantine inspection services for the arrival of international passengers, cargo, mail, animals and plants or their products into Australia, and inspection and certification for a range of animal and plant products exported from Australia.
<b>Certification</b>	Provided by independent certification agencies and generally involves an audit of business management and operational practices against a standard (such as ISO 9000, SQF 2000, Graincare etc).
<b>Designated Authority</b>	Authority designated by, and responsible to, the government of a participating country for the purpose of implementing these Rules and Directions on its behalf". (Appendix 1 Definitions of Terms Used For the Purpose of the OECD Seed Scheme for Crucifers and other oil or fibre species).
<b>Export Certification</b>	Export certificates are those paper or electronic documents which describe and attest to attributes of consignments moving in international trade and are primarily based on agreed Government to Government statements that are consistent with the principles of the Sanitary and Phytosanitary (SPS) agreement.
<b>FPA</b>	Food Processing Accreditation – a quality assurance based inspection system legislated within Schedule 7 of the Export Control (Processed Food) Orders.
<b>FSP</b>	Food Safety Plan

<b>GM</b>	Genetically Modified
<b>GM free</b>	Meets all commodity trading standard requirements. Market specification for “nil” adventitious presence of GM (based on a testing protocol that would provide an agreed level, e.g. 95% confidence, that it does not exceed 0.1%AP). Must be produced under a GM-free production system that meets customer specification or export standard requirement. (Canola Industry Stewardship Protocols for the Coexistence of Production Systems and Supply Chains GTGC December 2002).
<b>GM product</b>	Product from approved GM event.
<b>HACCP</b>	Hazard Analysis Critical Control Point. HACCP is a system which identifies, evaluates and controls hazards which are significant to food safety. (Codex Alimentarius Commission, Alinorm 97/13A Appendix 11)
<b>Module</b>	Large block of compressed harvested cotton.
<b>Monitor</b>	The act of conducting a planned sequence of observations or measurements of control parameters to access whether a critical control point is under control. (Codex Alimentarius Commission, Alinorm 97/13A Appendix 11)
<b>Non-GM product</b>	A product which meets commodity trading requirements, is within market specification for adventitious presence of GM (from approved GM Events), excludes product from GM production system (Canola Industry Stewardship Protocols for the Coexistence of Production Systems and Supply Chains GTGC December)
<b>OECD</b>	Organisation for Economic Co-operation and Development. The OECD consists of 30 member countries, which share a commitment to democratic government and the market economy.
<b>OGTR</b>	Office of the Gene Technology Regulator. The OGTR is a Federal Government Agency with regulatory responsibility for assessing risks to human health and safety and the environment from the release of genetically modified organisms (GMO's). Where a commercial release is approved the OGTR will establish licence conditions to manage any identified risks. (Canola Industry Stewardship Protocols for the Coexistence of Production Systems and Supply Chains GTGC December 2002.)
<b>Quality assurance</b>	All those planned and systematic actions necessary to provide adequate confidence that goods or services will satisfy given requirements.
<b>Quality management</b>	The organisational structure, responsibilities, procedures, activities, capabilities and resources that together aim to ensure that products, processes or services will satisfy stated or implied needs. An umbrella for all quality initiatives, including quality assurance and quality control.
<b>Ratoon cotton</b>	Regrowth cotton
<b>Supply Chain</b>	

**Management**

The management of activities along the supply chain to ensure product meets customer requirements. This may involve supply chain partners implementing formalized quality assurance systems and the linkages between these quality systems.

**Verification**

The application of methods, procedures, tests and other evaluations in addition to monitoring, to determine compliance with the HACCP (Hazard Analysis Critical Control Point) plan. (Codex Alimentarius Commission, Alinorm 97/13A Appendix 11)

# Generic Audit Checklists

Analysis of common issues across the four case studies has identified core elements that need to be addressed by quality management, quality assurance and other on-farm management systems to underpin the integrity of the system's ability to provide assurance of identity preservation and segregation. In addition, there are specific issues to be addressed at specific stages in the supply chain.

The case studies highlighted the fact that specific supply chains may have commonality of issues with respect to identity preservation and segregation, but that the rating of these issues was often supply chain and indeed situation specific. Therefore, apart from the core elements, it is not appropriate to bring the individual ratings (Must, Highly Desirable or Desirable) forward into the generic checklist. Instead, the ratings should be determined for the specific circumstance. It is also important to realise that the ratings, Must, Highly Desirable and Desirable are not intended to underplay the importance of the issue, the fact that the issue has been raised generally indicates it needs to be addressed in order to have confidence in the identity of the finished product.

## Core elements

Is the system subject to some form of external audit/inspection? (C1)

Does the system ensure that management understand the business responsibilities and requirements related to the application of GM technology? (C2)

Does the system require management to be committed to issues of identity preservation and segregation? (C3)

Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)

Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer/finished product specifications? (C5)

Does the system require clear customer specifications, particularly regarding GM status and tolerance levels? (C6)

Does the system require verification that product meets customer specifications? (includes inspection and testing at an appropriate laboratory)? (C7)

Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)

Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)

Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)

Does the system require that there is product identification at each process step? (C11)

Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results). (C12)

Specific supply chain elements  
**Cropping production systems**

On-farm (G1)

Issue	Likelihood	Severity	Rating
Does the system require documented specifications and/or selection criteria for growers and sites? (G1.1) To include issues such as appropriate, scientifically sound, industry agreed crop separation distances, boundaries or management methods to address specific crop reproduction biology.			
Does the system require paddock records are available to support cropping history and assist with identification of volunteers? (G1.2)			
Does the system ensure a suitable length of time has elapsed since previous crop of the same species / variety and that cultural practices have been employed to stimulate germination and control volunteers? (G1.3)			
Does the system require clear paddock identification of crops? (G1.4). This may include a farm map and physical paddock identification.			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of weather and</li> <li>• able to withstand affects of any transport process? (G1.5)</li> </ul>			
Does the system require purchased seed; <ul style="list-style-type: none"> <li>• be of known and acceptable genetic purity,</li> <li>• be clearly identified with variety and GM status at all times</li> </ul> and that <ul style="list-style-type: none"> <li>• records are kept of purchase information? (G1.6)</li> </ul>			
Does the system require seed identification records are linked to planting location? (G1.7)			
<b>Issue</b>	<b>Likelihood</b>	<b>Severity</b>	<b>Rating</b>

Does the system require that seed storage facilities are maintained to prevent cross contamination from other seed? (G1.8)			
Does the system ensure that, for farmer saved seed, records are kept of; <ul style="list-style-type: none"> <li>• paddock of origin</li> <li>• variety</li> <li>• GM status</li> <li>• quantity</li> <li>• storage location(s)? (G1.9)</li> </ul>			
Does the system ensure seeding, harvest and cartage equipment is practically free (cleaned or flushed) from seeds/product, particularly when changing between crops of different GM status? (G 1.10)			
Does the system require cleaning take place at an appropriate location? (G1.11)			
Does the system require that material cleaned or flushed from equipment is appropriately dealt with? (G1.12)			
Does the system require that, in order to assist highlight any planting mix-ups, GM seed purchases/inventory are reconciled with GM seed used and GM seed left over? (G1.13)			
Does the system require appropriate measures be taken to minimise the spread of seed from paddock by physical means such as truck tyres, soil or water movement? (G1.14)			
Does the system address the need to control volunteer plants in; <ul style="list-style-type: none"> <li>• the paddock and adjacent paddocks, including fencelines</li> <li>• paddocks where grazing animals may have transported seeds</li> <li>• farm roads, roadsides and storage sites</li> <li>• equipment cleanout / wash down areas? (G1.15)</li> </ul>			

## Transport (G2)

Includes on-farm transport by farmer and contractors. Contractor requirements may also be relevant.

Issue	Likelihood	Severity	Rating
Does the system require clear identification of any mixed loads, including details of all components of the load? (G2.1)			
Does the system require product to be securely packaged / sealed during transport to minimise spillage? (G2.2)			
Does the system require product identification to be securely fixed to package or identification documentation to travel with product? (G2.3)			
Does the system ensure bulk transport equipment is practically free from seeds/product, particularly when changing between crops / products of different GM status? (G2.4)			

## Contractors and Suppliers (G3)

Issue	Likelihood	Severity	Rating
Does the system require contractor specifications, including roles and responsibilities, are documented and understood? (G3.1)			
Does the system require monitoring of contractor performance against these specifications? (G3.2)			
Does the system ensure contractor / supplier equipment is practically free (cleaned or flushed) from seeds/product, particularly when changing between crops of different GM status? (G3.3)			

#### Receival (G4)

Issue	Likelihood	Severity	Rating
Does the system require identification of product be confirmed at receival? (G4.1) This may include sampling for verification of GM status.			
Does the system require product to be clearly identified at all stages of the process and for this information to be readily available to the operator? (G4.2)			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of any transport process? (G4.3)</li> </ul>			

#### Handling (G5)

Issue	Likelihood	Severity	Rating
Does the system require identification of product be confirmed prior to unloading? (G5.1) This may include sampling for verification of GM status			
Does the system require product to be clearly identified at all stages of the process and for this information to be readily available to the operator? (G5.2)			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of weather? (G5.3)</li> </ul>			
Does the system require systematic placement and storage of product based on GM status? (G5.4)			
Does the system require storage facilities are maintained to prevent mixing of products? (G5.5)			
Does the system ensure that all movements of product are recorded and reviewed? (G5.6)			
Issue	Likelihood	Severity	Rating

Does the system ensure storage facilities are thoroughly cleaned and inspected prior to use and particularly when changing between different GM status products? (G5.7)			
Does the system require material cleaned or flushed from storage facilities is identified and appropriately dealt with? (G5.8)			
Does the system require that a failure or fault in the segregation system is readily identifiable? (G5.9)			

### Processing (G6)

Issue	Likelihood	Severity	Rating
Does the system require identification of product be confirmed prior to processing? (G6.1). This may include sampling for verification of GM status			
Does the system require product to be clearly identified at all stages of the process and for this information to be readily available to the operator? (G6.2)			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of weather and</li> <li>• able to withstand affects of any transport process? (G6.3)</li> </ul>			
Does the system ensure processing equipment is thoroughly cleaned or flushed and inspected prior to use and particularly when changing between products of different GM status? (G6.4)			
Does the system require segregation practices are implemented between GM status products, particularly for continuous processes (ie when cleaning and flushing between batches not possible)? (G6.5)			

Issue	Likelihood	Severity	Rating
Does the system require material cleaned or flushed from storage and processing equipment is identified and appropriately dealt with? (G6.6)			
Does the system require that a failure or fault in the segregation system is readily identifiable? (G6.7)			
Does the system require finished product to be clearly identified with respect to GM status? (G6.8)			

## Animal production systems

Whilst principally for milk, elements of this generic checklist will be applicable to other animal production systems.

Stock feeds (A1)

See also requirements for contractor and suppliers.

Issue	Likelihood	Severity	Rating
Does the system require documented specifications for purchased stock feeds? (A1.1)			
Does the system require purchased stock feed is accompanied by; <ul style="list-style-type: none"> <li>• a stock feed declaration and/or</li> <li>• identity preserved policy statements</li> </ul> and that <ul style="list-style-type: none"> <li>• records are kept of purchase information? (A1.2)</li> </ul>			
Does the system ensure that stock feed is identified, segregated, and appropriately stored? (A1.3)			
Does the system ensure that designated storage areas are; <ul style="list-style-type: none"> <li>• clearly identified</li> <li>• identification is understood by contractors</li> <li>• identification system is able to withstand the affects of weather? (A1.4)</li> </ul>			
Does the system ensure storage facilities are thoroughly cleaned and inspected prior to use and particularly when changing between different GM status products? (A1.5)			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of weather and</li> <li>• able to withstand affects of any transport process? (A1.6)</li> </ul>			

Issue	Likelihood	Severity	Rating
Does the system ensure that use of stock feed is able to be traced? (A1.7)			
Does the system require that, in order to assist highlight any feeding mix-ups, GM stock feed purchases/inventory are reconciled with GM feed used and GM feed remaining? (A1.8)			

Livestock (A2)

Issue	Likelihood	Severity	Rating
Does the system ensure that stock sold and purchased are identified and recorded? (A2.1)			
Does the system ensure that purchased stock; <ul style="list-style-type: none"> <li>• are from a reputable or approved supplier and</li> <li>• are accompanied by a vendor declaration and or Identity Preserved Policy Statement, specifically dealing with GM status of livestock and time since fed GM feeds? (A2.2)</li> </ul>			
Does the system ensure that stock identification and movement records exist, including identification of; <ul style="list-style-type: none"> <li>• livestock introduced to the farm</li> <li>• livestock fed on GM feed or pastures be separately identified? (A2.3)</li> </ul>			
Does the system ensure that stock movements are appropriately controlled, both in terms of desired rotation and route taken to paddock? (A2.4)			
Does the system ensure that stock fed GM feed/pasture are identifiable and that the means of identification is; <ul style="list-style-type: none"> <li>• secure</li> <li>• understood by operators</li> <li>• able to withstand affects of weather and</li> <li>• able to withstand affects of any transport process? (A2.5)</li> </ul>			
Does the system ensure any unintended stock movements (eg escapes) are recorded and appropriately dealt with? (A2.6)			
Does the system ensure stock identification and movements whilst on agistment are recorded? (A2.7)			

Pasture (A3)

Issue	Likelihood	Severity	Rating
Does the system require documented specifications and/or selection criteria for paddocks (particularly paddocks to be planted with GM pasture)? (A3.1) To include issues such as appropriate, scientifically sound, industry agreed separation distances between GM and non-GM pastures, boundaries or management methods to address specific crop reproduction biology.			
Does the system require paddock records are available to support grazing history and assist with identification of volunteers? (A3.2)			
Does the system ensure that an appropriate paddock identification process exists, and is supported by well maintained fences? (A3.3). This may include a farm map and physical paddock identification.			
Does the system require that appropriate checks are made of any agisted pastures? (A3.4)			

## Transport (A4)

Includes on-farm transport by farmer and contractors. Contractor requirements may also be relevant.

Issue	Likelihood	Severity	Rating
<b>Stock feed (eg grain, hay)</b>			
Does the system ensure that transporters have a process for identification and appropriate segregation of loads during transport (A4.1)?			
Does the system require clear identification of any mixed loads, including details of all components of the load? (A4.2)			
Does the system require product to be securely packaged / sealed during transport to minimise spillage? (A4.3)			
Does the system ensure transporters have a process for identification, segregation and trace of all product whilst in their care? (A4.4)			
Does the system ensure bulk transport equipment is practically free from seeds/product, particularly when changing between crops of different GM status? (A4.5)			
<b>Livestock</b>			
Does the system ensure transporters have a process for identification, segregation (if appropriate) and trace of all livestock whilst in their care? (A4.6)			
<b>Milk</b>			
Does the system require only approved carriers are utilised? (A4.7)			
Does the system ensure bulk transport equipment is cleaned between loads, particularly when changing between milk products from animals fed crops of different GM status? (A4.8)			
Does the system require that the GM status of milk be declared prior to receipt and discharge (A4.9)			

Contractors and Suppliers (A5)

Issue	Likelihood	Severity	Rating
Does the system require contractor specifications, including roles and responsibilities with clear directions for handling stock feeds/livestock, are documented and understood? (A5.1)			
Does the system require monitoring of contractor performance against these specifications? (A5.2)			
Does the system ensure contractor / supplier equipment is practically free (cleaned or flushed) from seeds/product, particularly when changing between products of different GM status? (A5.3)			

## Milk Harvesting (A6)

Issue	Likelihood	Severity	Rating
Does the system require that a stock identification and movement process exists to support the identification and traceability of harvested milk? (A6.1)			
Does this system require that livestock fed on GM pastures or feed are separately identified? (A6.2)			
Does the system ensure that an appropriate time lapses before stock fed GM products no longer require segregation from stock that have not been fed GM products? (A6.3)			
Does the system ensure that stock identification and movement processes exist to support the identification and traceability of all milk introduced into the harvesting process and for this information to be readily available to the operator? (A6.4)			
Does the system ensure that an identification, segregation and traceability process exists for all milk harvested? (A6.5)			
Does the system require that "GM free" milk be harvested prior to non-GM milk and/or that appropriate cleaning takes place between batches? (A6.6)			
Does the system require that where storage facilities provide for the segregation of milk types, the vat identification is; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators</li> <li>• able to withstand affects of weather? (A6.7)</li> </ul>			
Does the system require a hold and release procedure be in place to control discharge of milk to tanker? (A6.8)			
Does the system require the GM status of the milk and farm be identified to the tanker driver? (A6.9)			

Processing (A7)

Issue	Likelihood	Severity	Rating
Does the system require identification of product be confirmed prior to unloading? (A7.1). This may include sampling for verification of GM status.			
Does the system require product to be clearly identified at all stages of the process and for this information to be readily available to the operator? (A7.2)			
Does the system require physical identification systems are; <ul style="list-style-type: none"> <li>• secure,</li> <li>• understood by operators,</li> <li>• able to withstand affects of weather (A7.3)</li> </ul>			
Does the system ensure processing equipment is thoroughly cleaned or flushed and inspected (where possible) prior to use and particularly when changing between products of different GM status? (A7.4)			
Does the system require segregation practices are implemented between GM status products, particularly for continuous processes (ie when cleaning and flushing between batches not possible)? (A7.5)			
Does the system require a hold and release system be in place to prevent the release or distribution of product of uncertain GM status? (A7.6)			
Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (A7.7)			

# Individual Case Study Findings

## General

### Assumptions

A number of assumptions have been made in the analysis of systems against identity preservation and segregation issues raised.

1. QA systems with a scope that must be set by individual business will be analysed on the assumption that this scope includes the hazards associated with the identity preservation and segregation of GM and non-GM products. Examples of systems with adjustable scopes include SQF 1000<sup>CM</sup>, SQF 2000<sup>CM</sup>, ISO 9001:2000 and HACCP. QA systems with fixed scopes such as Great Grain, Graincare, OECD Seed Scheme and Codes of Practice are analysed on the current requirements of the system.
2. A Crop Management Plan or equivalent is in place and has been established according to acceptable and scientifically based principles eg “Guidelines for Industry Stewardship Programs and Crop Management Plans” as being created by the Plant Industries Committee of the Primary Industries Standing Committee.

### Exclusions

It is understood that there are concerns regarding the formation of multiple resistance characteristics through, for instance pollen flow, weed resistance through use of herbicides. These concerns however have not been included in this analysis as the environmental and food safety aspects of GM products are evaluated by the OGTR prior to the commercial release of GM products. Appropriate use and control of the technology is currently addressed through Crop and Resistance Management Plans.

Similarly, while most QA systems have a food safety focus, food safety has not been included in the analysis.

HACCP has not been included in the analysis of quality systems. Whilst primarily designed to address food safety issues, HACCP is now widely used throughout Australian agribusiness to also address quality issues. HACCP methodology, as defined in Codex Alimentarius Commission, Alinorm 97/13A Appendix 11, can and is being used to aid risk assessments for a range of other issues, such as environmental assurance and occupational health and safety.

HACCP is a tool to assess hazards and establish control systems that focus on prevention rather than relying mainly on end product testing.

Codex Alimentarius Commission, Alinorm 97/13A Appendix 11,

HACCP methodology formed the basis of the risk assessment approach utilised for the four case studies. Therefore including an analysis of whether a HACCP system would address the case study specific issues would be tautological. HACCP, of itself, does not address the core elements but rather includes statements such as;

The successful application of HACCP requires the full commitment and involvement of management and the workforce.

Prior to the application of HACCP to any sector of the food chain, that sector should be operating according to the Codex General Principles for Food Hygiene, the appropriate Codex Codes of Practice and appropriate food safety legislation.

Codex Alimentarius Commission, Alinorm 97/13A Appendix 11,

HACCP also requires that appropriate prerequisite programs be implemented prior to the application of HACCP. It is reasonable to assume that the issues identified as Core Elements could represent such prerequisites.

It is therefore also assumed that HACCP, if appropriately scoped, will cover issues associated with identity preservation and segregation.

A summary of each of the four case studies follows, and includes reference to specific supply chain issues via a numbering system allowing cross-reference from the summary back to the detailed analyses (included in the Appendices). The numbering system codes for the supply chain step and the particular issue identified at that step; for example (2.3) refers to the second step in the supply chain and the third issue identified at that step.

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# Canola

## Overview

GM canola (*Brassica napus*) varieties are currently not commercially grown in Australia. The technology was first trialed in Australia in 1997, and has been commercialised in Canada since 1996. The canola case study provides a view of on-farm production through a bulk handling system to a primary oil crushing plant. The scope of the analysis covers on farm production through to the transport of 'crude' oil to a secondary processor and does not include, canola meal, hulls or any other use.

The systems that are currently operating in this supply chain include ISO 9001, SQF SQF 2000<sup>CM</sup>, SQF 1000<sup>CM</sup> Graincare, Great Grain and some Australian Oilseeds Federation Codes of Practice.

The supply chain has been mapped from seed receipt through commercial cropping and the bulk handling system to the primary crusher. Each system, excluding ISO 9001, has then been analysed against the risks to product segregation and identity preservation to determine how they perform against the identified issues.

### **Monsanto ROUNDUP READY Canola Technical Manual and Crop Management Plan 2003**

Monsanto has license agreements in place with Australia's leading canola seed breeding and production companies to make ROUNDUP READY canola technology available in a range of elite canola varieties.

These agreements include strict quality assurance requirements, and all licensed seed companies must follow Monsanto's "*Quality Assurance Guidelines for ROUNDUP READY Canola in Australia*".

The Crop Management Plan addresses on-farm management strategies for ROUNDUP READY Canola, as referenced in the "*Guidelines for Coexistence of Production Systems and Supply Chains in the Australian Grains Industry*" prepared by the Gene Technology Grains Committee.

The purpose of the ROUNDUP READY Canola Crop Management Plan is to put in place on-farm strategies that manage risks to the integrity of grain crop supply-chains and the sustainability of agricultural production.

Growers and/or agronomists are required to attend a ROUNDUP READY Canola Accreditation Programme as part of the ROUNDUP READY Canola stewardship strategy. The participants must attend training days and exhibit competency before they will be accredited to service or use the technology.

Accredited In-field Service Providers (agronomists who have successfully completed training and accreditation) have a duty of care to ensure that all recommendations are made in accordance with the Crop Management Plan, Resistance Management Plan, Technical Manual, ROUNDUP READY herbicide label, seed label, General Terms and Conditions and Technology User Agreement.

The ROUNDUP READY Canola Crop Management Plan has been used as an example of a crop management plan which would be developed to accompany an

application to the Office of the Gene Technology Regulator for an Approved GM event.

### **Graincare On-farm Quality Assurance Manual**

Graincare is an on-farm code of practice that has been developed by the Grains Council of Australia to provide a simple, cost effective quality assurance program for growers.

Graincare is one of many Codes of Practice in the 'care' family which also includes Cattlecare, Freshcare and Flockcare. These systems share a central core of management and food safety elements supplemented by industry specific modules.

The Graincare manual is broken up into three modules;

- Management,
- Chemicals, and
- Grain.

The four management sections are;

- Training (M1),
- Internal Audit and Corrective Action (M2),
- Quality Records (M3), and
- Document Control (M4).

The chemicals module includes three sections;

- Persistent Chemicals in Soil (C1),
- Obtaining and Storing Agricultural and Veterinary Chemicals (C2), and
- Paddock, Crop and Grain Treatments (C3).

The grain module contains six sections;

- Inputs and Service Suppliers (G1),
- Paddock Selection and Preparation (G2),
- Crop Management (G3),
- Harvesting and Harvest Equipment (G4),
- On-farm Storage and Handling (G5), and
- Off-farm Transport (G6)

Graincare does not have a flexible scope, but have indicated that they plan to develop new modules if required to handle GM specific requirements.

## **Great Grain**

The Great Grain Programme is an on-farm quality assurance program that has been developed by Quality Wheat CRC, Pulse Australia and the Australian Oilseeds Federation to provide a coordinated approach to the implementation of on-farm quality management practices in the grains industry.

Great Grain has been set up to specifically cater for identity preserved and segregated markets as well as addressing food safety, quality to the customer and legislative requirements. The programme contains a HACCP based food safety plan and an extensive set of procedures which cover production issues as well as sections devoted to quality management issues such as training, commitment and corrective action.

Great Grain has a flexible scope in terms of the commodities covered and the markets targeted, but its purpose is somewhat rigid, in that it does not require the individual business to define and address other issues such as GM production.

## **SQF 2000<sup>CM</sup> Quality Code**

The SQF 2000<sup>CM</sup> system was developed by the Western Australian Department of Agriculture in 1994 in an effort to increase the marketability and market access of West Australian produce. SQF means "Safe, Quality Food" with the system providing the tools for a food-based enterprise to demonstrate compliance with food safety standards and customer quality requirements. SQF 2000<sup>CM</sup> can be implemented in the full range of primary production systems as well as processing and manufacturing. Since its release SQF 2000<sup>CM</sup> has been widely adopted by Australian agribusinesses. In 2001 SQF moved firmly into the international arena, and has been implemented in at least a dozen other countries.

The SQF 2000<sup>CM</sup> system is built in two distinct parts; firstly a set of management elements which are based on the ISO 9001 model, and secondly a fully Codex compliant HACCP Plan. Whilst the code requires the HACCP plan address all food safety and quality hazards and is signed off by a Quality Society of Australia (QSA) qualified SQF practitioner, it is also recognised that other issues can be addressed through the HACCP methodology.

## **SQF 1000<sup>CM</sup> Quality Code**

The SQF 1000<sup>CM</sup> Quality Code was developed by the Western Australian Department of Agriculture in 2000 following the success of SQF 2000<sup>CM</sup> and in response to demand for a less complex approach to food safety and quality while maintaining the integrity and safety of the food supply. SQF 1000<sup>CM</sup> provides an entry-level introduction to quality assurance and is designed specifically for use by primary producers that do not supply products directly to the consumer, but rather to a packing shed or for further processing.

Like SQF 2000<sup>CM</sup>, the SQF 1000<sup>CM</sup> Quality Code is made up a set of management elements. The major difference between the systems is that SQF 1000<sup>CM</sup> incorporates a Food Safety Plan (FSP), derived from an industry approved master HACCP plan. The code requires that the FSP is modified to suit the individual business into which it is implemented, and must be signed off by a QSA qualified SQF practitioner.

Depending on the required scope of the business implementing SQF 1000<sup>CM</sup>, issues other than food safety and quality can be incorporated into the Master HACCP plan and therefore into the individual business' Food Safety Plan.

### **Australian Oilseeds Federation Codes of Practice**

The Australian Oilseeds Federation Codes of Practice were developed by the Australian Oilseeds Federation to standardise hygiene, cleaning procedures and minimise contamination of product. As a result the Codes of Practice deal mainly with cleaning procedures and list prohibited loads.

They are not audited as a stand-alone system, however they would become auditable if incorporated into another quality system such as ISO 9001:2000.

## **Results of analysis**

### **Monsanto ROUNDUP READY Canola Technical Manual and Crop Management Plan 2003**

Due to the specific scope of the documents and the focus on meeting the requirements of the OGTR and APVMA, their strengths lie in agronomic and GM specific issues. These documents were not designed to impose additional cost or management complexity on growers. Both the Technical Manual and Crop Management Plan nominate management strategies to address co-existence of non-GM and GM canola crops (4.4). The documents also provide coverage of the following issues;

- Management understanding the responsibilities and requirements related to the application of GM technology (C2)
- Identification of GM canola seed, crops and stored grain at each process step (C11, 2.2)
- Records be kept of purchase of seed, including identification information (1.1, 2.2)
- Seed storage that avoids contamination (1.2, 2.3)
- Farmer saved seed be traceable to paddock of origin (2.4)
- Farmer saved seed not be sold to another grower (2.5)
- Equipment used for planting, transport, swathing and harvest be practically free from seeds when changing from GM crops (3.1, 4.1, 5.1, 6.1, 7.1, 8.1)
- Control of volunteers (4.5)
- Notification of contractors of the GM status of the crop (5.2)
- Maintenance of transport equipment to minimise leakage (7.2, 8.2)

However the system does not specifically address issues such as;

- The majority of core elements are not addressed, specifically C3, C4, C5, C6, C7, C9. Elements C8, C10 and C12 are partially addressed.
- Reconciliation of purchased or stored seeds against seed planted and seed left-over (4.3).

It should also be noted that the Technical Manual provides reference information and advice, but is not strictly enforceable.

### **Graincare On-farm Quality Assurance Manual**

Graincare has been designed to be a simple on-farm system, focusing primarily on food safety, and an ability to demonstrate a safe production system (traceability). Graincare does not have separate, overarching ISO 9001 type elements, but addresses issues through activity specific requirements, which, for example, will detail the record that must be kept when doing a particular task. Graincare details the information to be kept but not always the intent. This complicates the analysis as it was often necessary to interpret the goal of the system from the specific requirements. As an example, core element (C12) asks whether the system ensures product trace through the system and although Graincare does not specifically require product trace, it does require records to be kept at each stage, which should allow for product trace (excluding seed batch numbers).

Graincare has indicated that they would happily consider developing new modules to specifically address the issues associated with the production and segregation of GM crops.

The main strengths of the Graincare program include:

- Training (C4 & C5)
- Corrective action (C9)
- Seed storage labelling and hygiene (2.1, 2.2, 2.3, 2.4)
- Risk assessment of paddocks prior to planting (4.2)
- Equipment hygiene (2.3, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1) although the intent may be subject to interpretation (see 6.1)

Graincare requires an internal audit (C10) using an internal audit checklist. For this to be effective in terms of identity preservation and segregation, these issues would need to be included on the generic Graincare internal audit checklist.

Given the specific, activity based nature of Graincare, many of the core elements are not addressed, including elements such as the need for clear customer specifications (C6), the need to verify product meets customer specifications (C7) and the need to identify product at each process step (C11).

Other issues not addressed by Graincare include:

- Reconciliation of seed stocks (4.3)
- Cultural issues such as boundaries / separation distances between GM and non GM crops (4.4), control of volunteers (4.5)
- Identification of load to the customer (9.1). While one would expect the customer's system to demand a level of identification, Graincare simply requires that the grower keep a record of the load.
- Seed batch number do not appear to be required (1.1)

### **Great Grain**

The Great Grain system is designed specifically for grain growers and applies only at the production level.

The principal strength of the of the Great Grain program lies in its focus on identity preservation and segregation systems, and is the only other system besides Monsanto's CMP and TM which requires product identification at all times (C11).

Great Grain's main strengths include:

- Management commitment to customer needs (C3)
- Training (C5) and documenting staff responsibilities (C4)
- A clear requirement for product identification at all times (C11, 2.2)
- Clear raw material specifications, and a requirement to inspect them prior to use (C8)
- Requirement to advise customers of any breakdown in identity preservation (C9)
- A strong focus on product trace through the system (C12, 1.1, 2.4)
- Requirement for storage, seeding and harvest equipment to be inspected prior to use. This at least partially addresses the need for this equipment to be practically free of seeds when switching from GM crop (2.3, 3.1, 4.1, 5.1, 6.1, 7.1). However in most cases the risk assessment regarded machinery hygiene as Highly Desirable rather than a Must due to the 'bulking up' effects of this supply chain.
- Control of contractors (5.2)
- A very explicit process for the identification of product to the customer (9.1)

Whilst there is no specific requirement to obtain customer specifications (C6), the food safety plan references customer specifications, so it is likely some formal understanding of requirements would exist. Similarly, Great Grain does not specifically require verification that product meets customer specifications (C7), but does require samples are retained for testing if required.

Like Graincare, Great Grain includes the requirement for internal audits, but using a generic checklist, which may not effectively uncover product identification issues.

Great Grain does not specifically address;

- Sale of farmer saved seed (2.5)
- Cultural issues such as length of rotation between non GM canola and GM canola (4.2), boundaries / separation distances between GM and non GM crops (4.4), control of volunteers (4.5)
- Reconciliation of seed stocks (4.3)

### **SQF 2000<sup>CM</sup> Quality Code**

SQF 2000<sup>CM</sup> is designed and scoped for post farm gate processing and handling, however it can be applied at any step in the supply chain including on-farm production.

The principal strength of the SQF 2000<sup>CM</sup> system lies within element 4.3.1 *Process Control* which requires that the business must document the means by which it will control food safety and quality in a SQF 2000<sup>CM</sup> plan. The SQF 2000<sup>CM</sup> plan is a fully Codex compliant HACCP plan. The analysis has assumed that the HACCP plan is scoped to include the issues associated with the production of GM Canola.

The union of a core set of quality system elements based on ISO 9001 principals and a flexible, tailored HACCP plan creates a system that addresses the majority of issues identified throughout the entire supply chain.

Issues that are not addressed by SQF 2000<sup>CM</sup> Quality Code include;

- Product identification (C11, 13.1) is not explicitly required within the system. There is however a requirement to identify the finished product to customer specification, and a strong requirement for product and raw material trace through the system. It could be reasonably argued, that a combination of these two elements and addressing the hazard of mix-ups within 4.3.1 *Process Control* would meet the requirement for product identification.
- Sale of farmer saved seed (2.5) would not be addressed, unless this is covered by food legislation at which point 4.3.4 *Food Legislation (Regulations)* would apply.
- Cleaning out of transport vehicles in an appropriate area (9.5) is unlikely to be covered.
- Ensuring minimal leakage from transport vehicles (8.2, 12.1, 16.1) may not be addressed as it is not directly related to the process, but could be included in specifications to transport contractors.

### **SQF 1000<sup>CM</sup> Quality Code**

SQF 1000<sup>CM</sup> is designed and scoped for producers supplying food produced within their own system, which is not classified as high risk. As a result, this system is only relevant at the production stages.

The principal strength of the SQF 1000<sup>CM</sup> system lies within element 4.3.1 *Process Control* which requires that the business must document the means by which it will control food safety and quality in a SQF 1000<sup>CM</sup> plan. The SQF 1000<sup>CM</sup> plan, normally called a Food Safety Plan (FSP), must at the very least address the issues of food

safety and quality to the customer, and is built from an industry approved Master HACCP Plan (MHP). The analysis has assumed that the MHP and FSP are both scoped to include the issues associated with identity preservation and segregation.

As with SQF 2000<sup>CM</sup>, the combination of a core set of quality system elements based on ISO 9001 principals and a flexible, tailored Food Safety Plan creates a system which addresses the majority of issues identified. However, SQF 1000<sup>CM</sup> does not provide the through chain coverage of SQF 2000<sup>CM</sup>.

Areas not addressed by SQF 1000<sup>CM</sup> Quality Code in relation to the identity preservation and segregation are;

- Verification of raw materials (goods and services), or checking them prior to use is not explicitly stated (C8). Element 4.2.1 Supplier Specifications requires that specifications exist for all goods and services that impact upon finished product safety and quality, but does not go as far as to enforce their implementation (inspection or verification). It could be reasonably argued that hazards associated with raw material goods and services will be identified, and significant issues will be appropriately monitored in the Food Safety Plan
- Product identification (C11) is not explicitly required within the system. There is however a requirement to identify the finished product to customer specification, and a strong requirement for product and raw material trace through the system. The combination of these two elements and addressing the any product mix-ups within 4.3.1 Process Control should adequately address product identification.
- The SQF 1000<sup>CM</sup> Quality Code cannot address the issue of GM seed sold 'over the fence' (2.5), unless it is covered by food legislation at which point 4.3.3 *Food Legislation (Regulations)* would apply.
- Cleaning out of transport vehicles in an appropriate area (9.5) is unlikely to be covered.
- Ensuring minimal leakage from transport vehicles (8.2) may not be addressed as it is not directly related to the process, but could be included in specifications to transport contractors.

## **Australian Oilseeds Federation Codes of Practice**

The Australian Oilseeds Federation (AOF) Codes of Practice 2-3 and 2-4 cover the bulk transport of vegetable oils and oilseeds, meal and hulls by road and rail. Whilst external auditing is not required, they may become audited if referenced in a handler or processor QA system.

The AOF Codes of Practice deal specifically with avoiding contamination of oils, oilseeds or oilseed products during transport and do not address any of the core elements. The AOF Codes of Practice are only relevant at the stages which involve transport (7), (8), (11), (12), (15), (16), (23) and (24).

Issues that are covered by the AOF Codes of Practice include;

- Requirement that transport equipment is practically free from seeds (7.1, 8.1, 11.1, 15.1).
- Ensuring that loads are properly covered (“tarped”) during transport (7.2, 8.2, 12.1, 16.1)
- Requirement for extensive cleaning between different loads if this is a source of contamination (22.1, 23.1)

The AOF Codes of Practice also mention the need for transport equipment/vehicles to have been cleaned at the last place of delivery, which partly covers the issue of ensuring equipment is cleaned out in an “appropriate area” (9.5, 12.2, 16.2).

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# Cotton

## Overview

Cotton (*Gossypium hirsutum*) is grown commercially in New South Wales from Hillston to the border at Goondiwindi and west to Bourke and Tandou and in Queensland from Goondiwindi through to the Darling Downs and Central Qld. GM cotton varieties have been commercially available since 1996 and currently include ROUNDUP READY cotton, with resistance to the herbicide ROUNDUP and INGARD and BOLLGARD II cotton with resistance to attack by certain Lepidopteran larvae. BOLLGARD II is the successor to INGARD cotton containing two genes from the soil bacterium *Bacillus thuringiensis*. Regulatory guidelines restrict production of GM cotton to NSW and southern Queensland (south of latitude 22° South). Current indications are that approximately 40% of cotton planted is ROUNDUP READY and 30% is INGARD (INGARD is capped at 30% of total cotton as part of the Resistance Management Plan approved by APVMA).

The cotton case study covered cropping, ginning and production of cottonseed meal for stock feed. The systems that operate through the supply chain include the BMP (Best Management Practice) Cotton, ISO 9001:2000 and the requirements of the Technology Provider (Monsanto's Crop Management Plan for ROUNDUP READY cotton, Resistance Management Plan for INGARD cotton, General Terms and Conditions and Technical Manual for ROUNDUP READY cotton). HACCP may also be implemented, but an analysis of HACCP has not been undertaken for reasons previously mentioned.

## BMP Cotton

BMP (Best Management Practices) Cotton is fundamentally an environmental management program for Australian cotton producers. It aims to achieve sustainability through improved farm efficiency and productivity, combined with effective environmental protection and sound resource management. With over 95% of Australia's cotton growers introduced to BMP, this is the dominant on-farm management system

The manual addresses the following key areas;

- Application of Pesticides
- Storage and Handling of Pesticides
- Integrated Pest Management
- Farm Design and Maintenance
- Farm Hygiene
- Storage and Handling of Petrochemicals

## **General Terms and Conditions of Technology User, Crop Management Plan, Resistance Management Plan, Technical Manuals – Monsanto Australia Limited**

Monsanto support their GM cotton varieties with a range of documents, grower training and licensing requirements. The General Terms and Conditions of the Technology User constitutes the legally binding agreement between the grower and Monsanto and includes details of the grower's obligations for activities such as planting audits, retention of seed and the Resistance Management Plan. Many of the requirements of the General Terms and Conditions reflect regulatory conditions for the commercial release and use of GM products. The inclusion or absence of issues from the General Terms and Conditions, Crop Management Plan and Resistance Management Plan is therefore directly related to the requirements of the OGTR and APVMA. As the licensed provider of the technology, Monsanto is responsible for ensuring compliance with these regulatory conditions.

The Crop Management Plan is a compulsory component of the ROUNDUP READY cotton program and includes four elements;

- The Technology
- The Reward
- Stewardship Program
- Integrated Weed Management Strategy

The Stewardship Programme includes more traditional quality system elements such as training, auditing and non-compliance requirements.

The Resistance Management Plan for INGARD details preventative resistance management and is required as part of the Technology User Agreement (TUA) and under the conditions of registration of INGARD. It specifies total areas to be planted to INGARD cotton, details of refuge establishment and area, requirements for the control of volunteers and ratoon cotton and pupae destruction. The specific requirements of the RMP vary slightly with location.

BOLLGARD II is being introduced with training and accreditation requirements similar to ROUNDUP READY cotton. These programs have developed over the last 5 years in line with changing regulatory requirements. At the time of release of INGARD these programmes were not required.

The Technical manuals provide agronomic advice as well as information regarding the technology and regulation of gene technology. These manuals are seen as useful support material but not strictly enforceable.

## ISO 9001:2000 Quality Management System

The ISO 9000 series of quality management systems are widely recognised as the original or reference quality systems. ISO 9001 "Quality systems – Model for quality assurance in design, development, production, installation and servicing" provides a solid quality management foundation. Many systems base their core elements on ISO 9001, for instance SQF 2000<sup>CM</sup> and SQF 1000<sup>CM</sup> Quality Codes.

The ISO (International Organization for Standardization) periodically reviews the standard and issues revisions. ISO 9001 was first published in Australia 1987, was republished in 1994 as AS/NZS ISO 9001:1994 and most recently as AS/NZS ISO 9001:2000. The latest revision is significantly different from its predecessors in format, focusing on processes rather than being a list of elements.

In so doing the standard promotes the adoption of a process approach when developing, implementing, and improving the effectiveness of a quality management system, to enhance customer satisfaction by meeting customer requirements. An advantage of a process approach is the ongoing control that it provides over the linkage between the individual processes within the system, as well as their combination and interaction.

Senior management takes a leading and visible role in defining, implementing, administering and improving this management system, with the goal of meeting all customer requirements.

A strength of ISO 9001:2000 lies in its product realisation processes. The Standard ensures that there are plans for all realisation processes, to be undertaken in controlled conditions to ensure that quality objectives are met. This includes identifying product specifications, reviewing regulatory standards and codes, and developing appropriate work instructions.

This Standard does not include requirements specific to other management systems such as environmental management, occupational health and safety, financial management risk management, or food safety. However, it enables an organisation to align or integrate their own quality management system with related management system requirements. It is possible for an organisation to adopt its existing management system(s) in order to establish a quality management system that complies with ISO 9001:2000.

The system includes the following elements;

- Quality management system
  - General requirements
  - Documentation requirements
- Management responsibility
  - Management commitment
  - Customer focus
  - Quality policy

- Planning
- Responsibility, authority and communication
- Management review
- Resource management
  - Provision of resources
  - Human resources
  - Infrastructure
  - Work environment
- Product realization
  - Planning product realization
  - Customer-related processes
  - Design and development
  - Purchasing
  - Product and service provision
  - Control of monitoring and measuring devices
- Measurement, analysis and improvement
  - General
  - Monitoring and measurement
  - Control of nonconforming product
  - Analysis of data
  - Improvement

## Results of analysis

### BMP Cotton

This system clearly details on farm environmental requirements for cotton growers. In addressing environmental concerns, a number of issues important to identity preservation and segregation are also addressed. Principally;

- Requirement for an external audit (C1)
- Identification of responsibilities of different people/positions (C4)
- Importance of training key individuals (C5)
- Concept of corrective and preventive actions (C9)
- Development of farm map (to aid with identification of crops and volunteers) (C11, 1.6, 7.1, 7.3)

The system also has a strong basis for Good Farming Practices (8.4) and crop hygiene practices (8.3), thereby including on farm activities that could be expanded to address identity issues raised as important to identity preservation and segregation, such as;

- Requirement to consider crop rotations prior to planting (1.1)
- Requirement to regularly monitor crop and implement a weed control program in and around each field (1.3, 8.1, 8.2, 10.1, 10.3)
- Requirement to clean vehicles and machinery before coming onto farm, with useful detailed instructions on how to clean particular pieces of equipment (9.2, 11.2, 12.5, 14.3,)
- Requirement to destroy cotton plants remaining after harvest (10.4)
- Requirement for modules to be pressed and covered prior to transport to minimise loss of cotton en route (14.1).

### **General Terms and Conditions of Technology User, Crop Management Plan, Resistance Management Plan, Technical Manuals – Monsanto Australia Limited**

The documents produced by Monsanto with regard to GM cotton focus on licensing and use of the technology, in most cases to meet the requirements of the OGTR, and were not designed with identity preservation and segregation in mind. The General Terms and Conditions of Technology User provides a legally binding framework incorporating some issues identified as being significant with regard to identity preservation and segregation.

- Monitoring and enforcement of the requirements via audits (C1) and non-compliance measures (C9)
- Definition of responsibilities and requirements related to use of GM technology (C2)
- Training and accreditation of growers of ROUNDUP READY cotton under the Crop Management Plan (C5). INGARD cotton does not have a similar requirement.

- Clear paddock identification on a farm map (GPS or surveyed map) (C11, 1.6, 6.1, 7.3, 9.5)
- Traceability of seed to grower/Farm Unit via the TUA number (C12).
- Discussion of cultural methods for control of volunteers and ratoon cotton (1.1, 8.1, 10.1). Volunteer control is included in the RMP for INGARD, but is not similarly enforced for ROUNDUP READY.
- Requirement for monitoring of subsequent crops for volunteer and ratoon INGARD cotton (10.2, 10.4)
- Formal arrangements between grower and seed supplier/technology provider (1.6)
- Seed to be of known and acceptable seed purity (2.2)
- Appropriate management of seed by grower, including farmer saved seed (6.2, 7.8, 7.9). It is noted that similar controls are not extended to contractors.
- Traceability of seed purchased to paddock as part of the Planting Audit (7.1, 7.2)

### **ISO 9001:2000 Quality Management System**

ISO 9001:2000 can be applied at all stages of the supply chain, though traditionally due to its complexity it has been implemented by larger agrifood businesses such as corporate farming operations, packers and processing organisations.

This system thoroughly addresses the majority of issues identified.

Particular strengths are in the coverage of all Core elements, particularly the requirement for product identification at each process step (C11) and the controls required of suppliers (C8). ISO 9001:2000 element 7.5.3, *Identification and Traceability* states that “where appropriate, the organisation shall identify the product by suitable means throughout product realization”. Assuming the system was implemented to address segregation and identity preservation issues, this identification would be appropriate and indeed critical at all stages of the process. Section 7.4 *Purchasing* deals with requirements a description of the product or service being purchased and that some verification takes place to confirm the product or service meets these specifications. This element provides control over linkages between the supply chain steps in the cotton case study (eg transport, harvest and planting contractors, seed purchases). The relationships become more complex in the situation where cotton is ginned but not purchased by the gin. The reliance on grower integrity with regard to the identification of the module requires verification, which may not be carried out by the gin in this situation (15.4). The ultimate purchaser of the cottonseed may have to rely on the systems running at the gin and the gin’s determination of the integrity of the module identification, whilst not having a direct financial relationship with the gin.

If the system has weaknesses they are in relation to requirements for implementation of cultural practices such as crop hygiene practices (8.3), good farming practices (8.4) including control of volunteers and ratoon cotton post-picking (10.1) and in non crop

areas (10.3). Similarly the control of fly cotton during transport of modules (14.4) and seed loss during transport of ginned seed (21.4) may not be specifically addressed through ISO 9001:2000 as the effects of this issue are not likely to directly impact on the process of cotton production. It is possible that these issues could be addressed through *Control of production and service provision*, ISO 9001:2000 element 7.5.1.

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# Pasture

## Overview

The analysis undertaken has reviewed how milk produced from GM pastures and GM feeds would potentially be handled by quality management systems and provides some consideration of how elements of these systems would cater for a GM presence. The study did not look at milk into cheese processes.

Extensive research of GM feeds shows rapid digestion of most ingested DNA with any remaining amount being quickly removed from the animal system through natural defence mechanisms. To date, no GM fragments of DNA have been found in animals (*GM Feed and the Livestock Industry, Gene Technology in Agriculture - Meat and Livestock Australia*).

Milk from animals fed on genetically modified feedstuffs is not considered to be genetically modified and labeling is not required. It is not necessary to seek certification that animals have been raised on non-GM feeds or pasture in order to comply with the labeling requirements of the Food Standards Code (*GM Feed and the Livestock Industry, Gene Technology in Agriculture - Meat and Livestock Australia*).

The Standards allows for GM material unintentionally present at less than 10g/kg (or 1%) (Food produced using Gene Technology - Customised Guide for the Red Meat and Livestock Industry on Food Standard A 18/1.5.2 - Meat and Livestock Australia).

This case study has considered product segregation for GM and non-GM production chains until commercial issues of market access and consumer response become clearer. The work of the Australian Dairy Industry is acknowledged in ensuring that the Industry remains competitive on International and Domestic markets and this study is in no way designed to influence current policy and any resultant strategies.

The supply chain has been mapped from the purchase, receipt, and/or growth of GM pastures and GM feeds, to dispatch from the processor. It takes into consideration the introduction of livestock, agistment of stock, and the possible transfer of unprocessed milk (raw material) to a second party prior to processing. This study does not consider veterinary chemicals used in relation to milk producing animals within the supply chain.

There are currently no GM pasture species grown commercially in Australia. Whilst research and associated small-scale field releases is continuing, it is anticipated that the first commercial release of GM pastures (white clover) will not occur until after 2006 (*Prof. German Spangenburg, Plant Biotechnology Centre, Department of Primary Industries, Victoria*).

In undertaking the risk assessment process, the processor has been seen as an "internal customer". Milk harvested could still be treated as non-conforming by the processor before the milk is processed to end customer requirements. Rejection/Recall has been considered at the post-processing stage.

On-farm systems, which operate within the supply chain, incorporate milk supplier and carrier issues and have been reviewed for their fundamental support of the dairy

industry at that level. Due to the number of systems in operation within Australia, two have been chosen as an example of the likely requirements on farm by processors.

Codes of Practice have been reviewed for their regulatory requirements and fundamental support for the dairy sector.

ISO 9001:2000 and the AQIS systems have been reviewed for the requirements which must be met in a processing environment by companies choosing to be certified to ISO 9001:2000 and/or inspected under Export Control (Processed Food) Orders.

### **ISO 9001:2000 Quality Management System**

Please refer to Cotton Case study for description of ISO 9001:2000.

## **Dairy Food Safety Victoria - Code of Practice for Dairy Food Safety**

All dairy premises operating in Victoria are required to be licensed with Dairy Food Safety Victoria (DFS), under Part 3, Section 22 of the Dairy Act (2000).

All Victorian food business, including dairy premises, are required under the *Food Act (1984)* to comply with the Food Standards Code.

The Victorian Code of Practice for Dairy Food Safety sets the minimum mandatory standards for the production, manufacture, storage, and transport of milk and dairy foods to safeguard public health and must be used by all dairy premises in conjunction with the Food Standards Code.

All dairy premises are required to hold a current industry licence and each licensee is required to have an approved Food Safety Programme (FSP) in place. Food Safety Programmes are audited on a regular basis.

The Code of Practice for Dairy Food Safety has been developed in consultation with the Victorian Dairy Industry using a risk-based approach and considering international Codex requirements and the provisions of the *Dairy Act (2000)*. Dairy Food Safety Victoria does not consider that a GM presence proposes a food safety risk.

The Code was approved by the Victorian Minister for Agriculture and Aboriginal Affairs on 3<sup>rd</sup> September 2002 and came into operation on 1 December 2002. It replaces the Code of Practice for the Quality Assurance of Milk and Dairy Produce (VDIA 1995), which was made under the *Dairy Industry Act 1992*.

Dairy Food Safety Victoria has powers under the *Dairy Act 2000* to refuse to issue, issue or renew subject to conditions, refuse to renew, refuse to transfer, cancel, or suspend a dairy licence.

The *Dairy Act 2000* also describes the actions that may be taken by a Dairy Food Safety Victoria Authorised Officer. These include detaining product and placing orders on premises and equipment.

The Code provides over-arching general principals which apply to all milk and dairy foods produced or manufactured in Victoria. Advisory guidelines are available to assist dairy premises with the implementation of the Code of Practice.

## **Tasmanian Dairy Industry Authority - Code of Practice for Dairy Food Safety**

Compliance with the Tasmanian Code of Practice for Dairy Food Safety is a pre-requisite for the granting and renewal of licences issued by the Tasmanian Dairy Industry Authority (TDIA) under the *Dairy Industry Act 1994*.

Licences are required to operate as a dairy farmer, dairy processor, dairy manufacturer, dairy store or depot and dairy distributor. A Certificate of Competency is required to act as a Farm Bulk Milk Tanker Driver.

The Tasmanian Code of Practice sets the minimum mandatory standards for the production, manufacture, processing, storage and transport of milk and dairy products to safeguard public health and must be used by all dairy licensees in conjunction with the Food Standards Code.

Each licensee is required to hold a current industry licence and have an approved Food Safety Programme in place. Food Safety Programmes are registered with the Tasmanian Dairy Industry Authority and audited on a regular basis.

Development of the Tasmanian Dairy Code of Practice for Dairy Food Safety and audit procedures are based on Hazard Analysis Critical Control Point (HACCP) concepts. The Tasmanian Dairy Industry Authority acknowledges Dairy Food Safety Victoria for the use of their Code of Practice for Dairy Food Safety in the development of their Code.

The Code provides over-arching general principles which apply to all milk and dairy products produced, transported, or manufactured in Tasmania.

### **Warrnambool Cheese and Butter Company - Quality Plus & Milk Suppliers Policy and Quality Standards Manual**

Warrnambool Cheese and Butter Company aim to supply the highest quality finished material to their customers, both domestically and around the World. Presently, the Warrnambool Cheese and Butter Processing Plants have quality systems in place based on ISO 9001:2000 and HACCP principals.

In an endeavour to control the quality of milk that enters the factory, Warrnambool Cheese and Butter introduced a programme on farm that is designed to minimise any potential problems.

The programme is based on a proven system from NSW, "Quality Plus". It was developed and later modified in partnership with the NSW Dairy Corporation and the Queensland Farm Quality Assurance Steering Committee. Each supplier to Warrnambool Cheese and Butter Company is encouraged to participate in the Quality Plus programme.

The Company has also developed a guide to all Warrnambool Cheese and Butter Factory suppliers. The Milk Suppliers Policy and Quality Standards Manual is a reference document providing information on milk pricing policies, milk quality standards, milk collection policies, company policies for tanker drivers, and daily testing.

Warrnambool Cheese and Butter Company are accredited by NATA to ISO 9001:2000. Warrnambool have indicated that they intend to review their manual in 2003 and anticipate that the potential traceability of GM products within their system will be reviewed at that time.

The Warrnambool Cheese and Butter Company's programme is underpinned in Victoria by the Dairy Food Safety Code of Practice.

### **Bonlac Foods Limited - Total Farm Program and Milk Supply Handbook**

Bonlac commenced trading on 1 January 1986 as a result of an amalgamation of three independent dairy co-operatives and one dairy marketing company.

Bonlac's corporate objective is to enhance returns to Shareholders through sustainable global competitive practice and process.

To do so, the company has developed a Milk Supply Handbook that outlines Bonlac's minimum requirements for a dairy premise in terms of access, housekeeping, hygiene and occupational health and safety. Bonlac believes that this is the foundation upon which food safety and quality programmes are built.

Bonlac's Total Farm programme provides guidelines on the minimum requirements of workplace safety, hygiene, and dairy condition. It outlines potential risks and provides options and information for controlling those risks. The programme consists of survey of the actual conditions on farm and a discussion of key areas of risk management.

Bonlac holds certification to ISO 9001:2000 for its manufacturing processes. Its Milk Supply Handbook and Total Farm Programme are underpinned in Tasmania by the Tasmanian Code of Practice for Dairy Food Safety 2003.

**AQIS (Australian Quarantine and Inspection Service) - FPA (Food Processing Accreditation) System of Inspection and AQA (Approved Quality Assurance) System of Inspection**

The AQIS export inspection programme operates within the statutory powers of the *Export Control Act 1982*. The Act is supported by regulations, the Export Control (Orders) Regulations and specific commodity Orders. Processed food products, including dairy products exported from Australia and intended for human consumption, are subject to inspection under the provisions of the *Export Control Act 1982*. These provisions are based on food safety issues.

Processed food, such as dairy products, are exported under either of two arrangements set out in the *Export Control (Processed Food) Orders*; Food Processing Accreditation (FPA) and Approved Quality Assurance (AQA) arrangements. These products cannot be exported unless they are produced, processed and stored in accordance with the Act and the Orders. Export inspection systems used for these products are fully Hazard Analysis Critical Control (HACCP) based and may include quality assurance. There is no specific provision under these two arrangements for audits of the dairy supply chain for GM input.

**FPA (Food Processing Accreditation)** is a quality assurance based inspection system legislated within Schedule 7 of the *Export Control (Processed Food) Orders*.

The exporter proves to AQIS that they have control of the process, rather than AQIS having to inspect the final product. The responsibilities for process control lie with the company and AQIS then conducts audits of plant hygiene, process control and other requirements of the Orders.

The company must prepare process control documentation. This includes details of the food to be prepared and the processing operations carried out. AQIS inspects the company for compliance with its process control documentation, which incorporates a process flow chart and HACCP table.

Companies are required to conduct their operation according to good manufacturing practice (GMP). GMP may be defined as maintaining and operating premises to the standards detailed in Schedule 2 (Structural requirements for processed food establishments) and Schedule 3 (Operational requirements for processed food establishments) - which are general requirements of the Export Control (Processed Food) Orders.

HACCP tables are not required to contain hazards addressed by good manufacturing practice. GMP thus includes the following elements that must be in place but do not have to be documented:

- hygiene and sanitation procedures (low and medium risk establishments)
- storage and use of hazardous substances
- equipment calibration
- personnel dress, conduct and training
- pest control

However the orders do require documentation of the following:

- hygiene and sanitation procedures (for high risk establishments only)
- location and frequency of servicing of bait stations
- production/stock records
- refrigeration logs
- transfer of processed food
- potable water analytical results
- analytical results where product standards are specified in the orders.

The FPA system offers exporters flexibility in clearance of product from Australia, as exporters under this system may sign their own export permits. This system is simpler to develop and implement than the Approved Quality Assurance (AQA) arrangement.

**AQA (Approved Quality Assurance) System of Inspection**, legislated within Schedule 8 of the *Export (Processed Food) Orders*, is an alternative inspection arrangement between AQIS and the export establishment. The company must have a fully documented quality system in place and undertake the inspection function previously performed by AQIS. The aim under this arrangement is to refine the quality system so that defective product is minimised or eliminated. As with the FPA system, exporters may sign their own export permits.

The company's quality system must ensure that only product which meets the AQIS (and the importing country) requirements is exported. The system must be effective, operational, and fully documented in a quality manual.

In documenting quality systems, companies need to describe the procedures and inspection points which will ensure that, as a minimum, all export product requiring AQIS certification meets AQIS and importing country requirements, under relevant commodity Orders. In other words, companies on AQA must be able to show that their product is at least as good as product produced under alternative inspection systems.

The AQA Handbook provided by AQIS and analysed within this study is a September 1992 version and references ISO 9001 and ISO 9002 in their form in 1992. These ISO Standards' elements are treated differently within ISO 9001:2000. It has been assumed that any company choosing to comply with Export Orders under the AQIS AQA Handbook arrangements would wish to comply with ISO 9002 requirements and in 2003 that would correspond to ISO 9001:2000.

Part 2 of the AQA Handbook (1992) gives some general guidelines for documenting quality systems. Part 3 lists the elements which must be addressed in documenting the quality system and describes a means to address each element

The system includes:

- Raw material control
- Process control (including HACCP tables)
- Finished product control
- Hygiene and sanitation procedures
- Pest Control
- Equipment maintenance
- Calibration
- Document control
- Internal audit procedures

AQIS desk audits the quality manual and then conducts a site audit to ensure the quality system is in place and effective. AQIS usually conducts two audits per year of the whole documented quality system.

Where a company documents specifications or criteria that exceed AQIS requirements set out in the relevant legislation, it will be expected to comply with them. However, if these criteria cannot be met reliably in practice, the company may elect to amend its documentation to comply with AQIS requirements.

Audits may be unannounced when the AQIS Regional Commodity Head considers appropriate. It is also possible that representatives of importing country governments may elect to audit companies.

## Results of analysis

### ISO 9001:2000

In the dairy industry ISO 9001:2000 is not generally found on farm. The point in the supply at which this system is taken up highlights the strengths of this management system.

It is well suited to a processing environment, however is not as easily transferable at an on-farm level due to the level of complexity and compliance required and the absence of Codex HACCP principles within its scope. In stating this, however, ISO 9001:2000 easily meets the majority of issues explored and can be well supported by incorporating food safety to Codex HACCP within its focus.

The application of ISO 9001:2000 within a processing environment requires the company to identify the actual flow or sequence of events in a process that any product or service follows. It requires that each sequence be performed under controlled conditions to ensure that objectives are met. Issues of identity, preservation, and segregation and roles, responsibilities, and training within a process environment are well scoped within the Standard (C3, C4, C5, C11).

ISO 9001:2000 is about knowing and understanding your customers and their requirements and then ensuring that your processes and products meet those requirements. Product realization is therefore strong and includes identifying product specifications, reviewing regulatory standards and codes. Customer needs are reviewed before accepting an order to ensure that you fully understand these needs and that all requirements are adequately defined. (C2, C5, C6, C7, 1.2, 16.3).

A considerable strength of this Standard over others reviewed is its handling of purchasing. Product and services from suppliers (including sub-contractors) are specified and then reviewed to ensure that stated requirements are met. Purchasing information is required to describe the product to be purchased, including requirements for approval of product, processes and equipment. The adequacy of this information is determined prior to communicating details to the supplier. (C8, 1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 3.1, 3.3, 3.5, 6.2, 6.4, 6.5, 6.6, 7.7, 9.1, 10.1, 12.1, 12.2, 12.3, 12.4, 13.1, 13.2, 13.3, 13.4, 14.3)

Control of production, identification and traceability, and preservation of product are also key elements of this Standard and are designed to ensure that procedures for identification, handling, storage, preservation, protection, and delivery of product are adequate to protect the integrity of product at all stages (C3, C4, C7, C11, C12, 2.4, 3.2, 3.6, 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, 5.3, 5.5, 5.6, 5.7, 5.8, 5.9, 6.1, 6.2, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.1, 8.2, 8.3, 8.4, 8.5, 9.2, 9.4, 9.5, 10.3, 12.5, 13.5, 14.1, 14.2, 14.5, 15.1, 15.2, 15.3, 15.4, 16.2, 17.1, 17.2, 17.3, 18.1, 18.2).

The whole-of-process and customer focussed elements of this Standard provide a proactive focus in handling product non-conformity and any necessary corrective and preventive action. (C9, C10)

## Victorian Code of Practice for Dairy Food Safety

The Victorian Code of Practice for Dairy Food Safety has been developed in consultation with the Victorian Dairy Industry using a risk-based approach and considering international Codex requirements and the provisions of the *Dairy Act (2000)*. Using this approach, the Code of Practice does not consider that a GM presence is a food safety risk.

All dairy farms, milk carriers, dairy food manufacturers and dairy food distributors must have an approved Food Safety Programme. The fundamental requirements of a food safety programme are specified in the Code for each industry sector. It is therefore considered that an appropriately scoped Food Safety Programme would pick up some of the elements that are not as easily identified within the Code's requirements, such as -

- Meeting individual company requirements not just regulatory (C2, C5, C6, 1.2, 16.3).
- Aspects of raw material supply at the on-farm level of milk production, including specifications detailing raw material and/or service requirements, review of suppliers, requirements for stock feed declarations and/or identity preserved policy statements, review of raw materials prior to receipt and traceability issues associated with identification and segregation of raw materials (1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 3.1, 3.2, 3.3, 3.5, 6.3, 6.4, 6.5, 6.6, 7.5, 7.6, 7.7)

Other elements within the Code which could be scoped on farm within a HACCP based food safety program are -

- Assignment of roles and authorities referred to within the Code which are required to be communicated through the organisation (C4, 9.1)
- Paddock identification and mapping requirements to assist with traceability issues (2.1, 5.1, 5.2)
- Infrastructure issues outside the immediate dairy premises, for example well maintained fences to provide support to stock grazing rotations (2.2)
- Good farming practices in addition to those specified for dairy production (2.4, 2.5, 3.6, 5.3, 5.4)
- Identification of storage areas outside the immediate dairy premises (3.4)
- Stock identification and movement processes for all stock (including sales and purchases), not just treated animals (4.3, 5.5, 6.1, 6.2, 6.3, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.4, 7.5, 7.8, 8.1)
- Traceability and record elements incorporating paddock identification, grazing rotation and stock feed/pasture elements (4.1, 4.4, 5.2, 5.6, 5.7, 5.8, 5.9, 7.7)
- Notification of GM status of farm be identified to the tanker driver (9.5, 10.3)

The Code provides strong coverage of the following aspects -

- Identity preservation and segregation (apart from on-farm raw material inputs) (C3, C4, 14.1, 15.1)

- Corrective and preventive actions (C9). Recall is specifically considered at the manufacturing stage.
- Trace back and trace forward (C12, 16.2, 17.2)
- Raw material trace at the processor (15.2, 17.1, 18.1)
- Hold and release to review final product at the processor (18.2)

### **Tasmanian Dairy Industry Authority - Code of Practice for Dairy Food Safety**

The Tasmanian Dairy Industry Authority acknowledges Dairy Food Safety Victoria for the use of their Code of Practice for Dairy Food Safety during the development of their 2003 Code. Using a risk-based approach, the Tasmanian Code of Practice does not presently consider that a GM presence is a food safety risk.

The Tasmanian Code of Practice essentially mirrors the Victorian Code, apart from two significant elements.

- Individual company requirements are required to be addressed, which ensures that the processor/customer specifications would be included in the scope of any food safety plan (C2, C6, C8, 1.2, 16.3)

Referencing individual company requirements provides capture of elements which the processor specifies in support of their manufacturing process. This provides an opportunity to understand business responsibilities and specifications on farm.

- The use of approved carriers at the transport stage (12.1, 13.1, 13.2, 13.3)

Approved supplier elements could be expanded to provide wider coverage and strength for the Code. This is particularly important where raw material trace at farm is considered by this Study to be an area where a GM presence can be reviewed more effectively.

It is considered that the presence of these two elements provides significant strength to the Tasmanian Code.

As with the Victorian Code of Practice for Dairy Food Safety, an appropriately scoped food safety program on farm would enable a number of elements to be included which are not scoped within the Code.

- Specifications detailing raw material requirements at the farm gate level, as well as review of suppliers for their ability to supply to those requirements (1.1, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 3.1, 3.2, 3.3, 3.5, 6.3, 6.4, 6.5, 6.6, 7.5, 7.6, 7.7)
- Identification and segregation issues for raw materials and service providers (not milk carriers) (1.6, 3.1, 4.1)
- Inventory of stock feed (4.2)
- Issues outside the immediate dairy premises, including good farming practices (2.1, 2.2, 2.4, 2.5, 5.1, 5.2, 5.3, 5.4, 5.7)
- Identification and movement processes for all stock, not just treated animals (4.3, 5.5, 6.1, 6.2, 6.3, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.4, 7.5, 7.8, 8.1).

## **Warrnambool Cheese and Butter Co**

The Warrnambool Cheese and Butter Co operations are well supported by a number of management systems including ISO 9001:2000 and the Victorian Code of Practice for Dairy Food Safety. The combination of these systems ensures that the Company has the benefit of solid support from the flow of management elements across these systems.

Whilst the analysis has looked at each system within the process flow individually, Warrnambool Cheese and Butter Co has the benefit of this multi-faceted system, which if scoped correctly could pick up the application of GM technology.

This is obvious in the following areas -

- Quality Plus does not require that on-farm management understand business responsibilities associated with the application of GM technology (C2). ISO 9001:2000 could cover this requirement through its approved supplier processes.
- The Victorian Dairy Code of Practice does not require that specific roles and authorities be assigned within the on-farm business enterprise. However, Section 15 of the Quality Plus Working Manual requires that a list of responsibilities be developed (C3).
- Warrnambool Cheese and Butter does not provide finished product specifications detailing GM status or tolerance levels within its Milk Supply Handbook or Quality Plus at the on-farm level. However, ISO 9001:2000 requires clear customer and/or finished product specifications in planning for product realisation and these would (it is assumed) be fed in at the on-farm level (C6, 1.2, 16.3)
- Underlying product identification and trace steps within ISO 9001:2000 and the Victorian Code of Practice for Dairy Food Safety support the issues covered in the Quality Plus system. (C3, C4, C11 C12)

Also strong within the Warrnambool Cheese and Butter system are;

- Processes for identifying product non-conformity (C10)
- Requirements for stock feed declarations (1.1)
- Paddock identification and mapping (2.1, 5.1, 5.2)
- Contamination of feed issues (3.2)
- Stock identification and movement - including introduced and agisted stock (4.3, 5.5, 5.6, 6.1, 6.7, 7.1, 7.4, 8.1)
- Good farming practices (2.4, 2.5, 5.3, 5.4)
- Roles and responsibilities for carriers (9.1)
- Hold and release prior to discharge to tanker (9.4)

Enhancements could be provided to give strength in the following areas -

- Specifications and review processes for raw material and service requirements apart from stock feed (1.3, 1.4, 1.5, 1.8, 3.3, 3.5, 12.1, 12.2, 12.4, 13.1, 13.2)
- Infrastructure outside the immediate dairy premises (2.2)
- Grazing of GM pastures (5.8, 5.9, 6.8, 7.2)
- Check on agisted pastures (6.6, 7.7, 7.8)
- Does not require that milk with non-GM status be clearly identified (8.3)
- Processes for being advised of the non-GM status of milk prior to receipt at the processor level (8.3, 8.5, 9.5, 10.3, 12.5, 13.5, 14.2, 14.5)

### **Bonlac Total Management System**

Bonlac are keenly aware of GM technology issues within their supply chain. Whilst the documentation reviewed does not specifically reference GM technology, the system is well supported by ISO 9001:2000 and the Tasmanian Code of Practice for Dairy Food Safety.

Through focussed implementation, Bonlac's system could ensure that any GM issues are positively handled, particularly if they are defined at an on-farm level through an approved supplier process. This would ensure that business responsibilities and management understanding related to the application of the technology is achieved.

Stock feed and Vendor declarations (for stock) are a current requirement within the system, and this provides for a description of the product, ingredients, and intended uses to be stated. However, the system could gain further strength with the control functions generated by an approved supplier and raw material process (C2, C8, 1.2, 1.3, 1.4, 1.5, 1.8, 3.3, 3.5, 6.3, 7.6).

Whilst not clearly specified within the Bonlac system, an appropriately scoped HACCP Food Safety Plan would pick up elements of identity preservation and segregation which are found within other management systems within the Bonlac process flow. Roles and responsibilities and training could be further defined to ensure that these issues and those associated with achieving customer and finished product specifications (including any for a GM presence) are achieved (C3, C4, C5, C6, C11, C12).

There are strong elements of stock identification and movement processes that take into account agisted pastures, which is a feature of this system over others reviewed (4.3, 4.4, 4.5, 5.5, 6.2, 6.4, 6.5, 6.6, 6.7, 6.8, 7.1, 7.4, 7.5, 7.7, 7.8).

Good farming practices are well referenced for on-farm functions outside the immediate dairy premises (2.4, 5.2, 5.3, 5.5, 5.7, 5.8, 6.1, 6.8, 7.1, 7.4, 7.5).

Incorporation of elements relating to the notification of a non-GM presence at the on-farm level would be a useful control point. (8.3, 8.5, 9.5, 10.3, 12.5, 13.5, 14.2, 14.5)

### **AQIS FPA System of Inspection**

The FPA System of Inspection has been difficult to analyse in comparison to other systems (including the AQIS AQA System of Inspection) due to the number of source documents, namely - *Export Control (Processed Food) Orders* Schedule 2, Schedule 3, and Schedule 7 FPA System of Inspection, and the FPA Self-Help Handbook.

Due to the coverage of other management systems and codes within the Dairy sector, it is considered that an appropriately scoped process flow and HACCP plan could pick up the majority of issues to be considered by GM technology at the processor level. In stating this, the processor would need to be keenly aware of their product related processes and customer specifications for finished product (C2, C3, C4, C6, C7, C8, C11, C12).

Whilst it is acknowledged that the FPA system of Inspection is designed to be less compliant than the AQA System of Inspection, it is considered that the best possible point of control for processors receiving milk is at the farm gate prior to dispatch. The process flow and HACCP plan would therefore need to carefully consider approved supplier and raw material elements if it was to constructively handle GM technology to satisfy regulatory or importing customer/country requirements (C8, 13.1, 13.2, 13.3, 13.4, 13.5, 14.3, 14.5).

Training in roles and responsibilities within the FPA System of Inspection could also be highlighted in further detail to reinforce a whole-of-business approach to achieving quality and food safety objectives, not just GMP (C5).

### **AQIS AQA System of Inspection**

Although a 1992 version of the AQA Handbook was analysed within this Study, it is considered that the system is closely mirrored to ISO 9001:2000 and well suited to a processing environment.

Most of the elements necessary to ensure that identity preservation and segregation are achieved are evident and handled well by the AQA system. The processor implementing the system would need to identify and plan the production, storage and (where appropriate) transport processes that directly affect quality and ensure they are carried out under controlled conditions (C3, C11, C12, 13.1, 13.2, 13.3, 13.4, 13.5, 14.1, 14.2, 14.4, 14.5, 5.2, 25.2, 15.3, 15.4, 15.5, 16.1, 16.2, 16.3, 17.1, 17.2, 17.3, 18.1, 18.2).

Customer focus is strong and elements of contract review are also included which ensures that the business understands the complete scope of the product to be produced (C2, 16.3)

Raw material processes are present and focus on incoming ingredients and their verification to ensure that they conform to specifications. Any incoming material used prior to clearance is also subject to procedures which will result in the detection of product non-conformity in the event that they do not meet specification (C8, 14.5, 15.2, 15.3, 15.4, 16.2, 17.1, 18.1).

A check on software to ensure that it is well able to support processing and segregation issues could be included in the section of "special processes" to enhance this element (15.5, 16.1).

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# Poppies

## Overview

Commercial opium poppies (*Papaver somniferum*) are grown in Tasmania through a licensing regime overseen by the Poppy Advisory and Control Board. Poppy production provides a unique case study due to the strict regulatory controls in place. The case study also provides an example of a closed loop supply chain.

The systems that operate through the supply chain include the regulatory requirements of the Poppy Advisory and Control Board and ISO 9001:2000. The OECD Scheme for the varietal certification of Crucifer seed and other oil or fibre species seed moving in international trade, 2000 has been included as the poppy processing companies are actively involved in seed breeding and multiplication.

The supply chain has been mapped from seed crop production through commercial cropping and processing to active pharmaceutical product and also through to seed for culinary purposes, although the major focus of interest is commercial cropping and processing. Processing companies have indicated that should GM poppies be commercially produced, the culinary seed trade would cease.

HACCP may also be implemented, but an analysis of HACCP has not been undertaken for reasons previously mentioned

## Poppy Advisory and Control Board

The PACB is an agency of the Tasmanian Government Department of Justice and Industrial Relations. The board's role in the regulation and surveillance of the industry is clearly defined:

- To act as a licensing authority for the industry
- To advise on matters relating to the cultivation, production and transport of poppies and poppy material
- To collect and collate statistical information and prepare reports
- To liaise with Australian Government departments to fulfil Australia's obligations under the International Drug Conventions
- To oversee security matters for Tasmanian crops.

Stringent control is required over;

- Field security
- Factory operations and movements within the states of Tasmania and Victoria
- Exports outside Australia.

The State Police of Tasmania and Victoria, the Australian Protective Services, the Commonwealth Department of Health and Aging, the Australian Customs Service and the PACB jointly share responsibility for security.

Tasmania has laws prohibiting unauthorised cultivation and possession of any part of the poppy plant, with severe penalties in place.

Licences to grow the *P.somniferum* plant are issued to farmers only after they have been contracted to grow and dispose of the crop (when harvested) to a licensed manufacturer. Farmers must also have obtained security clearance from Tasmania Police and provide a detailed plan of the cultivation site.

Security efforts are co-ordinated by PACB, but also include general surveillance and reporting by growers, contractors and field officers as well as investigation of thefts, apprehension and prosecution of offenders by the Tasmania Police Drug Bureau Task Force.

In the risk assessment the issue of volunteers and movement of seed leading to adventitious presence is generally given a low severity due to the legal requirement to remove volunteers from paddocks and roadsides.

## ISO 9001:2000

Please refer to Cotton Case study for description of ISO 9001:2000.

## **OECD Scheme for the varietal certification of Crucifer seed and other oil or fibre species seed moving in international trade, 2000 OECD**

The OECD Seed Certification Scheme is not currently used for production of poppy seed and its inclusion is not intended to confer any requirement that it be adopted by the poppy industry. It is simply included to analyse the seed production controls offered by this system. The OECD Seed Certification Scheme is supplemented by local requirements and is overseen by State Departments of Agriculture. The local requirements are currently being revised and so were not able to be included in this analysis.

There are a variety of OECD Seed Certification Schemes for different seed species, but the schemes have the same general scope, that being to provide certification of seed with regard to purity including parentage and weed seed contamination and germination percentage.

### **Results of analysis**

#### **ISO 9001:2000**

ISO 9001:2000 can be applied at all stages of the supply chain, though traditionally due to its complexity it has been implemented by larger agrifood businesses such as corporate farming operations, packers and processing organisations.

This system thoroughly addresses the majority of issues identified. If the system has a weakness it is in relation to requirements for implementation of crop hygiene practices (18.2) and good farming practices (18.3, 21.8). It is possible that these issues could be addressed through Control of production and service provision, ISO element 7.5.1.

The issue of roadside volunteers (see Analysis questions 3.3, 9.6, 11.4, 15.3, 21.7, 34.2, 36.3, 38.3) would perhaps not normally be addressed by an ISO system, however as it is a legal requirement for poppy material to always remain on licensed sites, the issue is picked up through ISO element 7.2.1 which requires statutory and regulatory requirements be addressed. The issue is complicated somewhat as the actual responsibility for removing volunteers from roadsides varies with road type and jurisdiction.

#### **PACB**

The Poppy Advisory and Control Board's activities do not cover the majority of the core elements expected of a quality system. This is not surprising as the Board's scope is to oversee legal requirements rather than to be a traditional quality system and is not in any way a criticism of the PACB. The analysis has highlighted areas where the PACB role could provide support to issues of identity preservation and segregation of GM products.

The principle strengths of the PACB's activities are in the following areas;

- Inspection of paddocks throughout the life of the crop and post-harvest clean-up (C1)
- Control of volunteers, in paddock, surrounding land, along roadsides, subsequent crops (1.1, 3.3, 8.1, 8.2, 11.4, 13.1, 15.3, 19.7, 20.1, 20.2, 21.7, 34.2, 36.3, 38.3)
- Secure transport of seed and product (3.2, 9.5, 11.3, 15.2, 21.6, 34.1, 36.2, 38.2)

- Identification of properties where poppies are grown and variety (C12, 5.6, 5.7, 17.6, 17.7)
- Formalised relationship with and requirements of growers, enforceable by law (1.3, 1.5, 13.3, 13.5)
- Control of locations where seed and product is stored/handled/disposed (7.5, 7.6, 9.4, 25.2, 27.3, 28.3, 29.3, 30.4, 31.4, 37.4)
- Cleaning of harvest equipment prior to leaving paddock (19.8, 21.3)

**OECD Scheme for the varietal certification of Crucifer seed and other oil and fibre species seed moving in international trade, 2000.**

The strengths of the OECD seed scheme for identification of seed are clear. The system is prescriptive with relation to how certified seed will be labelled and the need for permanency of this labelling (C11, C12, 5.6, 5.7, 12.1, 12.2)

The system also addresses crop production issues such as;

- Requirement for appropriate cropping history and time intervals since crops of the same species (1.1)
- Specification of isolation distances between seed crops and other potential pollinating species (1.4). Isolation distances take account of pollination method (ie self-pollinating vs cross-pollinating).
- Requirement for seed to be of known an acceptable genetic purity and for this information to be attached to seed containers (2.1, 3.1, 4.1, 4.2, 5.7)
- Secure transport of seed (3.2)
- Monitoring of seed crop for purity during growth (6.1)

However the system does not specifically address issues such as;

- In-process identification of seed, for example harvested seed not yet cleaned and packaged for sale (7.1, 7.2, 9.1, 9.2, 10.1, 10.2, 11.1, 11.2)
- Cleaning of seeding, harvest and seed cleaning equipment (5.1, 5.2, 7.4, 9.3, 9.4, 12.3)
- Appropriate location for cleaning seeding and harvest equipment and control of material cleaned from equipment (5.2, 5.3, 5.4, 7.5, 7.6)
- Control of material cleaned from seed cleaning equipment (12.4)
- Management of seed stocks by seeding contractor (5.5)
- Specifications for selection and performance of grower and contractors (1.5, 7.3)

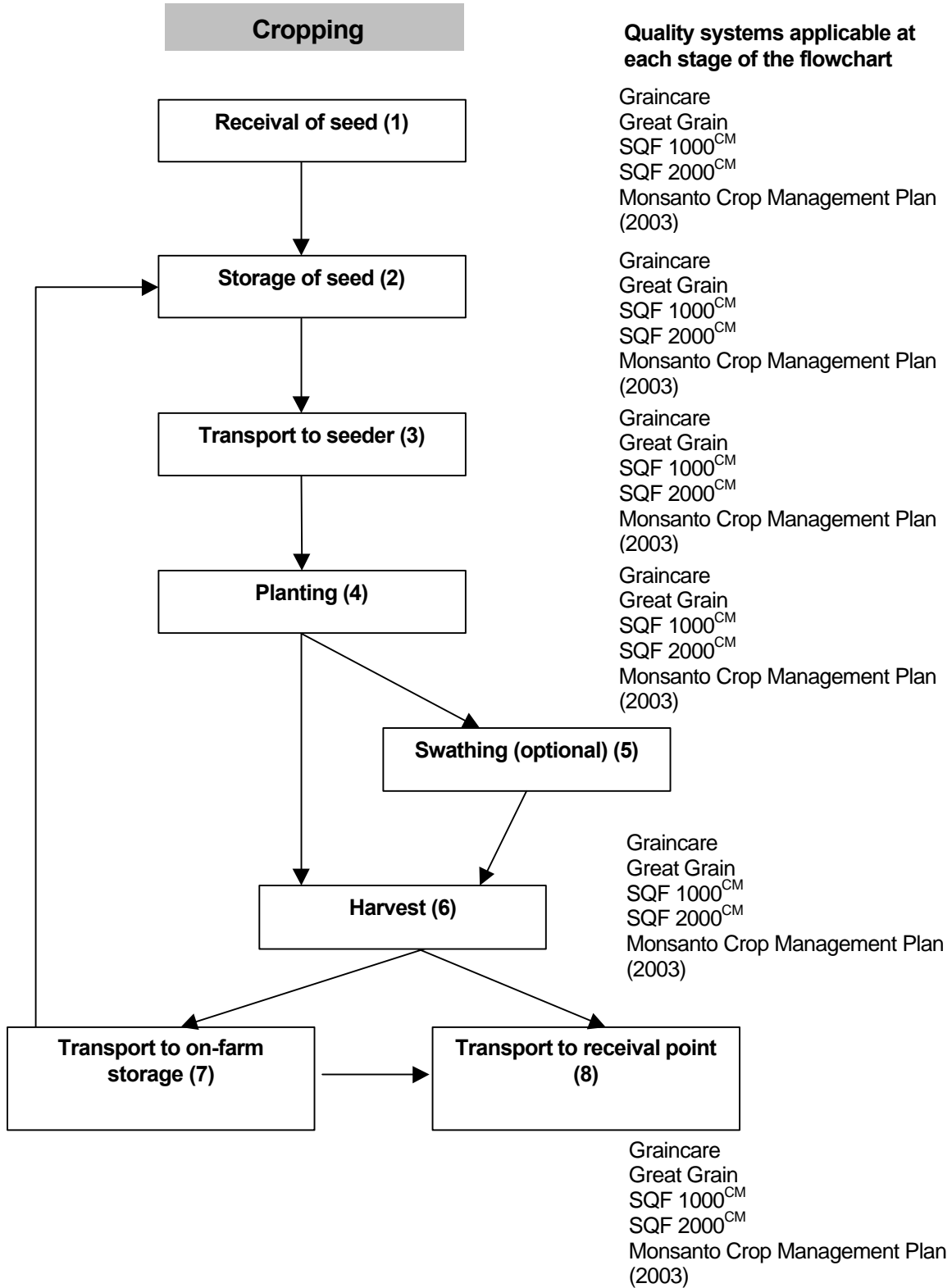
Read in isolation the OECD seed scheme appears weak in its requirements for “in-process” controls such as identification of seed between harvest of seed crop and packaging for “sale”. This particular point has been identified by local designated authorities and is in the process of being formally addressed. It is also important to bear in mind that the scheme is supported by local requirements that were not able to

be assessed as part of this project and these requirements may address many of the issues raised above.

# Appendices

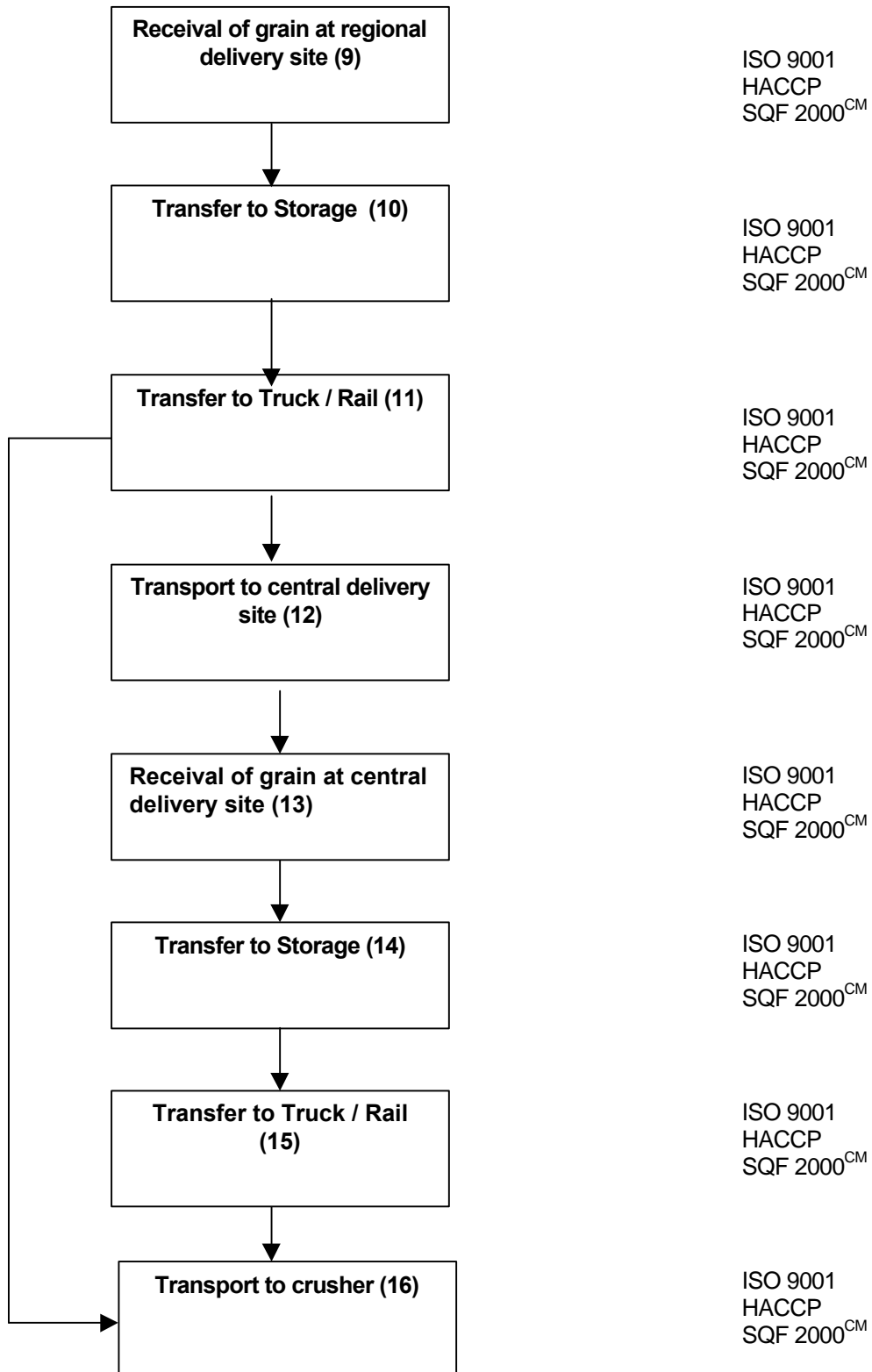
# Canola

## Supply Chain Mapping for canola destined for oil



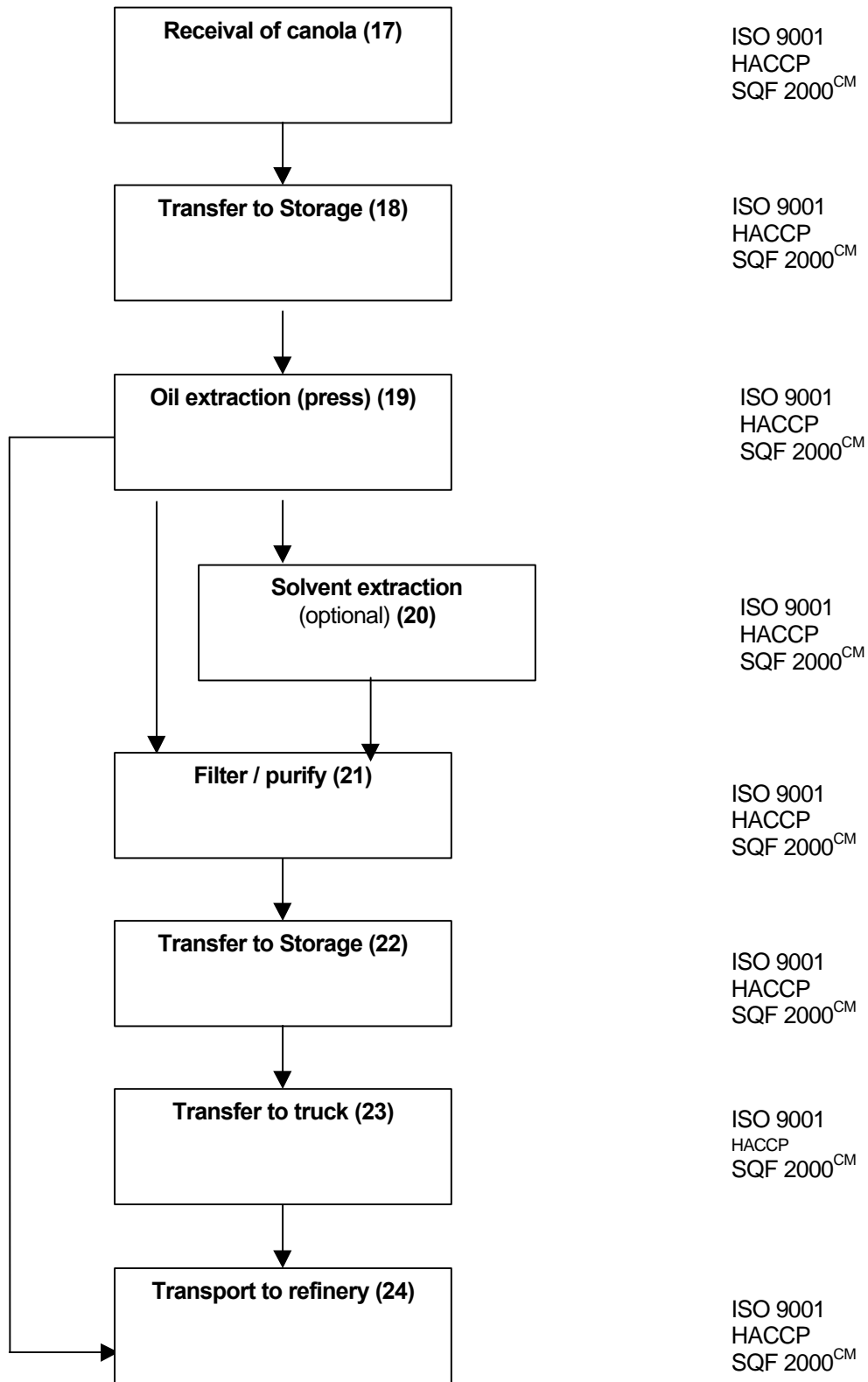
## Bulk Grain Handling

Quality systems applicable at each stage of the flowchart



**Oilseed Processing**

**Quality systems applicable at each stage of the flowchart**



## Risk Assessment for canola destined for oil

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Receival of seed (1)	Loss of traceability	Line / batch numbers of purchased seed not recorded	Possible	Recall	Must	Does the system require that a record is kept of the purchase of seed including line/batch numbers to allow for product trace? (1.1)
Storage of seed (2)	Unacceptable level of adventitious presence in purchased seed	Spillage or animal transfer of stored seed	Unlikely	Rejection	Should	Does the system ensure that storage of seed is done in such a way as to avoid any chance of cross contamination? (2.1)
	Mix-up of seed varieties	Poorly identified seed storage	Possible	Recall	Must	Does the system require that seed is clearly identified at all times during storage? (2.2)
	Unacceptable level of adventitious presence in purchased seed	Storage equipment not thoroughly cleaned prior to filling	Possible	Complaint	Should	Does the system ensure that bulk storage is practically free from other seeds prior to filling? (2.3)
	Loss of traceability of farmer saved seed	Harvest records which do not allow for the identification of source paddocks	Possible	Rejection	Should	Does the system ensure that farmer saved seed can be traced from the paddock it came from? (2.4)
Transport to seeder (3)	Unacceptable level of adventitious presence in subsequent crop	Seed left in the transport equipment following transport of GM seed.	Almost Certain	Not commercially significant	Should	Does the system ensure that equipment used to transport seed to the seeder is practically free of seeds when switching from GM seed? (3.1)
Planting (4)	Unacceptable level of adventitious presence of GM canola in subsequent crop	Seed left in the seeding equipment following planting	Almost Certain	Not commercially significant	Should	Does the system ensure that planting equipment is practically free of seeds when switching from GM seed? (4.1)
		Uncontrolled / uncontrollable volunteers in subsequent canola crop	Possible	Rejection	Should	Does the system ensure that non GM Canola is not planted in a paddock in which GM canola was planted within an industry agreed period of years? (4.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Planting (contd) (4)	Unacceptable level of adventitious presence in crop	Planting mix-ups, poor labelling or instructions	Possible	Rejection	Must	Does the system require that GM seed purchases/ inventory are reconciled with GM seed used and GM seed leftover? (4.3)
	Pollen flow to non-GM canola crops	Wind, insects or animals	Almost Certain	Complaint	Must	Does the system ensure that a scientifically sound / industry agreed boundary is maintained to reduce cross-pollination? (4.4)
	Pollen flow to non-GM canola crops	Uncontrolled volunteers providing a pollen source	Almost Certain	Complaint	Must	Does the system address the need to control volunteer plants in: (4.5) The paddock and adjacent paddocks including fencelines? Paddocks where grazing animals may have transported seed? Farm roads, roadsides, and GM storage sites? Equipment cleanout / wash down areas?
Swathing (5)	Spread of GM seed within and / or outside of property	Seeds / pods spread by equipment (i.e. sprayer, tyres)	Likely	Complaint	Should	Does the system ensure that equipment is practically free from seeds and pods when switching from GM paddocks? (5.1)
		Seeds / pods in swathing equipment	Likely	Complaint	Should	Does the system address the roles and responsibilities of contractors (if used)? (5.2)
Harvest (6)	Adventitious presence of GM canola in load	Canola grain remaining in harvester and harvest equipment	Almost Certain	Not commercially significant	Should	Does the system ensure that all harvest equipment, including field bins and chaser bins, are practically free from seeds and pods when switching from GM paddocks? (6.1)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transport to on-farm storage (7)	Unacceptable level of adventitious presence of GM canola in load or saved seed	Canola grain remaining in Truck and transport equipment	Almost Certain	Complaint	Must	Does the system ensure that transport equipment is practically free from seeds and pods when switching from GM paddocks? (7.1)
	Spread of GM seed within property	Grain leakage out of transport equipment	Likely	Complaint	Should	Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (7.2)
Transport to receival point (8)	Unacceptable level of adventitious presence of GM canola in load	Canola grain remaining in truck and transport equipment	Almost Certain	Not commercially significant	Should	Does the system ensure that transport equipment is practically free from seeds and pods when switching from GM paddocks? (8.1)
	Spread of GM seed outside property	Grain leakage out of transport equipment	Likely	Customer complaint	Should	Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (8.2)
Receival of grain at regional delivery site (9)	GM Truckload delivered into non GM segregation	Misidentification of load	Likely	Recall	Must	Is there a clear process for the correct identification of product to the operator at ALL times? Does it allow for the clear identification of GM vs. non-GM product? (9.1)
	Grain delivered to wrong segregation	Equipment failure or fault	Likely	Recall	Must	Does the system ensure that all GM grain movements are recorded and reviewed? (9.2)
	Adventitious presence in next canola delivery	Sampler mishandling samples of GM Canola	Possible	Complaint	Should	Does the system ensure that samples of GM canola are not mixed with non-GM canola? (9.3)
	Adventitious presence in non GM stack	GM canola residues in and around grain receival pit	Almost Certain	Not commercially significant	Should	Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (9.4)
	Spread of GM seed outside property	Inappropriate cleanout location	Almost Certain	Complaint	Must	Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (9.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transfer to storage (10)	Unacceptable level of adventitious presence in stack	Transfer equipment not thoroughly cleaned prior to filling	Possible	Complaint	Should	Does the system ensure that bulk storage is practically free from other seeds prior to filling? (10.1)
	Mix-up of grain varieties	Equipment failure or fault	Possible	Recall	Must	Does the system require that a failure or fault in the segregation system is readily identifiable? (10.2)
		Faulty handling equipment	Possible	Rejection	Should	Does the system require that transfer equipment is maintained to minimise leakage of product? (10.3)
Transfer to Truck / Rail (11)	Unacceptable level of adventitious presence in load	GM canola left in the transport equipment following transport	Likely	Not commercially significant	Should	Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (11.1)
Transport to central delivery site (12)	Spread of GM seed along roadsides / railway	Grain leakage out of transport equipment	Likely	Complaint	Should	Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (12.1)
	Spread of GM seed outside property	Inappropriate cleanout location	Almost Certain	Complaint	Must	Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (12.2)
Receival of grain at central delivery site (13)	Truckload delivered into non GM segregation	Misidentification of load	Likely	Recall	Must	Is there a clear process for the correct identification of product to the operator at all times? Does it allow for the clear identification of GM vs. non-GM product? (13.1)
	Grain delivered to wrong segregation	Equipment failure or fault	Likely	Recall	Must	Does the system ensure that all GM grain movements are recorded and reviewed? (13.2)
	Adventitious presence in next canola delivery	Sampler mishandling samples of GM Canola	Possible	Complaint	Should	Does the system ensure that samples of GM canola are not mixed with non-GM canola? (13.3)
	Adventitious presence in non GM stack	GM canola residues in and around grain receival pit	Almost Certain	Not commercially significant	Should	Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (13.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transfer to Storage (14)	Unacceptable level of adventitious presence in stack	Transfer equipment and bulk storage not thoroughly cleaned prior to filling	Possible	Complaint	Should	Does the system ensure that transfer equipment and bulk storage is practically free from other seeds prior to filling? (14.1)
	Mix-up of grain varieties	Equipment failure or fault	Possible	Recall	Must	Does the system require that a failure or fault in the segregation system is readily identifiable? (14.2)
		Faulty handling equipment	Possible	Rejection	Should	Does the system require that transfer equipment is maintained to minimise leakage of product? (14.3)
Transfer to Truck / Rail (15)	Unacceptable level of adventitious presence in load	GM canola left in the transport equipment following transport	Likely	Not commercially significant	Should	Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (15.1)
Transport to crusher (16)	Spread of GM seed along roadsides / railway	Grain leakage out of transport equipment	Likely	Not commercially significant	Should	Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (16.1)
	Spread of GM seed outside property	Inappropriate cleanout location	Almost Certain	Not commercially significant	Should	Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (16.2)
Receival of canola (17)	GM Truckload delivered into non GM segregation	Misidentification of load	Likely	Recall	Must	Is there a clear process for the correct identification of product to the operator at all times? Does it allow for the clear identification of GM vs. non-GM product? (17.1)
	Grain delivered to wrong segregation	Equipment failure or fault	Likely	Recall	Must	Does the system ensure that all GM grain movements are recorded and reviewed? (17.2)
	Adventitious presence in non GM stack	GM canola residues in and around grain receival pit	Almost Certain	Not commercially significant	Should	Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (17.3)
	Spread of GM seed outside property	Inappropriate cleanout location	Almost Certain	Complaint	Must	Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (17.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transfer to storage (18)	Unacceptable level of adventitious presence in stack	Transfer equipment not thoroughly cleaned prior to filling	Possible	Complaint	Should	Does the system ensure that bulk storage is practically free from other seeds prior to filling? (18.1)
	Mix-up of grain varieties	Equipment failure or fault	Possible	Recall	Must	Does the system require that a failure or fault in the segregation system is readily identifiable? (18.2)
		Faulty handling equipment	Possible	Rejection	Should	Does the system require that transfer equipment is maintained to minimise leakage of product? (18.3)
Oil extraction (press) (19)	Unacceptable level of GM oil in non GM oil	GM Canola oil left in the extraction equipment	Likely	Not commercially significant	Should	Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (19.1)
Solvent extraction (optional) (20)	Unacceptable level of GM oil in non GM oil	GM Canola oil left in the extraction equipment	Likely	Not commercially significant	Should	Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (20.1)
Filter/purify (21)	Mixing of oil from GM and non-GM sources	GM Canola oil left in the filter / purification equipment	Almost Certain	Recall	Must	Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (21.1)
Transfer to storage (22)	Mixing of oil from GM and non-GM sources	GM canola oil left in the pipe work and storage tanks	Almost Certain	Recall	Must	Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (22.1)
Transfer to truck (23)	Mixing of oil from GM and non-GM sources	Canola oil of GM origin left in the tanker filling pipe work or tanker	Almost Certain	Not commercially significant	Should	Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (23.1)
Transport to refinery (24)	Tanker of canola oil of GM origin delivered to a customer requiring non GM	Misidentification of load	Likely	Recall	Must	Is there a clear process for the correct identification of product to the customer at all times? Does it allow for the clear identification of GM vs. non-GM product? (24.1)

**Analysis of quality systems against hazards to product segregation and identity preservation along the Canola Oil supply chain.**

**Core elements**

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Core elements</b>							
Is the system subject to some form of external audit/inspection? (C1)	Must	Yes, growers are inspected by an in-field service provider in addition to co-operative random audits by Monsanto	Yes, the Graincare systems must be audited by a Graincare qualified auditor.	Yes, it must be audited yearly by a JASANZ accredited audit body.	Yes, it must be audited yearly by a JASANZ accredited audit body.	Yes, it must be audited twice yearly by a JASANZ accredited auditor	No, not unless they are referenced in another QA system
Does the system ensure that the management understand the business responsibilities and requirements related to the application of GM technology? (C2)	Must	Yes, there is a requirement for growers to undergo training. Section 8.2 <i>Training and Accreditation</i>	No, not specifically	No, not specifically	Yes, 4.1 <i>Commitment</i> requires the owner or most senior person to define the business commitment to quality in a policy statement that is relevant to the customer needs and expectations.	Yes, 4.1 <i>Commitment</i> requires the owner or most senior person to define the business commitment to quality in a policy statement that is relevant to the customer needs and expectations.	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require management to be committed to issues of identity preservation and segregation? (C3)	Must	No	No	Yes, 7.1 <i>Commitment</i> requires that a commitment statement is written which includes customer needs.	Yes, 4.1.1 <i>Management Policy</i> requires that a commitment statement is written which addresses customer needs and expectations to be signed by the owner or most senior person	Yes, 4.1.1 <i>Management Policy</i> requires that a commitment statement is written which addresses customer needs and expectations to be signed by the owner or most senior person	No
Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)	Must	No	Yes M1.1 <i>Training</i> requires documented job responsibilities	Yes, 7.2 <i>Responsibility</i> requires documenting each area of responsibility.	Yes, Element 4.1.3 <i>Organisational Structure</i> requires job descriptions and key responsibilities defined.	Yes, Element 4.1.3 <i>Organisational Structure</i> requires job descriptions and key responsibilities defined.	No
Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer/finished product specifications? (C5)	Must	No, only the requirement for growers to undergo training. Section 8.2 <i>Training and Accreditation</i>	Yes M1.2 <i>Training</i> requires that staff are trained in their areas of responsibility	Yes, Procedure 6.1 Training requires individuals to be trained in all areas.	Yes, Element 4.1.4 <i>Training</i> requires that individuals performing tasks at critical points must be appropriately trained	Yes, Element 4.1.4 <i>Training</i> requires that individuals performing tasks at critical points must be appropriately trained	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require clear customer specifications, particularly regarding GM status and tolerance levels? (C6)	Must	No, however Section 5.3 <i>How Do Growers Purchase and Deliver Roundup Ready Canola</i> indicates that any grain delivered must be declared as derived from GM origin.	No	Partial, not specifically required. However delivery standards and customer specifications are referenced in the Food safety plan so it could be assumed that they will be available	Yes, Element 4.2.2 <i>Finished Product Specifications</i> requires that written specifications are available	Yes, Element 4.2.3 <i>Finished Product Specifications</i> requires that written specifications are available	No
Does the system require verification that product meets customer specifications? (includes inspection and testing at an appropriate laboratory) (C7)	Must	No, however the TM section 6.2 <i>Testing Procedures</i> outlines a number of tests that can be done to determine whether Canola is of GM origin	No	No, not specifically however procedure 6.3 <i>Product Traceability and Identity Preservation</i> covers many aspects, including keeping samples from paddocks for testing if required and, testing seed prior to planting if required.	Yes, 4.3.1 Process Control requires (as a step of HACCP) that verification activities are conducted to ensure critical points are being controlled.	Yes, 4.3.1 Process Control requires (as a step of HACCP) that verification activities are conducted to ensure critical points are being controlled.	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)	Must	Partial, the CMP and TM indicates in several places that contractors must be made aware of the GM status of the crop and take appropriate measures.	No	Yes, Procedure 6.2.2 <i>Raw Material Inspection</i> requires specifications and inspection of raw materials upon delivery	Partial, Element 4.2.1 <i>Supplier Specifications</i> requires that specifications exist for all raw materials and services but does not require inspection or verification	Yes, Element 4.2.1 <i>Supplier Specifications</i> requires that specifications exist for all raw materials and services Element 4.2.2 <i>Incoming Goods and Services</i> require that raw materials are inspected prior to use or have originated from an approved supplier	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)	Must	Partial, Section 9 of the CMP <i>Seed Hygiene, Planting, Storage and Transport at Harvest</i> indicates that when Roundup Ready canola and other varieties are mixed the grain must be declared as GM. Section 11 of the CMP <i>Adverse Event Reporting</i> requires any adverse events be reported to Monsanto. There is no specific requirement to advise customer.	Yes, M2.2 and M2.4 of Element M2 <i>Internal auditing and corrective action</i> requires that a corrective action is raised is product is identified as being potentially contaminated and that if sold, the buyer must be notified.	Yes, Procedure 6.3.4 <i>Grower responsibilities</i> require that customers should be advised of any breakdown in the identification preservation. There is no reference to a formal recall procedure	Yes, but not explicitly Element 4.3.2 <i>Corrective and Preventative Action</i> requires that a procedure is in place to deal with any food safety or quality issues. This will in most cases include notifying the customer and possibly recall of product.	Yes, Element 4.3.2 <i>Corrective and Preventative Action</i> requires that a procedure is in place to deal with any food safety or quality issues. Element 4.6.3 <i>Product Recall</i> requires a tested and verified product recall procedure is in place.	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system include a formal process such as an internal audit to identify mistakes, loss of identity, mix-ups, product non-conformity or other significant problems within the system? (C10)	Must	Partial, the requirement for an In-Field service provider might uncover problems. In TM section 6.1.1 Data Sent to Monsanto there is a requirement for a Crop Management Plan Checklist to be sent to Monsanto. There is no requirement however for an internal audit.	Partial, Element M2 <i>Internal auditing and corrective action</i> requires that an internal audit checklist is completed however this checklist is standardised and only looks only at requirements within the Graincare system. As a result, it does not address all identified issues.	Partial, while there is an internal audit checklist in Section 9 <i>Internal audit checklist</i> it would not effectively uncover product identification issues. Other steps listed in this section would most likely fulfil this requirement however they are 'shoulds' and therefore not required.	Yes, Element 4.4.2 <i>Internal Audits</i> requires internal audits and actions to be taken to correct any deficiencies found. Element 4.3.1 Process Control requires Internal audits as a verifications procedure under HACCP step 11 <i>Verification</i> .	Yes, Element 4.4.2 <i>Internal Audits</i> requires internal audits and actions to be taken to correct any deficiencies found. Element 4.3.1 Process Control requires Internal audits as a verifications procedure under HACCP step 11 <i>Verification</i> .	No
Does the system require that there is product identification at each process step? (C11)	Must	Yes, TM section 5.1.1 <i>Bagged Seed Storage and Handling</i> covers stored seed, and paddocks while Section 5.1.2 <i>Seed and Grain Transport</i> covers all transport.	No	Yes, several procedures including 6.3.4 <i>Grower Responsibilities</i> , 6.3.7 <i>Product Handling, Transfer and Labelling</i> and 6.4.2 <i>Storage</i> should cover this requirement	No, not explicitly, however Element 4.6.2 <i>Product Trace</i> requires a documented product trace procedure Element 4.6.1 <i>Product identification</i> only requires finished product to be identified.	No, not explicitly, however Element 4.6.2 <i>Product Trace</i> requires a documented product trace procedure and 4.3.3 <i>Non-Conforming product</i> requires identification of substandard product.	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results). (C12)	Must	Partial. While there is no specific requirement for traceability, records required within the system will by default create a traceable GM system.	No, not specifically, however most of the information would be kept within the system to allow for trace.	Yes, Food safety plan requirement <i>Product Traceability and Identity Preservation</i> addresses product trace issues	Yes, Element 4.6.2 <i>Product Trace</i> requires that raw materials and other inputs must be traceable to the finished products.	Yes, Element 4.6.2 <i>Product Trace</i> requires that raw materials and other inputs must be traceable to the finished products.	No

## Supply chain step

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Receival of Seed (1)</b>							
Does the system require that a record is kept of the purchase of seed including line/batch numbers to allow for product trace? (1.1)	Must	Yes, TM 5.1.1 <i>Bagged Seed Storage and Handling</i> and TM 5.2.1 <i>Sowing implements</i>	No but requires a record is kept of the seed source which may include the line / batch number	Yes procedure 6.3.4 <i>Grower Responsibilities</i>	Yes although not explicitly stated. 4.6.2 <i>Product trace</i> requires identification of raw materials through the system	Yes although not explicitly stated. 4.6.2 <i>Product trace</i> requires identification of raw materials through the system	N/A
<b>Storage of Seed (2)</b>							
Does the system ensure that storage of seed is done in such a way as to avoid any chance of cross contamination? (2.1)	Highly Desirable	Yes, TM 5.1.1 <i>Bagged Seed Storage and Handling</i>	Yes Although not explicitly stated, adherence to element G5 <i>On-farm storage and handling</i> and G1.5 <i>Inputs and service suppliers</i> should minimise the risk	No not explicitly but procedure 6.3.7 <i>Product Handling, Transfer and Labeling</i> refers to facilities and systems that are "capable of preserving the product "	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system require that seed is clearly identified at all times during storage? (2.2)	Must	Yes TM 5.1.3.1 <i>Labelling</i>	Yes G5.1 <i>On Farm Storage and Handling</i>	Yes, procedure 6.3.4	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A

<b>Issue to be addressed</b>	<b>Rating</b>	<b>Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)</b>	<b>Graincare</b>	<b>Great Grain</b>	<b>SQF 1000<sup>CM</sup></b>	<b>SQF 2000<sup>CM</sup></b>	<b>AOF Code of Practice</b>
Does the system ensure that bulk storage is practically free from other seeds prior to filling? (2.3)	Highly Desirable	Yes, TM 5.1.3.1 <i>Grain Storage Cleaning</i>	Yes G5.3 <i>On Farm Storage and Handling</i>	Yes procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment (including storage) prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system ensure that farmer saved seed can be traced from the paddock it came from? (2.4)	Highly Desirable	Yes TM 5.1.3.2 <i>Labelling</i>	Yes G5.7 <i>On Farm Storage and Handling</i>	Yes, Procedure 6.3.6 <i>Establishing Seed Source</i> covers establishing a seed source.	Yes, Element 4.6.2 <i>Product Trace</i> requires that raw materials and other inputs must be traceable through the system to the finished products.	Yes, Element 4.6.2 <i>Product Trace</i> requires that raw materials and other inputs must be traceable through the system to the finished products.	N/A
Does the system prevent farmer saved seed from being sold to another grower? (2.5)	Must	Yes, CMP Section 8 <i>Farmer Saved Seed</i>	No	No	No	No	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Transport to Seeder (3)</b>							
Does the system ensure that equipment used to transport seed to the seeder is practically free of seeds when switching from GM seed? (3.1)	Highly Desirable	Yes, although not explicitly stated section 9 of CMP <i>Seed Hygiene, planting, Storage and Transport at harvest</i> clearly indicates the importance of preventing dispersal of seed	Yes G1.3 <i>Inputs and service suppliers</i> should require that inputs are transported in a manner that minimises the risk of contamination. G3.3 <i>Crop Management</i> requires equipment to be cleaned pre-seeding and post-seeding	No, not explicitly, however procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A
<b>Planting (4)</b>							
Does the system ensure that planting equipment is practically free of seeds when switching from GM seed? (4.1)	Highly Desirable	Yes, although not explicitly stated section 9 of CMP <i>Seed Hygiene, planting, Storage and Transport at harvest</i> clearly indicates the importance of preventing dispersal of seed	Yes, depending in interpretation G3.3 <i>Crop Management</i> requires equipment to be cleaned pre-seeding and post-seeding	No, not explicitly, however procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure that non GM Canola is not planted in a paddock in which GM canola was planted within an industry agreed period of years? (4.2)	Highly Desirable	Partial, Section 6 of CMP <i>Management of open pollinated canola</i> mentions use of proper rotations. Section 3.1 of the TM <i>Crop Husbandry</i> states that RR canola should not be "grown one year in two".	Yes element G2.1 <i>Paddock selection and preparation</i> requires that a risk assessment is done on the paddock to identify food safety concerns	No	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system require that GM seed purchases/ inventory are reconciled with GM seed used and GM seed leftover? (4.3)	Must	No	No	No	Yes if 4.3.1 <i>Process Control</i> identifies mix-ups at seeding as a significant hazard	Yes if 4.3.1 <i>Process Control</i> identifies mix-ups at seeding as a significant hazard	N/A
Does the system ensure that a scientifically sound / industry agreed boundary is maintained to reduce cross-pollination? (4.4)	Must	Yes section 6 of CMP <i>Management of open pollinated canola</i>	No	No	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<p>Does the system address the need to control volunteer plants in: (4.5)</p> <p>The paddock and adjacent paddocks including fencelines?</p> <p>Paddocks where grazing animals may have transported seed?</p> <p>Farm roads, roadsides, and GM storage sites?</p> <p>Equipment cleanout / wash down areas?</p>	Must	Yes section 7 of CMP Identification and control of volunteer canola and more specifically in the TM Section 3.47 to 3.4.10.	No	No	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A
<b>Swathing (optional) (5)</b>							
Does the system ensure that equipment is practically free from seeds and pods when switching from GM paddocks? (5.1)	Highly Desirable	Yes, although not explicitly stated section 9 of CMP <i>Seed Hygiene, planting, Storage and Transport at harvest</i> clearly indicates the importance of preventing dispersal of seed	No however element G4 <i>Harvesting and harvest equipment</i> indicates that harvest equipment shall be cleaned pre-harvest and post-harvest	No, not explicitly, however procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system address the roles and responsibilities of contractors (if used)? (5.2)	Highly Desirable	Yes, Section 5 of TM <i>Seed management</i> indicates that contractors must be made aware of the crop's GM status	Yes, element G1 <i>Inputs and service suppliers</i> should cover this requirements	Yes, procedure 6.2.1 <i>Approved suppliers</i> could cover this	Yes, element 4.2.1 <i>Supplier Specifications</i> requires specifications for services	Yes, element 4.2.1 <i>Supplier Specifications</i> requires specifications for services. Element 4.2.2 <i>Incoming Goods and Services</i> requires that are inspected or have originated from an approved supplier	N/A
<b>Harvest (6)</b>							
Does the system ensure that all harvest equipment, including field bins and chaser bins, are practically free from seeds and pods when switching from GM paddocks? (6.1)	Highly Desirable	Yes, although not explicitly stated section 9 of CMP <i>Seed Hygiene, planting, Storage and Transport at harvest</i> requires that appropriate measures are taken to avoid spillage during intermediate storage.	No, not explicitly, however element G4 <i>Harvesting and harvest equipment</i> indicates that harvest equipment shall be cleaned pre-harvest and post-harvest. This depends on interpretation	No, not explicitly, however procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Transport to on-farm storage (7)</b>							
Does the system ensure that transport equipment is practically free from seeds and pods when switching from GM paddocks? (7.1)	Highly Desirable	Yes, although not explicitly stated section 9 of CMP <i>Seed Hygiene, planting, Storage and Transport at harvest</i> requires that appropriate measures are taken to avoid spillage during transport	No but element G4 <i>Harvesting and harvest equipment</i> indicates that harvest equipment shall be cleaned pre-harvest and post-harvest and requires that transport equipment be clean, dry, and odourless	No, not explicitly, however procedure 6.8.1 <i>Machinery Hygiene</i> requires inspection of equipment prior to use	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	Yes AOF 2-4 Code of practice element 1.0.1 requires that trailers/rail cars must be free of any product prior to loading.
Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (7.2)	Highly Desirable	Yes 5.1.2 of TM <i>Seed and Grain Transport</i>	No	No, however Procedure 6.8.1 <i>Machinery Hygiene</i> indicates that equipment <b>should</b> not leak grain	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i>	Partial, AOF 2-4 element 1.0.8 requires that loads must be properly tarped.
<b>Transport to receival point (8)</b>							
Does the system ensure that transport equipment is practically free from seeds and pods when switching from GM paddocks? (8.1)	Highly Desirable	Yes 5.1.2 of TM <i>Seed and Grain Transport</i>	Yes G6.1 <i>Off-farm Transport</i>	No	Yes 4.3.1 <i>Process Control</i>	Yes 4.3.1 <i>Process Control</i> or 4.2.1 <i>Supplier Specifications</i> may cover this depending on whether a contractor is used.	Yes AOF 2-4 Code of practice element 1.0.1 requires that trailers/rail cars must be free of any product prior to loading.

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (8.2)	Highly Desirable	Yes 5.1.2 of TM <i>Seed and Grain Transport</i>	No	No, however Procedure 6.8.1 <i>Machinery Hygiene</i> indicates that equipment <b>should</b> not leak grain	Depending on implementation, 4.2.1 <i>Supplier Specifications</i> may cover this.	Depending on implementation, 4.2.1 <i>Supplier Specifications</i> may cover this.	Partial, AOF 2-4 element 1.0.8 requires that loads must be properly tarped.
<b>Receival of grain at regional delivery site (9)</b>							
Is there a clear process for the correct identification of product to the operator at ALL times? Does it allow for the clear identification of GM vs. non-GM product? (9.1)	Must	Yes 5.1.2 of TM <i>Seed and Grain Transport</i>	No, but G6.4 <i>Off-farm transport</i> requires that for each load of grain a record is kept of the date, truck and/or driver used to transport the load; its paddock(s) and/or storage facility(s) of origin; and its destination.	Yes, Procedure 6.3 <i>Product Identification and Traceability</i> requires that the product is labelled at traceable at all times. Procedure 6.3.1 <i>Delivery Documentation</i> requires delivery documentation. Procedure 6.3.7 <i>Product Handling, Transfer and Labeling</i> requires IP labelling	Yes 4.6.1 <i>Product Identification</i> to customer specifications (as long as the customer requires this identification)	Yes 4.6.1 <i>Product Identification</i> to customer specifications (as long as the customer requires this identification)	No

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure that all GM grain movements are recorded and reviewed? (9.2)	Must	N/A	N/A	N/A	N/A	Partial, element 4.6.2 <i>Product trace</i> would require all grain movements to be recorded but not necessarily reviewed however The review of records required by the HACCP plan in element 4.3.1 <i>Process Control</i> requires a review of records of monitoring of critical points	N/A
Does the system ensure that samples of GM canola are not mixed with non-GM canola? (9.3)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (9.4)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (9.5)	Highly Desirable	No	No	No	No	No	No, only that they should be cleaned at the last place of delivery
<b>Transfer to storage (10)</b>							
Does the system ensure that bulk storage is practically free from other seeds prior to filling? (10.1)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system require that a failure or fault in the segregation system is readily identifiable? (10.2)	Must	N/A	N/A	N/A	N/A	Partial, the HACCP plan within 4.3.1 <i>Process Control</i> requires a review of records relating to critical points. This requirement however, deals more with equipment design and failure modes (FMEA)	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require that transfer equipment is maintained to minimise leakage of product? (10.3)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i> should identify this as a potential hazard	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Transfer to truck / rail (11)</b>							
Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (11.1)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i> or 4.2.1 <i>Supplier Specifications</i> may cover this.	Yes AOF 2-4 Code of practice element 1.0.1 requires that trailers/rail cars must be free of any product prior to loading.
<b>Transport to central delivery site (12)</b>							
Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (12.1)	Highly Desirable	N/A	N/A	N/A	N/A	Depending on implementation, 4.2.1 <i>Supplier Specifications</i> may cover this.	Partial, AOF 2-4 element 1.0.8 requires that loads must be properly tarped.
Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (12.2)	Highly Desirable	No	No	No	No	No	No, only that they should be cleaned at the last place of delivery

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Receival of grain at central delivery site (13)</b>							
Is there a clear process for the correct identification of product to the operator at ALL times? Does it allow for the clear identification of GM vs. non-GM product? (13.1)	Must	N/A	N/A	N/A	N/A	No, not specifically however 4.6.2 <i>Product Trace</i> requires that product is traceable. 4.6.1 1 <i>Product Identification</i> to customer specifications does not apply as this is an internal movement of product, not delivery to customer.	No
Does the system ensure that all GM grain movements are recorded and reviewed? (13.2)	Must	N/A	N/A	N/A	N/A	Partial, element 4.6.2 <i>Product trace</i> would require all grain movements to be recorded but not necessarily reviewed however The review of records required by the HACCP plan in element 4.3.1 <i>Process Control</i> requires a review of records of monitoring of critical points	N/A

<b>Issue to be addressed</b>	<b>Rating</b>	<b>Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)</b>	<b>Graincare</b>	<b>Great Grain</b>	<b>SQF 1000<sup>CM</sup></b>	<b>SQF 2000<sup>CM</sup></b>	<b>AOF Code of Practice</b>
Does the system ensure that samples of GM canola are not mixed with non-GM canola? (13.3)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (13.4)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A
<b>Transfer to storage (14)</b>							
Does the system ensure that transfer equipment and bulk storage is practically free from other seeds prior to filling? (14.1)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require that a failure or fault in the segregation system is readily identifiable? (14.2)	Must	N/A	N/A	N/A	N/A	Partial, the HACCP plan within 4.3.1 <i>Process Control</i> requires a review of records relating to critical points. This requirement however, deals more with equipment design and failure modes (FMEA)	N/A
Does the system require that transfer equipment is maintained to minimise leakage of product? (14.3)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i> should identify this as a potential hazard	N/A
<b>Transfer to truck / rail (15)</b>							
Does the system ensure that equipment used to transport Canola is practically free of seeds when switching from GM seed? (15.1)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i> or 4.2.1 <i>Supplier Specifications</i> may cover this.	Yes AOF 2-4 Code of practice element 1.0.1 requires that trailers/rail cars must be free of any product prior to loading.

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Transport to crusher (16)</b>							
Does the system ensure that vehicles used to transport GM Canola are maintained to minimise leakage of product? (16.1)	Highly Desirable	N/A	N/A	N/A	N/A	Depending on implementation, 4.2.1 <i>Supplier Specifications</i> may cover this.	Partial, AOF 2-4 element 1.0.8 requires that loads must be properly tarped.
Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (16.2)	Highly Desirable	N/A	N/A	N/A	N/A	No	No, only that they should be cleaned at the last place of delivery

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Receival of canola (17)</b>							
Is there a clear process for the correct identification of product to the operator at ALL times? Does it allow for the clear identification of GM vs. non-GM product? (17.1)	Must	N/A	N/A	N/A	N/A	Yes 4.6.1 <i>Product Identification</i> to customer specifications (as long as the customer requires this identification)	No
Does the system ensure that all GM grain movements are recorded and reviewed? (17.2)	Must	N/A	N/A	N/A	N/A	Partial, Element 4.6.2 <i>Product trace</i> would require all grain movements to be recorded but not necessarily reviewed however The review of records required by the HACCP plan in element 4.3.1 <i>Process Control</i> requires a review of records of monitoring of critical points	N/A

<b>Issue to be addressed</b>	<b>Rating</b>	<b>Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)</b>	<b>Graincare</b>	<b>Great Grain</b>	<b>SQF 1000<sup>CM</sup></b>	<b>SQF 2000<sup>CM</sup></b>	<b>AOF Code of Practice</b>
Does the system require that the grain receival pit is cleared of excess GM canola prior to unloading non-GM canola? (17.3)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A
Does the system ensure that vehicles used to transport GM Canola are cleaned out in an appropriate area? (17.4)	Highly Desirable	N/A	N/A	N/A	N/A	No	N/A
<b>Transfer to storage (18)</b>							
Does the system ensure that bulk storage is practically free from other seeds prior to filling? (18.1)	Highly Desirable	N/A	N/A	N/A	N/A	Yes 4.3.1 <i>Process Control</i>	N/A

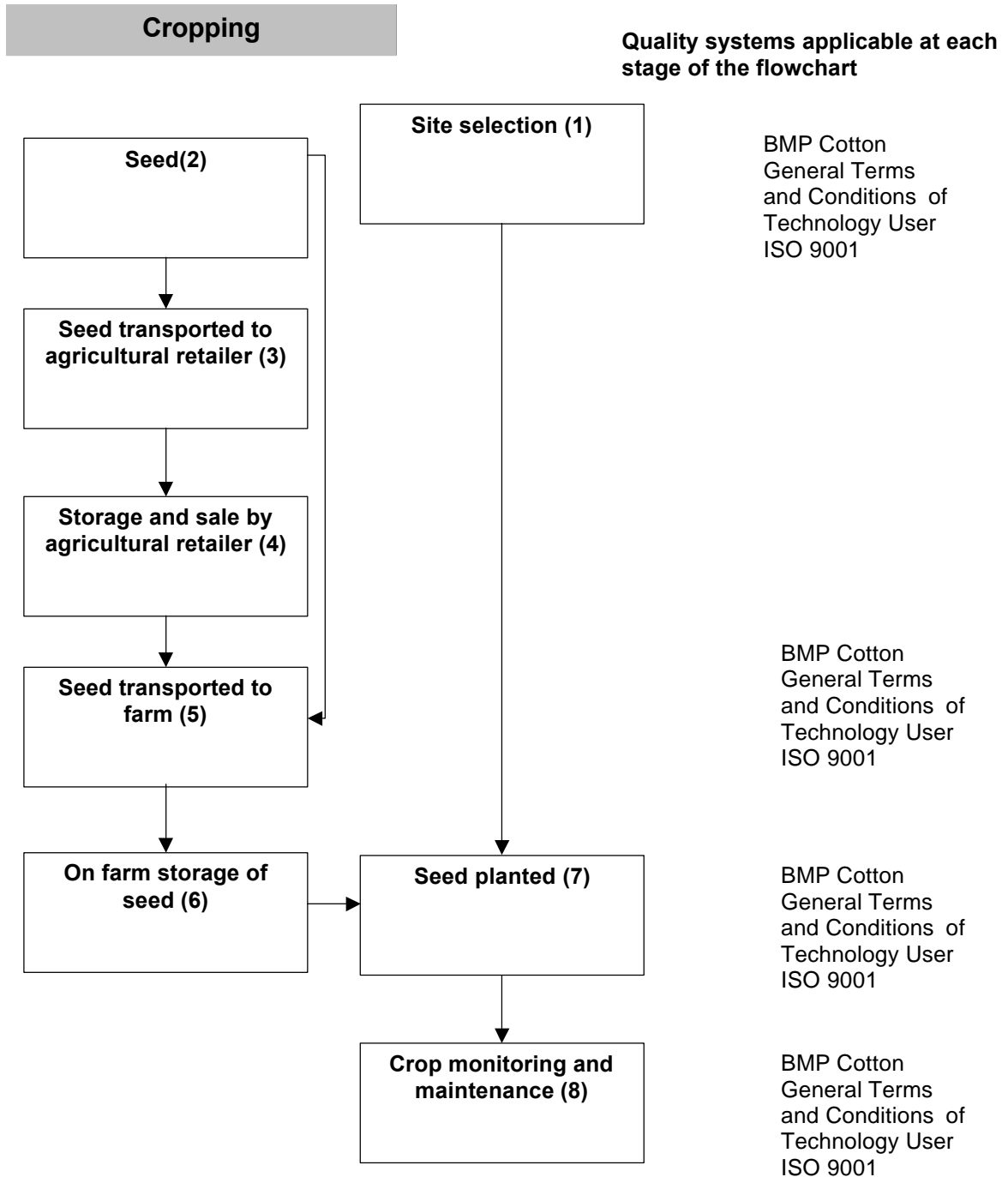
Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
Does the system require that a failure or fault in the segregation system is readily identifiable? (18.2)	Must	N/A	N/A	N/A	N/A	Partial, the HACCP plan within 4.3.1 <i>Process Control</i> requires a review of records relating to critical points. This requirement however, deals more with equipment design and failure modes (FMEA)	N/A
Does the system require that transfer equipment is maintained to minimise leakage of product? (18.3)	Highly Desirable	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications	N/A
<b>Oil extraction (press) (19)</b>							
Does the system ensure that equipment used to transfer Canola is practically free of seeds when switching from GM seed? (19.1)	Highly Desirable	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications	N/A

Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Solvent extraction (optional) (20)</b>							
Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (20.1)	Must	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications however it is questionable whether this is possible given current plant designs	N/A
<b>Filter / purify (21)</b>							
Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (21.1)	Must	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications however it is questionable whether this is possible given current plant designs	N/A

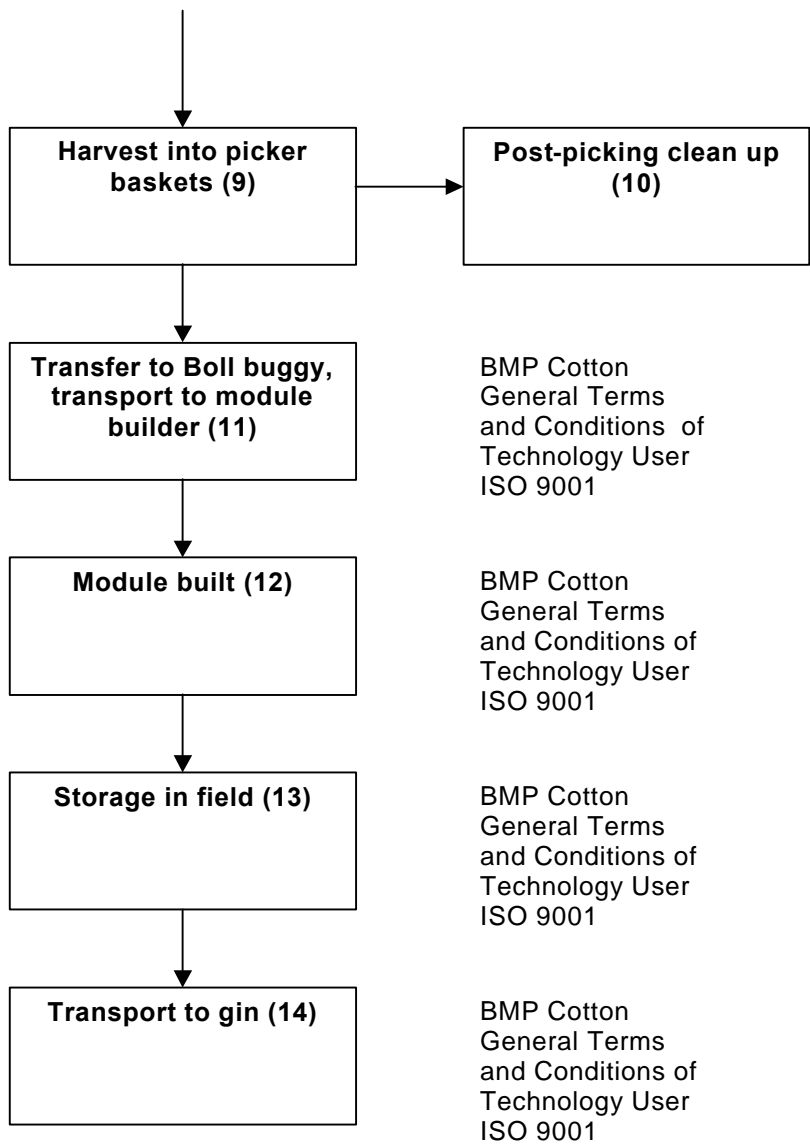
Issue to be addressed	Rating	Monsanto Roundup Ready Canola Technical Manual 2003 (TM) or Crop Management Plan 2003 (CMP)	Graincare	Great Grain	SQF 1000 <sup>CM</sup>	SQF 2000 <sup>CM</sup>	AOF Code of Practice
<b>Transfer to Storage (22)</b>							
Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (22.1)	Highly Desirable	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications	AOF 2-3 Requires extensive cleaning procedures between prior load if they may be a source of contamination
<b>Transfer to Truck (23)</b>							
Does the system require that there is an effective process to minimise mingling of gm oil with non-gm oil? (23.1)	Highly Desirable	N/A	N/A	N/A	N/A	Possibly, 4.3.1 <i>Process Control</i> should identify this as a potential hazard if it will fall outside customer specifications	AOF 2-3 Requires extensive cleaning procedures between prior load if they may be a source of contamination
<b>Transport to refinery (24)</b>							
Is there a clear process for the correct identification of product to the customer at ALL times? Does it allow for the clear identification of GM vs. non-GM product? (24.1)	Must	N/A	N/A	N/A	N/A	Yes 4.6.1 <i>Product Identification</i> to customer specifications (as long as the customer requires this identification)	No

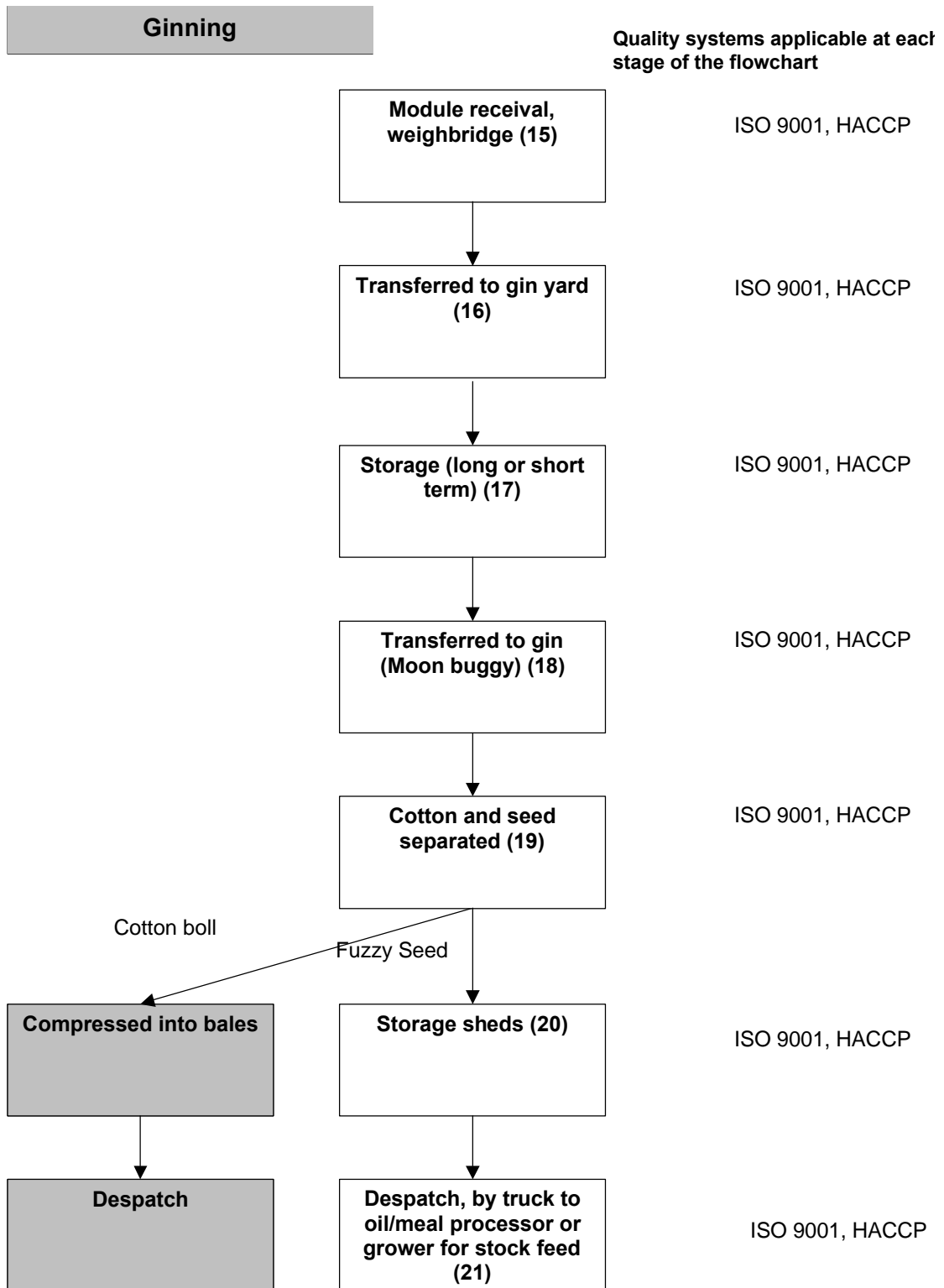
# Cotton

## Supply Chain Mapping for cotton destined for cottonseed meal



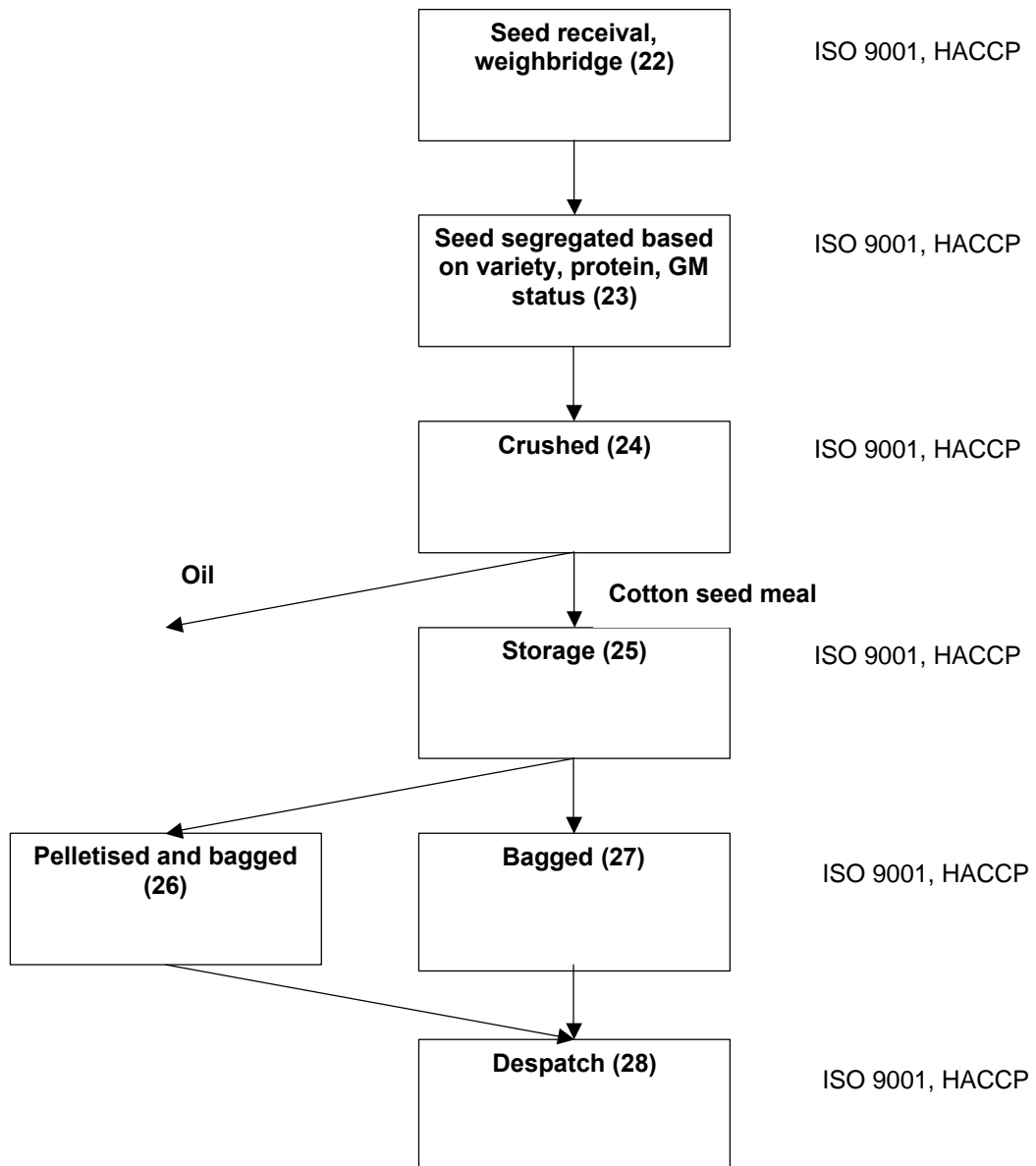
BMP Cotton  
General Terms  
and Conditions of  
Technology User  
ISO 9001





## Cottonseed meal processing

Quality systems applicable at each stage of the flowchart



## Risk Assessment for cotton destined for cottonseed meal

### Cropping

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Site selection (1)	Adventitious presence	Volunteers / ratoon cotton - carry over seed from previous cotton crops, seed introduced (eg wind, spillage, animal feed sites)	Possible	Not commercially significant	Highly Desirable	Does the system ensure a suitable length of time since previous cotton crop and cultural practices employed to stimulate germination and control of volunteer and ratoon cotton? (1.1) Does the system require historical paddock records to be available to assist with identification of volunteers/ratoon cotton? (1.2) Does the system require monitoring and control of volunteers in surrounding paddocks and animal feed sites? (1.3) Does the system require documented specifications / selection criteria for growers / sites? (1.4)
		Cross pollination from neighbouring crops	Unlikely	Customer Complaint	Highly Desirable	Does the system require an appropriate distance be maintained between crops of different variety, GM and non-GM and pure seed crops? (1.5)
	Crop identity unknown (variety, GM status)	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require clear paddock identification prior to planting (farm map, GPS)? (1.6)
Seed (2)	Loss of crop information and identity	Grower not bound by contract / Technology User Agreement	Possible	Rejection	Highly Desirable	Does the system require formal arrangements between grower and seed supplier / technology provider? (2.1)
	Adventitious presence	Seed used not of desired purity	Rare	Rejection	Highly Desirable	Does the system require seed to be of known and acceptable genetic purity? (2.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed transported to agricultural retailer (3)	None identified					
Storage and sale by agricultural retailer (4)	Incorrect variety provided by retailer	Poorly identified seed, human error	Unlikely	Rejection	Highly Desirable	Does the system require appropriate management of seed stocks by reseller (security of seed, clear labelling, identity preservation of seed whilst in control of reseller)? (4.1)
	Adventitious presence	Packaging damaged or animal transfer	Unlikely	Not commercially significant	Desirable	Does the system require appropriate management of seed stocks by reseller (security of seed including vermin control, identity preservation of seed whilst in control of reseller)? (4.2)
Seed transported to farm (5)	None identified					
On farm storage of seed (6)	Crop variety / identity unknown	Seed packaging / identification removed	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (6.1)
	Adventitious presence	Packaging damaged or animal transfer	Unlikely	Not commercially significant	Desirable	Does the system require appropriate management of seed by grower (security of seed including vermin control, identity preservation of seed)? (6.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed planted (7)	Crop variety / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require identification and traceability information to be available for all crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (7.1) Consideration should also be given to recording location of neighbouring crops. Does the system require seed variety / GM status to be clearly identified and for this information to be readily available to the operator? (7.2) Does the system require physical identification of paddock eg Farm Map, GPS? (7.3)
	Adventitious presence	Seed drill not thoroughly cleaned prior to planting	Likely	Customer complaint	Highly Desirable	Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing GM status? (7.4) Does the system require that flushed material is identified and appropriately dealt with? (7.5) Does the system require that cleaning take place at an appropriate place and that material cleaned from seeder is appropriately dealt with? (7.6)
		Seed cleaned from drill not clearly identified.	Possible	Not commercially significant	Highly Desirable	Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (7.7)
		Incorrect variety planted	Possible	Rejection (assuming the crop survives to harvest)	Highly Desirable	Does the system require appropriate management of seed stocks by seeding contractor / grower / employee (identity preservation of seed whilst in control of contractor)? (7.8)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed planted (7) (contd)	Loss of identification of unused seed	Excess seed (part bags) not clearly identified	Possible	Not commercially significant	Highly Desirable	Does the system require that any excess seed is clearly identified with variety and GM status and stored for later use or appropriately disposed of? (7.9)
Crop monitoring and maintenance (8)	Adventitious presence	Pollen flow from volunteers / ratoon cotton	Unlikely	Rejection	Highly Desirable	Does the system require control of volunteers and ratoon cotton within the crop and surrounding land (including roadsides and grazing land)? (8.1)
		Volunteers / ratoon cotton established in rows.	Possible	Customer complaint	Highly Desirable	Does the system require control of volunteers and ratoon cotton within rows? (8.2)
		Seeds introduced via machinery, personnel, soil movement, or irrigation run-off.	Unlikely	Not commercially significant	Highly Desirable	Does the system require crop hygiene practices to be implemented? (8.3) Does the system require good farming practices to be implemented? (8.4)
Harvest into picker baskets (9)	Adventitious presence	Mixed varieties in picker basket	Almost certain	Customer complaint	Must	Does the system require identification of all crops/ varieties in module? (9.1)
		Picker baskets not thoroughly cleaned between different varieties / GM status crops	Almost certain	Not commercially significant	Highly Desirable	Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (9.2) Does the system require that material removed from harvest equipment is appropriately dealt with? (9.3) Does the system require documented specifications for harvest team / contractors? (9.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Harvest into picker baskets (9) (contd)	Crop variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require crops to be clearly identified (variety / GM status) and for this information to be readily available to the operator? (9.5) Does the system require physical identification of paddock/planting? (9.6)
Post-picking clean –up (10)	Adventitious presence	Volunteers / ratoon cotton – carry over seed from previous cotton crops, seed introduced (eg wind, spillage)	Almost certain	Customer complaint	Must	Does the system ensure a suitable length of time since previous cotton crop and cultural practices employed to stimulate germination and control of volunteer and ratoon cotton? (10.1) Does the system require historical paddock records to be available to assist with identification of volunteers/ratoon cotton? (10.2) Does the system require documented specifications / selection criteria for growers / sites? (10.3)
		Volunteers in non cropping situations (fence lines, gin yard module pads etc)	Almost certain	Customer complaint	Must	Does the system require monitoring and control of non-crop areas for volunteers? (10.4)
		Plant stubble remaining after harvest	Almost certain	Customer complaint	Must	Does the system require that cotton plants remaining after harvest are destroyed as soon as practical after picking? (10.5)
	Volunteer cotton along roadsides	Fly cotton	Unlikely	Not commercially significant	Desirable	Does the system require harvest equipment (pickers, boll buggies, module builders) are thoroughly cleaned before leaving field? (10.6)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transfer to Boll buggy transport to Module builder (11)	Adventitious presence	Mixed varieties in boll buggy	Almost certain	Customer complaint	Must	Does the system require identification of all crops/ varieties in module? (11.1)
		Boll buggy not thoroughly cleaned between different varieties / GM status crops	Almost certain	Not commercially significant	Highly Desirable	Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (11.2) Does the system require that material removed from harvest equipment is appropriately dealt with? (11.3) Does the system require documented specifications for harvest team / contractors? (11.4)
Module built (12)	Adventitious presence	Module made up of more than one variety / GM status crop	Likely	Rejection	Must	Does the system require identification of all crops / varieties in module? (12.1)
		Material of unknown GM status on ground where module built	Likely	Not commercially significant	Highly Desirable	Does the system require that ground under module builder is free from cotton before module building commences? (12.2)
		Remnants and fly cotton added to module	Likely	Customer complaint	Highly Desirable	Does the system require modules to be clearly identified with regard to the GM status of material being added to that module? (12.3) Does the system require remnant material to only be used for non identity sensitive modules? (12.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Module built (12) (contd)	Adventitious presence	Module builder not thoroughly cleaned between different varieties / GM status crops	Almost certain	Not commercially significant	Highly Desirable	Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (12.5) Does the system require that material removed from harvest equipment is appropriately dealt with? (12.6) Does the system require documented specifications for harvest team / contractors? (12.7)
	Cotton variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require module to be clearly identified and for this information to be readily available to the operator? (12.8) Does the system require this identification to be documented and travel with the module? (12.9)
Storage in field (13)	Cotton variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require module to be clearly identified and for this information to be readily available to the operator? (13.1) Does the system require identification to be securely attached to module and able to withstand affects of weather? (13.2)
Transport gin (14)	Cotton variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require module to be clearly identified and for this information to be readily available to the operator? (14.1) Does the system require this identification to be documented and travel with the module? (14.2)
	Volunteer cotton along roadsides	Fly cotton	Almost certain	Not commercially significant	Highly Desirable	Does the system require harvest equipment (pickers, boll buggies, module builders) are thoroughly cleaned before leaving field? (14.3) Does the system require modules are covered to minimise lose of cotton during transport? (14.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transport gin (14) (contd)	Adventitious presence	Cotton on chains of transport vehicle	Almost certain	Not commercially significant	Highly Desirable	Does the system require transport vehicle and chains are thoroughly cleaned before transporting module? (14.5)

## Ginning

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Module receipt, weighbridge (15)	Module identity unknown (GM status, variety, grower)	Loss of ticket, failure to apply ticket.	Unlikely	Rejection	Highly Desirable	Does the system require identification accompanies each module from the field? (15.1) Does the system require identification information to be securely attached to the module? (15.2)
	Module identity incorrect	Failure of all previous identification and traceability procedures	Unlikely	Recall	Highly Desirable	Does the system require verification of module GM status? (15.3) Does the system require some evaluation of the performance and integrity of the module supplier? (15.4)
Transferred to gin yard (16)	Loss of identity of module	Misplacement of module in gin yard	Possible	Customer complaint	Highly Desirable	Does the system require systematic placement of modules, particularly according to GM status? (16.1)
	Adventitious presence	Material of unknown GM status on ground where module stored	Likely	Not commercially significant	Highly Desirable	Does the system require gin yard ground under and around module to be free from cotton before unloading module? (16.2)
		Fly cotton	Possible	Not commercially significant	Highly Desirable	Does the system require an appropriate physical separation between modules of different GM status? (16.3)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage (17)	Cotton variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require module to be clearly identified and for this information to be readily available to the operator? (17.1) Does the system require identification to be securely attached to module and able to withstand affects of weather? (17.2)
Transferred to gin (18)	Cotton variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require module to be clearly identified and for this information to be readily available to the operator? (18.1) Does the system require identification to be securely attached to module and able to withstand affects of weather? (18.2) Does the system require this identification to be documented and travel with the module? (18.3)
	Adventitious presence	Processing incorrect module (variety / GM status)	Possible	Recall	Must	Does the system require verification of module identity prior to processing? (18.4)
		Cotton remnants on moon buggy and at cotton intake	Almost certain	Customer complaint	Must	Does the system require cleaning and inspection of moon buggy and cotton intake area between modules of different GM status? (18.5)
Cotton and seed separated (19)	Cotton and seed variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require seed and cotton to be clearly identified and for this information to be readily available to the operator? (19.1)
	Adventitious presence	Cotton remnants in machinery	Almost certain	Customer complaint	Must	Does the system require processing equipment to be thoroughly cleaned or flushed and inspected particularly between modules of different GM status? (19.2) Does the system require that flushed material is identified and appropriately dealt with? (19.3)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage sheds (20)	Adventitious presence	Misplacement of cotton seed	Possible	Recall	Must	Does the system ensure separate storage for cotton seed of different GM status? (20.1) Does the system require a record of seed movements / storage? (20.2)
		Seed storage facilities and equipment not thoroughly cleaned between different varieties / GM status crops	Possible	Customer complaint	Highly Desirable	Does the system require seed storage facilities and equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (20.3) Does the system require that material removed from storage facilities/ and equipment is appropriately dealt with? (20.4) Does the system require that flushed material is identified and appropriately dealt with? (20.5)
Despatched, by truck to oil/meal processor or grower for stockfeed (21)	Cotton seed variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require seed to be clearly identified and for this information to be readily available to the operator? (21.1)
	Adventitious presence	Transport equipment not thoroughly cleaned between different varieties / GM status crops	Possible	Customer complaint	Highly Desirable	Does the system require seed transport equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (21.2) Does the system require that material removed from storage facilities/ and equipment is appropriately dealt with? (21.3) Does the system require that flushed material is identified and appropriately dealt with? (21.4)
	Volunteer cotton along roadsides	Seed spillage	Likely	Not commercially significant	Highly Desirable	Does the system require the load to be secured prior to transport? (21.5)

## Cottonseed meal processing

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed receipt, weighbridge (22)	Cotton seed variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require seed to be clearly identified and for this information to be readily available to the operator? (22.1)
	Cotton seed identity incorrect	Failure of all previous identification and traceability procedures	Unlikely	Recall	Highly Desirable	Does the system require verification of seed GM status? (22.2) Does the system require some evaluation of the performance and integrity of the seed supplier? (22.3)
Seed segregated based on variety, protein, GM status (23)	Cotton seed variety / GM status / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require seed to be clearly identified and for this information to be readily available to the operator? (23.1)
	Adventitious presence	Storage area not thoroughly cleaned between different varieties / GM status crops	Likely	Customer complaint	Highly Desirable	Does the system require storage area is thoroughly cleaned and inspected prior to handling crops of different GM status? (23.2) Does the system require that material removed from storage facilities/ and equipment is appropriately dealt with? (23.3)
		Insufficient physical separation between meal of different GM status	Possible	Rejection	Highly Desirable	Does the system require physical separation of material of different GM status during storage? (23.4)
		Animal transfer of stored seed	Unlikely	Not commercially significant	Desirable	Does the system require appropriate vermin control strategies are in place? (23.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Crushed (24)	Adventitious presence	Incorrect seed transferred to processing plant	Possible	Recall	Must	Does the system require material to be clearly identified and for this information to be readily available to the operator? (24.1)
		Equipment not thoroughly cleaned prior to changing GM status	Likely	Customer complaint	Highly Desirable	Does the system require processing equipment to be thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (24.2) Does the system require that material removed from storage facilities/ and equipment is appropriately dealt with? (24.3) Does the system require that flushed material is identified and appropriately dealt with? (24.4)
Storage (25)	Cotton seed meal GM status unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require meal to be clearly identified and for this information to be readily available to the operator? (25.1)
	Adventitious presence	Storage area not thoroughly cleaned between different varieties / GM status crops	Likely	Customer complaint	Highly Desirable	Does the system require storage area is thoroughly cleaned and inspected prior to handling crops of different GM status? (25.2) Does the system require that material removed from storage facilities/ and equipment is appropriately dealt with? (25.3)
		Insufficient physical separation between meal of different GM status	Possible	Rejection	Highly Desirable	Does the system require physical separation of material of different GM status during storage? (25.4)
		Animal transfer of stored seed	Unlikely	Not commercially significant	Desirable	Does the system require appropriate vermin control strategies are in place? (25.6)
Pelletised and bagged (26)	Cotton seed meal GM status unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require meal to be clearly identified and for this information to be readily available to the operator? (26.1)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Pelletised and bagged (contd) (26)	Adventitious presence	Equipment not thoroughly cleaned between different varieties / GM status crops	Likely	Customer complaint	Highly Desirable	Does the system require pelletising and bagging equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (26.2) Does the system require that material removed from pelletising and bagging equipment is appropriately dealt with? (26.3) Does the system require that flushed material is identified and appropriately dealt with? (26.4)
Bagged (27)	Cotton seed meal GM status unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require meal to be clearly identified and for this information to be readily available to the operator? (27.1)
	Adventitious presence	Storage area not thoroughly cleaned between different varieties / GM status crops	Likely	Customer complaint	Highly Desirable	Does the system require bagging equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (27.2) Does the system require that material removed from bagging equipment is appropriately dealt with? (27.3) Does the system require that flushed material is identified and appropriately dealt with? (27.4)
Despatch (28)	Cotton seed meal GM status identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require bags to be clearly identified and for this information to be readily available to the operator? (28.1)

## Analysis of quality systems against hazards to product segregation and identity preservation along the cotton to cottonseed meal supply chain

### Core elements

Issue to be addressed	Rating	BMP Cotton	General Terms and Conditions (GTC) of Technology User (TU), Crop Management Plan (CMP), Resistance Management Plan (RMP) Technical Manuals (TM)	ISO 9001:2000
<b>Core elements</b>				
Is the system subject to some form of external audit/inspection? (C1)	Must	Yes, Step 3 of “Elements of the BMP program”, Best Management Practices Manual.	Yes, minimum of 2 audits/Farm Unit/season. GTC 3.2 requires a Planting Audit, GTC 3.3g and 3.5g allows for additional audits as specified by Monsanto, GTC 3.4d requires Weed audit for ROUNDUP READY cotton, GTC 3.5g Resistance Management Audit for INGARD. Audits are to be carried out by Licensed Technology Service Provider (agricultural retailer).	Yes 0.1 <i>General</i>
Does the system ensure that the management understand the business responsibilities and requirements related to the application of GM technology? (C2)	Must	No, but system requires this level of understanding for issues within its scope.	Yes, ROUNDUP READY Crop Management Plan covers GM issues: <ul style="list-style-type: none"> <li>• The Technology</li> <li>• The Reward</li> <li>• Stewardship Program</li> <li>• Integrated Weed Management Strategy.</li> </ul> GTC also covers TU responsibilities.	Yes, 5.1 <i>Management Commitment</i> requires communication of the importance of meeting customer as well as statutory and regulatory requirements to the organisation. 5.2 <i>Customer Focus</i> requires customer requirements are determined and met.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require management to be committed to issues of identity preservation and segregation? (C3)	Must	No, while system implies management commitment for issues within its scope via creation of action plans there is no formal statement of commitment.	No	Yes, 5.1 <i>Management Commitment</i> requires communication of the importance of meeting customer as well as statutory and regulatory requirements to the organisation. 5.2 <i>Customer Focus</i> requires top management to ensure customer requirements are determined and met. 5.3 <i>Quality Policy</i> requires commitment of top management and is focussed on quality objectives 5.4.1 <i>Quality objectives</i> requires top management to ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within the organisation.
Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)	Must	No, but system addresses assignment of responsibility for issues within its scope eg "Responsibilities Table" for pesticide applications Appendix 1, Application of Pesticides Booklet.	No	Yes, 5.5.1 <i>Responsibility and authority</i> requires that top management shall ensure that responsibilities and authorities are defined and communicated within the organisation.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer/finished product specifications? (C5)	Must	No, but system requires this level of training and understanding for issues within its scope. System has "Responsibilities Table" for pesticide applications Appendix 1 and Objective 5.2, Use trained applicators to apply pesticides, <i>Application of Pesticides Booklet</i> , Objective 6, Safe work procedures, <i>Storage and Handling of Pesticides Booklet</i> .	Partial, Crop Management Plan (RR) includes Stewardship Program which requires Training and accreditation of growers prior to planting RR cotton. INGARD Guide to Resistance Management Plan covers insect management.	Yes, 6.2.2 <i>Competence, awareness and training</i> requires personnel to be aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives and are appropriately trained.
Does the system require clear customer specifications, particularly regarding GM status and tolerance levels? (C6)	Must	No	No	Yes, 7.1 <i>Planning of product realization</i> requires the organisation to determine the quality objectives and requirements of the product 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine requirements specified by the customer, as well as those not stated by the customer but necessary for specified or intended use and statutory and regulatory requirements.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require verification that product meets customer specifications? (includes inspection and testing at an appropriate laboratory) (C7)	Must	No	No	<p>Yes, 7.1 <i>Planning of product realization</i> requires the organisation to determine the required verification, validation, monitoring and test activities specific to the product and the criteria for product acceptance</p> <p>7.5.2 <i>Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p> <p>8.1 <i>Measurement, analysis and improvement</i> requires demonstration of conformity of the product.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires monitoring and measurement of the characteristics of the product to verify product requirements have been met.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)	Must	No	No	Yes, 7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier. 7.4.3 <i>Verification of purchased product</i> requires the organisation to establish and implement inspection or other activities to ensure the purchased product meets purchase requirements.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)	Must	No, though addresses for some issues within scope - Objective 7 Record keeping, <i>Application of Pesticides Booklet</i> , Objective 7 Establish emergency procedures, <i>Storage and Handling of Pesticides Booklet</i> .	Partial, Crop Management Plan (RR) includes Adverse Event Reporting GTC 10 addresses Termination, 12 addresses Non-Compliance by the grower	Yes 7.2.3 <i>Customer communication</i> requires the organisation to have effective arrangements for communicating with customers. 8.2.4 <i>Monitoring and measurement of product</i> requires that product shall not be released until planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and where applicable, by the customer. 8.3 <i>Control of nonconforming product</i> addresses identification and control of product that does not meet product requirements and specifically seeking customer authorisation to release product. Provision for recall activities under requirement for organisation to take appropriate action if nonconforming product detected after delivery or use has started. 8.5.2 <i>Corrective action</i> 8.5.3 <i>Preventive action</i> 8.3 <i>Control of nonconforming product</i>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)	Must	No. The system does include self-assessment worksheets which include objectives and then an assessment of where grower is with regard to that objective. The objectives are generally of environmentally focussed. The outcome of the self-assessment is the development of an action plan for those areas that the grower decides need improvement.	Partial, GTC 3.4d for RR requires grower to conduct an audit of the Farm Unit as part of the Stewardship program.	Yes 8.2.2 <i>Internal audit</i> requires that the organisation conduct internal audits at planned intervals. 8.2.3 <i>Monitoring and measurement of processes</i> requires the application of suitable methods for monitoring and measuring system processes to determine the ability of the processes to achieve planned results. 8.2.4 <i>Monitoring and measurement of product</i> requires monitoring and measurement of the product to verify compliance with product specifications. 8.3 <i>Control of non-conforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery
Does the system require that there is product identification at each process step? (C11)	Must	Partial for cropping stage, Objective 2.1 Develop a farm map, <i>Application of Pesticides Booklet</i> . Does not require identification of modules leaving property.	Partial, GTC 3.1a requires an accurate map of the Farm Unit to be attached to Licence (Global Positioning System or surveyed map). GTC 3.2 requires map to show fields planted to GM cotton, actual seeding rate and variety.	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> includes the requirement for product identification.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results). (C12)	Must	No, batch numbers for seed and chemicals not required to be maintained.	Partial GTC 3.3 requires Technology User Agreement number is issued for each Farm Unit Licence	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). It is also a requirement that where traceability is a requirement the organisation will control and record the unique identification of the product. 7.5.1 <i>Control of production and service provision</i> requires production to be carried out under controlled conditions 7.5.5 <i>Preservation of product</i> includes identification and control of handling, packaging, storage and protection of the product.

## Cropping

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Site selection (1)</b>				
Does the system ensure a suitable length of time since previous cotton crop and cultural practices employed to stimulate germination and control of volunteer and ratoon cotton? (1.1)	Highly Desirable	Partial, emphasis is on pest control. Objective 3 An integrated approach to managing disease, weeds and pests, <i>Farm Hygiene Booklet</i> mentions "use of an appropriate crop rotation strategy" and "maintain a strict weed control program in and around each field"	Partial, documents do not address rotations or germination issues but TM (RR) 7.9 discusses methods for control of volunteer and ratoon cotton and INGARD Guide to Resistance Management Plan discusses control of volunteers, pupae-busting and efficacy of different farm implements in cultivating crops to stop regrowth and destroy pupae in soil.	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.
Does the system require historical paddock records to be available to assist with identification of volunteers/ratoon cotton? (1.2)	Highly Desirable	No	No, although historical farm maps may provide this information.	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions ("conformity to requirements").

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require monitoring and control of volunteers in surrounding paddocks and animal feed sites? (1.3)	Highly Desirable	Partial, emphasis is on pest control. Objective 2 Regularly monitor fields for insects and damage <i>Integrated Pest Management Booklet</i>	No	<p>Partial, not certain non crop areas would be included in regular scope of system, but could be addressed through</p> <p>7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions and volunteers in surrounding land or animal feed sites could constitute a lack of control.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require documented specifications / selection criteria for growers / sites? (1.4)	Highly Desirable	No	No	<p>Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.</p> <p>7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier.</p> <p>Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspect purchased products against the specifications.</p>
Does the system require an appropriate distance be maintained between crops of different variety, GM and non-GM and pure seed crops? (1.5)	Highly Desirable	No	No	<p>Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions and insufficient distance between crops could constitute a lack of control.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. NB it is understood that pure seed crops have their own specifications and would be a suitable distance from commercial crops, based on risk assessment of site etc.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require clear paddock identification prior to planting (farm map, GPS)? (1.6)	Highly Desirable	Yes, Objective 2.1 Develop a farm map, <i>Application of Pesticides Booklet</i> .	Yes GTC 3.1a requires an accurate map of the Farm Unit to be attached to Licence (Global Positioning System or surveyed map).	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
<b>Seed (2)</b>				
Does the system require formal arrangements between grower and seed supplier / technology provider? (2.1)	Highly Desirable	No	Yes, GTC 1.1 Licence required to access technology	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of GM cotton production a licence is required to access the technology.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require seed to be of known and acceptable genetic purity? (2.2)	Highly Desirable	No	Implied	<p>Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product.</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p>
<b>Seed transported to agricultural retailer (3)</b>				
None identified				

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Storage and sale by agricultural retailer (4)</b>				
Does the system require appropriate management of seed stocks by reseller (security of seed, clear labelling, identity preservation of seed whilst in control of reseller)? (4.1)	Highly Desirable	No	No, although Technology Service Provider Agreement includes issues of traceability to grower TUA number.	<p>If system implemented by reseller</p> <p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing (includes storage and protection).</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>If addressed through grower system;</p> <p>Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.</p> <p>7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier.</p> <p>Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspect purchased products against the specifications.</p>

<b>Issue to be addressed</b>	<b>Rating</b>	<b>BMP Cotton</b>	<b>GTC, CMP, RMP, TM</b>	<b>ISO 9001:2000</b>
Does the system require appropriate management of seed stocks by reseller (security of seed including vermin control, identity preservation of seed whilst in control of reseller)? (4.2)	Desirable	No	No	As above (4.1)
<b>Seed transported to farm (5)</b>				
None identified				
<b>On farm storage of seed (6)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (6.1)	Highly Desirable	No	Yes, implied in requirement to accurately trace to farm map.	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require appropriate management of seed by grower (security of seed including vermin control, identity preservation of seed)? (6.2)	Desirable	No	Yes, GTC 3.3d covers re-selling / supply of seed to others, GTC 3.3 h addresses unused / saved seed, GTC 3.3 j covers notification of quantity and location of GM seed not planted during season in which seed was sold to grower. Doesn't address vermin control.	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
<b>Seed planted (7)</b>				
Does the system require identification and traceability information to be available for all crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (7.1) Consideration should also be given to recording location of neighbouring crops.	Highly Desirable	Partial, Objective 2.1 Develop a farm map, <i>Application of Pesticides Booklet</i> . Batch numbers for seed and chemicals not required to be maintained	Partial, GTC 3.2 Planting Audit requires identification of fields planted, GPS or surveyed map, actual seeding rate and variety for GM and conventional cotton. No specific requirement for seed batch or neighbouring crops.	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). It is also a requirement that where traceability is a requirement the organisation will control and record the unique identification of the product 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions ("conformity to requirements").

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require seed variety / GM status to be clearly identified and for this information to be readily available to the operator? (7.2)	Highly Desirable	No	Yes, implied to comply with licence requirements	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
Does the system require physical identification of paddock eg Farm Map, GPS? (7.3)	Highly Desirable	Yes, Objective 2.1 Develop a farm map, <i>Application of Pesticides Booklet</i> .	Yes GTC 3.1a requires an accurate map of the Farm Unit to be attached to Licence (Global Positioning System or surveyed map).	Yes 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 6.3 <i>Infrastructure</i> requires that the necessary infrastructure needed to achieve conformity to product requirements is available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing GM status? (7.4)	Highly Desirable	No	No	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require that flushed material is identified and appropriately dealt with? (7.5)	Highly Desirable	No	No	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that cleaning take place at an appropriate place and that material cleaned from seeder is identified and appropriately dealt with? (7.6)	Highly Desirable	No	No	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (7.7)	Highly Desirable	No	No	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require appropriate management of seed stocks by seeding contractor / grower / employee (identity preservation of seed whilst in control of contractor)? (7.8)	Highly Desirable	No	Partial, GTC 3.3d covers re-selling / supply of seed to others, GTC 3.3 h addresses unused / saved seed, GTC 3.3 j covers notification of quantity and location of GM seed not planted during season in which seed was sold to grower. GTC 3.2 Planting Audit requires identification of fields planted, GPS or surveyed map, actual seeding rate and variety for GM and conventional cotton. No specific mention of controls over contractors.	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications
Does the system require that any excess seed is clearly identified with variety and GM status and stored for later use or appropriately disposed of? (7.9)	Highly Desirable	No	Yes, GTC 3.3 j covers notification of quantity and location of GM seed not planted during season in which seed was sold to grower.	Yes 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing (includes storage and protection). 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 6.3 <i>Infrastructure</i> requires that the necessary infrastructure (ie storage facilities) needed to achieve conformity to product requirements is available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Crop monitoring and maintenance (8)</b>				
Does the system require control of volunteers and ratoon cotton within the crop and surrounding land (including roadsides and grazing land)? (8.1)	Highly Desirable	No although does require maintenance of a strict weed control program in and around each field, Objective 3 An integrated approach to managing disease, weeds and pests, <i>Farm Hygiene Booklet</i> .	Partial, RMP 4 (NSW/Sth QLD) and 5 (Central QLD) discusses control of INGARD volunteers in conventional crop and vice versa. TM (RR) section 7.9 discusses control of volunteers prior to planting and in fallow situations and promotes importance of destroying ratoon cotton post picking. Also section 13 addresses non-crop situations (eg fencelines) for RR volunteers.	Partial, not certain non crop areas would be included in regular scope of system, but could be addressed through 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of INGARD cotton this is a requirement. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions and volunteers in surrounding land or animal feed sites could constitute a lack of control. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require control of volunteers and ratoon cotton within rows? (8.2)	Highly Desirable	No although does require maintenance of a strict weed control program in and around each field, Objective 3 An integrated approach to managing disease, weeds and pests, <i>Farm Hygiene Booklet</i> .	Not specifically addressed.	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment (paddock) be managed to achieve conformity with product requirements. 8.3 <i>Control of non-conforming product</i> requires that product that does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.
Does the system require crop hygiene practices to be implemented? (8.3)	Highly Desirable	Yes, Farm Hygiene Booklet dedicated to crop hygiene.	No	Partial 7.5.1 <i>Control of production and service provision</i> requires production be carried out under controlled conditions. Crop hygiene practices could be considered to constitute "controlled conditions".
Does the system require good farming practices to be implemented? (8.4)	Highly Desirable	Yes, is Best Management Practices system with specific emphasis on Farm Design and Management, Integrated Pest Management, use of agricultural chemicals and petrochemicals.	No	Partial 7.5.1 <i>Control of production and service provision</i> requires production be carried out under controlled conditions. Good farming practices could be considered to constitute "controlled conditions".

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Harvest into picker baskets (9)</b>				
Does the system require identification of all crops/ varieties in module? (9.1)	Must	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. Preservation shall also apply to constituent parts of a product (ie crops/varieties within a module).</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (9.2)	Highly Desirable	Partial, emphasis on spread of disease and weeds between farms, requires cleaning of vehicles and machinery before coming onto or leaving property, Objective 2 <i>Farm Hygiene Booklet</i> . Includes cleaning procedures for particular pieces of equipment.	No	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material removed from harvest equipment is identified and appropriately dealt with? (9.3)	Highly Desirable	No	No	<p>Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.</p>
Does the system require documented specifications for harvest team / contractors? (9.4)	Highly Desirable	No	No	<p>Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.</p> <p>7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier.</p> <p>Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require crops to be clearly identified (variety / GM status) and for this information to be readily available to the operator? (9.5)	Highly Desirable	No	Partial, GTC 3.1a requires an accurate map of the Farm Unit to be attached to Licence (Global Positioning System or surveyed map). GTC 3.2 requires map to show fields planted to GM cotton, actual seeding rate and variety. No requirement for operator to be aware of identity of crop.	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
Does the system require physical identification of paddock/planting? (9.6)	Highly Desirable	No	No	Yes 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 6.3 <i>Infrastructure</i> requires that the necessary infrastructure needed to achieve conformity to product requirements is available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Post-picking clean up (10)</b>				
Does the system require post harvest management of cotton paddocks to minimise volunteer and ratoon cotton? (10.1)	Must	Partial, emphasis is on pest control. Objective 3 An integrated approach to managing disease, weeds and pests, <i>Farm Hygiene Booklet</i> mentions “use of an appropriate crop rotation strategy” and “maintain a strict weed control program in and around each field”	Partial TM (RR) discusses methods for control of volunteer and ratoon cotton and Guide to INGARD Resistance Management Plan discusses control of volunteers, pupae-busting and efficacy of different farm implements in cultivating crops to stop regrowth and destroy pupae in soil.	Partial 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of INGARD cotton the RMP requires control of volunteers and ratoon cotton.
Does the system require monitoring of subsequent crops for volunteer and ratoon cotton? (10.2)	Must	No	Partial, RMP (INGARD) 4 and 5 require control of volunteers and ratoon cotton.	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require monitoring and control of non-crop areas for volunteers? (10.3)	Must	Partial, Objective 3 An integrated approach to managing disease, weeds and pests, <i>Farm Hygiene Booklet</i> requires maintenance of a weed control program “in and around each field”	No, although some strategies in TM (RR) 13 for control of volunteers in non-cropping situations	Partial, not certain non crop areas would be included in regular scope of system, but could be addressed through 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that cotton plants remaining after harvest are destroyed as soon as practical after picking? (10.4)	Must	Partial, Objectives 3 and 4 of Farm Hygiene Booklet address issues related to crop removal and appropriate strategies but mainly from disease and pest management perspective.	Partial, RMP (INGARD) 4 and 5 require control of volunteers and ratoon cotton.	<p>Yes 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of INGARD cotton production it is a requirement of the RMP that volunteers and ratoon cotton are controlled.</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions and post-picking activities would constitute control for following crop.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Transfer to Boll buggy, transport to module builder (11)</b>				
Does the system require identification of all crops/ varieties in module? (11.1)	Must	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. Preservation shall also apply to constituent parts of a product (ie crops/varieties within a module).</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (11.2)	Highly Desirable	Partial, emphasis on spread of disease and weeds between farms, requires cleaning of vehicles and machinery before coming onto or leaving property, Objective 2 <i>Farm Hygiene Booklet</i> . Includes cleaning procedures for particular pieces of equipment.	No	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material removed from harvest equipment is appropriately dealt with? (11.3)	Highly Desirable	No	No	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
Does the system require documented specifications for harvest team / contractors? (11.4)	Highly Desirable	No	No	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Module built (12)</b>				
Does the system require identification of all crops / varieties in module? (12.1)	Must	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. Preservation shall also apply to constituent parts of a product (ie crops/varieties within a module).</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require that ground under module builder is free from cotton before module building commences? (12.2)	Highly Desirable	No	No	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require modules to be clearly identified with regard to the GM status of material being added to that module? (12.3)	Highly Desirable	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require remnant material to only be used for non identity sensitive modules? (12.4)	Highly Desirable	No	No	<p>Yes 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. Preservation shall also apply to constituent parts of a product.</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require harvest equipment is thoroughly cleaned and inspected prior to harvesting crops of different GM status? (12.5)	Highly Desirable	Partial, emphasis on spread of disease and weeds between farms, requires cleaning of vehicles and machinery before coming onto or leaving property, Objective 2 <i>Farm Hygiene Booklet</i> . Includes cleaning procedures for particular pieces of equipment.	No	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require that material removed from harvest equipment is identified appropriately dealt with? (12.6)	Highly Desirable	No	No	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require documented specifications for harvest team / contractors? (12.7)	Highly Desirable	No	No	<p>If using contractors;  Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.  7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier.  Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications  If using staff;  Yes, 6.2.2 <i>Competence, awareness and training</i> requires personnel to be aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and are appropriately trained.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require module to be clearly identified and for this information to be readily available to the operator? (12.8)	Highly Desirable	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require this identification to be documented and travel with the module? (12.9)	Highly Desirable	No	No	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Storage in field (13)</b>				
Does the system require module to be clearly identified and for this information to be readily available to the operator? (13.1)	Highly Desirable	No	No	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require identification to be securely attached to module and able to withstand affects of weather? (13.2)	Highly Desirable	No	No	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p> <p>No specific mention of permanency of identification but is implied.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Transport to gin (14)</b>				
Does the system require module to be clearly identified and for this information to be readily available to the operator? (14.1)	Highly Desirable	No	No	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
Does the system require this identification to be documented and travel with the module? (14.2)	Highly Desirable	No	No	Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require harvest equipment (pickers, boll buggies, module builders) are thoroughly cleaned before leaving field? (14.3)	Highly Desirable	Yes, emphasis on spread of disease and weeds between farms, requires cleaning of vehicles and machinery before coming onto or leaving property, Objective 2 <i>Farm Hygiene Booklet</i> . Includes cleaning procedures for particular pieces of equipment.	No	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require modules are covered to minimise lose of cotton during transport? (14.4)	Highly Desirable	Yes, Objective 3 An integrated approach to managing disease, weeds and pests requires modules to be pressed and covered and for modules to be “transported securely to minimise the loss of cotton”.	No	Partial, system elements are concerned with integrity of product not potential contamination of environment by product 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require transport vehicle and chains are thoroughly cleaned before transporting module? (14.5)	Highly Desirable	No	No	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require that material removed from harvest equipment is identified and appropriately dealt with? (14.6)	Highly Desirable	No	No	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

## Ginning

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Module receival, weighbridge (15)</b>				
Does the system require identification accompanies each module from the field? (15.1)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>
Does the system require identification information to be securely attached to the module? (15.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require verification of module GM status? (15.3)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes <i>8.1 Measurement, analysis and improvement General</i> requires that monitoring and measurement and analysis be undertaken to demonstrate conformity of the product.</p> <p><i>8.2.4 Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p> <p><i>7.5.2 Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p>
Does the system require some evaluation of the performance and integrity of the module supplier? (15.4)	Highly Desirable	Not Applicable	Not Applicable	<p>Partial <i>7.4.3 Verification of purchased product</i> that the organisation inspects purchased products against the specifications. May be compromised if ginning being provided as a service to grower and cotton or cottonseed not being purchased by gin.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Transferred to gin yard (16)</b>				
Does the system require systematic placement of modules, particularly according to GM status? (16.1)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing (includes storage).</p> <p>6.4 <i>Work environment</i> requires that the work environment is managed to achieve conformity to product requirements.</p>
Does the system require gin yard ground under and around module to be free from cotton before unloading module? (16.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require an appropriate physical separation between modules of different GM status? (16.3)	Highly Desirable	Not Applicable	Not Applicable	Yes 7.5.1 <i>Control of production and service provision</i> requires production to be carried out under controlled conditions. 6.4 <i>Work environment</i> requires that the work environment is managed to achieve conformity to product requirements.
<b>Storage (17)</b>				
Does the system require module to be clearly identified and for this information to be readily available to the operator? (17.1)	Highly Desirable	Not Applicable	Not Applicable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require identification to be securely attached to module and able to withstand affects of weather? (17.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>
<b>Gin (18)</b>				
Does the system require module to be clearly identified and for this information to be readily available to the operator? (18.1)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require identification to be securely attached to module and able to withstand affects of weather? (18.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>
Does the system require this identification to be documented and travel with the module? (18.3)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require verification of module identity prior to processing? (18.4)	Must	Not Applicable	Not Applicable	<p>Yes <i>8.1 Measurement, analysis and improvement General</i> requires that monitoring and measurement and analysis be undertaken to demonstrate conformity of the product.</p> <p><i>8.2.4 Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p> <p><i>7.5.2 Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require cleaning and inspection of moon buggy and cotton intake area between modules of different GM status? (18.5)	Must	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>
Does the system require that material removed from transport equipment is identified and appropriately dealt with? (18.6)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Cotton and seed separated (19)</b>				
Does the system require seed and cotton to be clearly identified and for this information to be readily available to the operator? (19.1)	Must	Not Applicable	Not Applicable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require processing equipment to be thoroughly cleaned or flushed and inspected particularly between modules of different GM status? (19.2)	Must	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material flushed or cleaned from equipment is identified and appropriately dealt with? (19.3)	Must	Not Applicable	Not Applicable	<p>Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.</p>
<b>Storage sheds (20)</b>				
Does the system ensure separate storage for cotton seed of different GM status? (20.1)	Must	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require a record of seed movements / storage? (20.2)	Must	Not Applicable	Not Applicable	Yes 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions (“conformity to requirements”).
Does the system require seed storage facilities and equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (20.3)	Highly Desirable	Not Applicable	Not Applicable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require that material flushed or cleaned from storage facilities and equipment is identified and appropriately dealt with? (20.4)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Despatch, by truck to oil/meal processor or grower for stock feed (21)</b>				
Does the system require seed to be clearly identified and for this information to be readily available to the operator? (21.1)	Must	Not Applicable	Not Applicable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require seed transport equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (21.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material flushed or cleaned from transport equipment is identified and appropriately dealt with? (21.3)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
Does the system require the load to be secured prior to transport? (21.4)	Highly Desirable	Not Applicable	Not Applicable	Partial, system elements are concerned with integrity of product not potential contamination of environment by product 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination

## Cottonseed meal processing

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Seed receipt, weighbridge (22)</b>				
Does the system require seed to be clearly identified and for this information to be readily available to the operator? (22.1)	Must	Not Applicable	Not Applicable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require verification of seed GM status? (22.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 8.1 <i>Measurement, analysis and improvement</i> General requires that monitoring and measurement and analysis be undertaken to demonstrate conformity of the product.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p> <p>7.5.2 <i>Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p>
Does the system require some evaluation of the performance and integrity of the seed supplier? (22.3)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Seed segregated based on variety, protein, GM status (23)</b>				
Does the system require seed to be clearly identified and for this information to be readily available to the operator? (23.1)	Must	Not Applicable	Not Applicable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.
Does the system require storage area is thoroughly cleaned and inspected prior to handling crops of different GM status? (23.2)	Highly Desirable	Not Applicable	Not Applicable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material removed from storage facilities and equipment is identified and appropriately dealt with? (23.3)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
Does the system require physical separation of material of different GM status during storage? (23.4)	Highly Desirable	Not Applicable	Not Applicable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions, which includes the implementation of monitoring.
Does the system require appropriate vermin control strategies are in place? (23.5)	Desirable	Not Applicable	Not Applicable	Yes 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing, which includes storage and product protection.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Crushed (24)</b>				
Does the system require material to be clearly identified and for this information to be readily available to the operator? (24.1)	Must	Not Applicable	Not Applicable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>
Does the system require processing equipment to be thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (24.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material flushed or cleaned from equipment is identified and appropriately dealt with? (24.3)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
<b>Storage (25)</b>				
Does the system require meal to be clearly identified and for this information to be readily available to the operator? (25.1)	Must	Not Applicable	Not Applicable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require storage area is thoroughly cleaned and inspected prior to handling crops of different GM status? (25.2)	Highly Desirable	Not Applicable	Not Applicable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring
Does the system require that material flushed or cleaned from storage facilities and equipment is appropriately dealt with? (25.3)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require physical separation of material of different GM status during storage? (25.4)	Highly Desirable	Not Applicable	Not Applicable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions, which includes the implementation of monitoring.
Does the system require appropriate vermin control strategies are in place? (25.6)	Desirable	Not Applicable	Not Applicable	Yes 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing, which includes storage and product protection.
<b>Pelletised and bagged (26)</b>				
Does the system require meal to be clearly identified and for this information to be readily available to the operator? (26.1)	Must	Not Applicable	Not Applicable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires information describing the characteristics of the product be available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require pelletising and bagging equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (26.2)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>

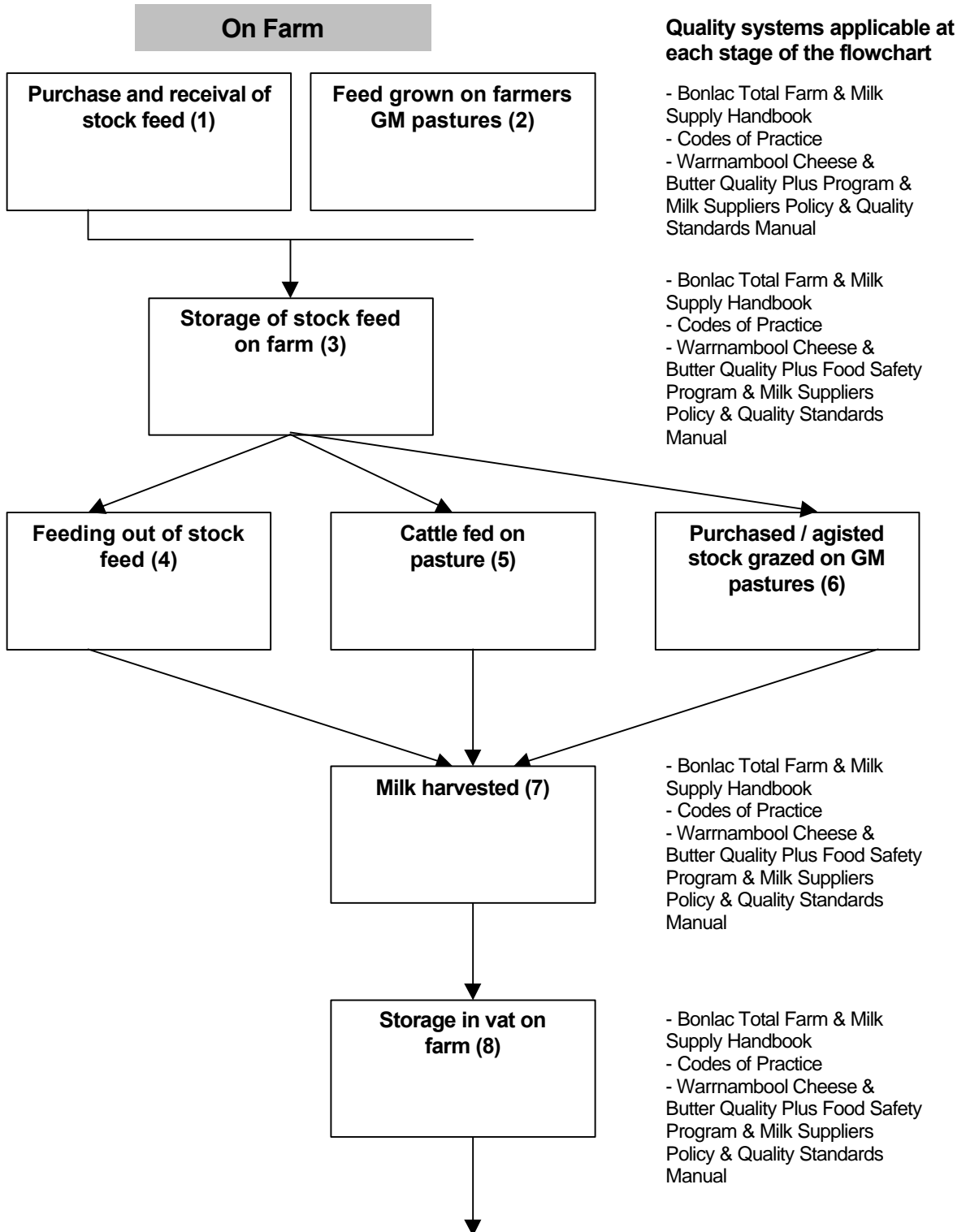
Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require that material flushed or cleaned from pelletising and bagging equipment is identified and appropriately dealt with? (26.3)	Highly Desirable	Not Applicable	Not Applicable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.
<b>Bagged (27)</b>				
Does the system require meal to be clearly identified and for this information to be readily available to the operator? (27.1)	Must	Not Applicable	Not Applicable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
Does the system require bagging equipment is thoroughly cleaned or flushed and inspected prior to handling crops of different GM status? (27.2)	Must	Not Applicable	Not Applicable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>
Does the system require that material flushed or cleaned from bagging equipment is identified and appropriately dealt with? (27.3)	Highly Desirable	Not Applicable	Not Applicable	<p>Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.</p>

Issue to be addressed	Rating	BMP Cotton	GTC, CMP, RMP, TM	ISO 9001:2000
<b>Despatch (28)</b>				
Does the system require bags to be clearly identified and for this information to be readily available to the operator? (28.1)	Must	Not Applicable	Not Applicable	<p>Yes <i>7.5.3 Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p><i>7.5.5 Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p><i>7.5.1 Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>

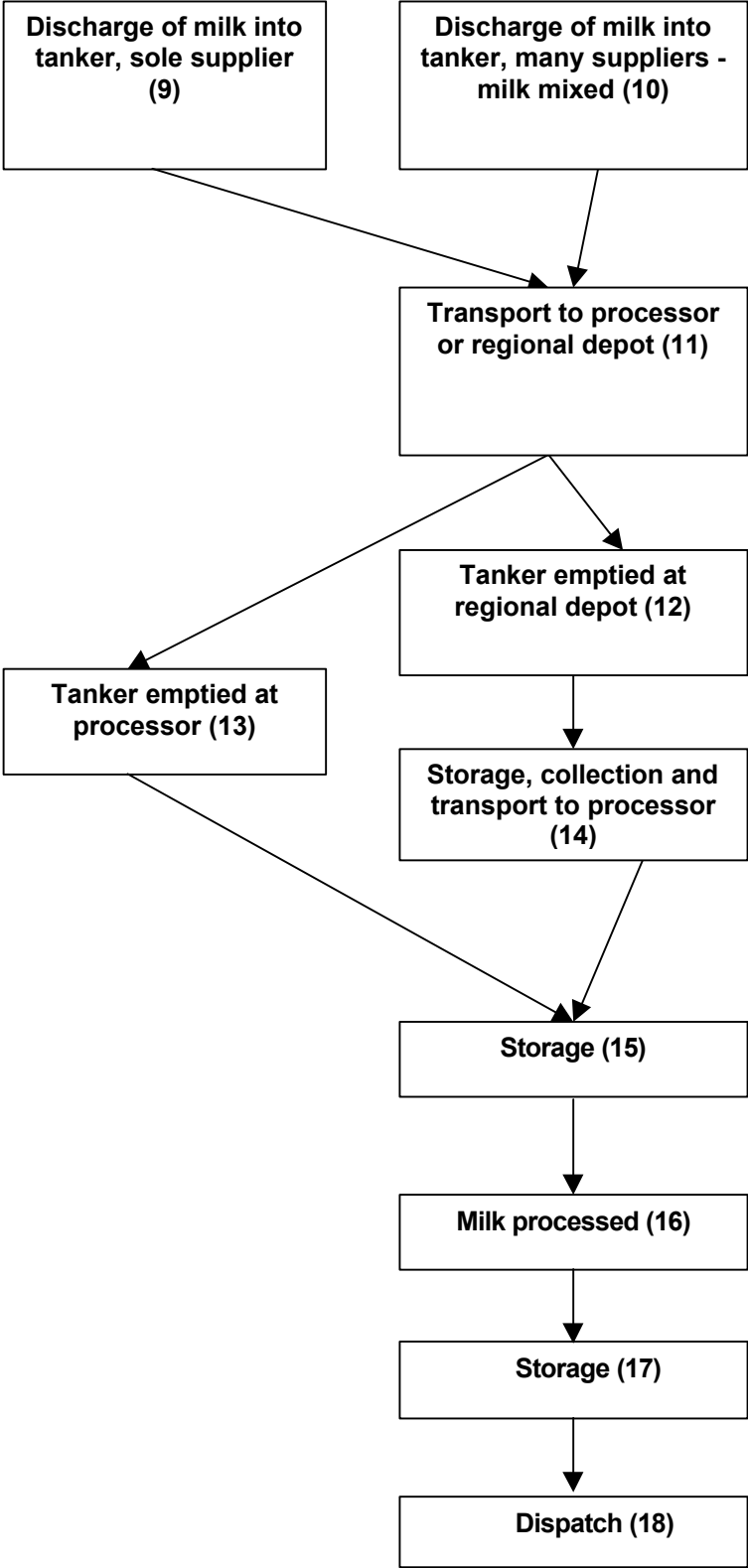
# Pasture

## Supply Chain Mapping for Milk production from GM pastures and GM feeds



**Transport and Processing**

**Quality systems applicable at each stage of the flowchart**



- Bonlac Total Farm & Milk Supply Handbook
- Codes of Practice
- Warrnambool Cheese & Butter Quality Plus Food Safety Program & Milk Suppliers Policy & Quality Standards Manual

- Bonlac Total Farm & Milk Supply Handbook
- Codes of Practice
- Warrnambool Cheese & Butter Quality Plus Food Safety Program & Milk Suppliers Policy & Quality Standards

- ISO 9001:2000
- Bonlac Milk Suppliers Handbook
- Codes of Practice
- Warrnambool Cheese & Butter Co Milk Suppliers Policy and Quality Standards Manual

- ISO 9001:2000
- Bonlac Milk Suppliers Handbook
- Codes of Practice
- Warrnambool Cheese & Butter Co Milk Suppliers Policy and Quality Standards Manual

- ISO 9001:2000
- Codes of Practice
- FPA System of Inspection
- AQA System of Inspection

- ISO 9001:2000
- Codes of Practice
- FPA System of Inspection
- AQA System of Inspection

- ISO 9001:2000
- Codes of Practice
- FPA System of Inspection
- AQA System of Inspection

- ISO 9001:2000
- Codes of Practice
- FPA System of Inspection
- AQA System of Inspection

## Risk Assessment for milk production from GM pastures and GM feeds supply chain

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Purchase and receipt of Stock Feed (1)	GM status of stock feed unknown	Stock feed declaration and/or Identity Preserved Policy Statement not supplied.	Likely	Customer Complaint	Highly desirable	Does the system include requirements for stock feed declaration and/or identity preserved policy statements from suppliers? (1.1) Does the system ensure that Processor's specifications for milk harvested are clearly defined and understood particularly in relation to GM status? (1.2)
	GM status of stock feed unknown	Failure to supply appropriate specifications to supplier	Likely	Customer Complaint	Highly desirable	Does the system require specifications to be prepared detailing raw material requirements? (1.3) Does the system ensure that Processor's specifications for milk harvested are clearly defined and understood particularly in relation to GM status? (same as 1.2 above)
	Origin of stock feed not known or not traceable to source.	Not sourced from reputable or approved supplier. Stock feed declaration and/or Identity Preserved Policy Statement not supplied.	Likely	Customer Complaint	Highly desirable	Does the system ensure that suppliers are reviewed for their ability to supply to raw material requirements? (1.4) Does the system include requirements for stock feed declaration and/or identity preserved policy statements from suppliers? (same as 1.1 above) Does the system ensure that Processor's specifications for milk harvested are clearly defined and understood particularly in relation to GM status? (same as 1.2 above)
	Adventitious presence of GM products in non-GM stock feed.	Stock feed supplier not recognising importance of segregation	Likely	Customer Complaint	Highly Desirable	Does the system ensure that suppliers are reviewed for their ability to supply to raw material requirements? (same as 1.4 above) Does the system ensure that the supplier is aware of the importance of the segregation of GM products? (1.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Purchase and receipt of stock feed (1)	Adventitious presence of GM products in non-GM stock feed.	Product mixed during transport	Possible	Customer Complaint	Highly Desirable	Does the system ensure that transporters have a process for identification, and appropriate segregation during transport? (1.6) Does the system ensure that the transporter is aware of the responsibilities and importance of the segregation of GM products? (1.7)
	Adventitious presence of GM products in non-GM stock feed.	Loss of traceability in transport due to poor identification practices	Likely	Customer Complaint	Highly Desirable	Does the system ensure that transporters have a process for identification, segregation, and trace of all products whilst in their care? (1.8) Does the system ensure that the carrier is aware of the responsibilities and importance of the segregation of GM products? (same as 1.7 above)
Feed grown on farmers GM pastures (2)	Loss of traceability of GM pastures	Lack of paddock identification	Possible	Customer Complaint	Highly Desirable	Does the system ensure that an appropriate paddock identification and mapping process exists? (2.1)
	Adventitious presence in non-GM pastures.	Poor paddock segregation	Possible	Customer Complaint	Highly Desirable	Does the system ensure that paddock identification is supported by well-maintained fences? (2.2)
		Pasture species spread from GM to non-GM pastures (including across boundaries)	Possible	Customer Complaint	Highly Desirable	Does the system require appropriate distances between GM and non-GM pastures? (2.3) Does the system require good farming practices are implemented? (2.4) Does the system require adherence to a Crop Management Plan? (2.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage of stock feed on farm (3)	Loss of traceability	Lack of identification and traceability of stock feed on farm.	Likely	Customer Complaint	Highly Desirable	Does the system ensure that purchased stock feed is identified, segregated, and use is traced? (3.1)
	Adventitious presence of GM products in non-GM stock feed.	Inappropriate identification, segregation, and storage of feed	Likely	Customer Complaint	Highly Desirable	Does the system ensure that storage of stock feed is sufficient to prevent cross contamination? (3.2)
		Transporter unloading stock feed to incorrect area	Likely	Customer Complaint	Highly Desirable	Does the system ensure that suppliers are reviewed for their ability to meet requirements? (3.3) Does the system ensure that designated storage areas are clearly identified? (3.4) Does the system ensure that clear directions are provided to the transporter for the handling of raw materials on site? (3.5)
		Prior cleaning of dedicated storage facilities not sufficient	Likely	Not commercially significant	Highly desirable	Does the system ensure appropriate cleaning practices are implemented? (3.6)
Feeding out of stock feed (4)	GM status of stock feed unknown	Lack of identification and trace for stock feed. Inventory not maintained	Likely	Customer Complaint	Highly Desirable	Does the system ensure that stock feed is clearly identified and traced? (4.1) Does the system require an inventory to be maintained of all stock feed? (4.2)
	No knowledge of stock fed on GM stock feed	Lack of stock identification and movement process	Likely	Customer Complaint	Highly Desirable	Does the system ensure that a stock identification and movement procedure exists? (4.3) Does the system ensure that stock fed GM feed are identifiable? (4.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Cattle fed on pasture (5)	GM status of pastures unknown	Lack of paddock identification system.	Possible	Customer Complaint	Highly Desirable	Does the system ensure that paddock identification and mapping system exists? (5.1) Does the system require that GM pastures are clearly identified, both within the system and in the field? (5.2) Does the system require good farming practices are implemented? (5.3) Does the system require adherence to a Crop Management Plan? (5.4)
	No knowledge of stock fed on GM pastures	Lack of stock identification and movement process	Possible	Customer Complaint	Highly Desirable	Does the system ensure that a stock identification and movement procedure exists to control the movement of stock? (5.5) Does the system ensure that stock fed GM pastures are identifiable? (5.6)
	Inadvertent grazing on GM pastures	Poorly managed grazing rotations (ie escapes)	Possible	Customer Complaint	Highly Desirable	Does the system require that a grazing rotation process exist to identify and control grazing? (5.7) Does the system ensure that stock grazed on GM pastures are identified and traced? (5.8) Does the system ensure that GM pastures are clearly identified within the system and in the field? (same as 5.2 above) Does the system detail any unintended grazing of GM pastures (ie escapes)? (5.9)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Purchased/adjusted stock grazed on GM pastures (6)	Loss of traceability	No stock identification and movement system	Possible	Customer Complaint	Highly Desirable	Does the system ensure that a stock identification and movement procedure is in place? (6.1)
	Loss of traceability	Sales and Purchases not recorded	Possible	Customer Complaint	Highly Desirable	Does the system ensure that stock sold and purchased are identified and recorded? (6.2)
	Nature and origin of introduced stock not known	Not sourced from reputable supplier or approved supplier. Vendor declaration not completed. Specifications for cattle not provided.	Likely	Customer Complaint	Highly Desirable	Does the system ensure that introduced stock is purchased from a reputable or approved supplier? (6.3) Does the system require a vendor declaration and/or Identity Preserved Policy Statement to be supplied? (6.4) Does the system ensure specifications for cattle are available? (6.5)
	Cattle adjusted and fed GM pastures	Failure to check on adjustment pasture prior to use.	Likely	Customer Complaint	Highly Desirable	Does the system require that a check be made on adjusted pastures? (6.6)
	Cattle adjusted, fed GM pastures, and reintroduced to herd without traceability.	Lack of stock identification and movement process.	Possible	Customer Complaint	Highly Desirable	Does a stock identification and movement process exist which caters for the identification and traceability of adjusted stock? (6.7) If such a system exists, does it require that cattle fed on GM pastures be separately identified? (6.8)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Milk harvested (7)	Milk harvested from cattle fed GM pastures or stock feed not identified, segregated, or traced	Lack of stock identification and movement process causing non-segregation of cattle with a GM status	Likely	Customer Complaint	Highly Desirable	Does the system ensure that a stock identification and movement process exists to support the identification and traceability of milk introduced to the harvesting process? (7.1) Does this system require that cattle fed on GM pastures or feed be separately identified? (7.2)
		Not abiding by "with holding period" prior to accepting stock fed GM feeds	Likely	Customer Complaint	Highly Desirable	Does the system ensure that an appropriate time lapses before stock fed GM products no longer require segregation from stock that have not been fed GM products? (7.3)
	Milk harvested from stock introduced to property not identified as having been fed GM pastures or stock feed	Lack of stock identification and movement process. Failure to maintain a stock sales and purchases register. Failure to obtain vendor declaration and/or Identity Preserved Policy Statement.	Likely	Customer Complaint	Highly Desirable	Does the system ensure that a stock identification and movement system exists to identify stock introduced to the farm? (7.4) Does the system ensure that a Stock Sales and Purchases register exists to identify the origin of introduced stock? (7.5) Does the system include requirements for a vendor declaration and/or identity preserved policy statements from suppliers? (7.6) Does the system require that cattle fed on GM pastures or feed be separately identified? (same as 7.2 above)
	Milk harvested from adjisted stock not identified as having been fed GM pastures or stock feed	Failure to check on adjisted pasture.	Likely	Customer Complaint	Highly Desirable	Does the system ensure that a check on adjisted pastures occurs? (7.7) Does the system require that this information be recorded in the stock identification and movement procedure? (7.8)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage in vat on farm (8)	Non-GM Milk mixed with GM free milk	Lack of identification, segregation and trace procedure within process control enabling milk with non-GM status to be stored with other harvested GM free milk.	Almost certain	Customer Complaint	Must	Does the system ensure that a stock identification and movement process exists to support the identification and traceability of ALL milk introduced to the harvesting process? (8.1) Does the system ensure that an identification, segregation, and traceability process exists for all milk harvested? (8.2) Does the system require that milk with non-GM status be clearly identified? (8.3) Does the system ensure that the stock identification and traceability process is compatible with the identification and traceability process for harvesting? (8.4)
		Poor process control causing inadvertent mixing with GM free milk prior to storage in vat.	Unlikely	Customer Complaint	Highly Desirable	Does the system require that GM free milk is harvested prior to non-GM milk and/or that appropriate cleaning is in place between batches? (8.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Discharge of milk into tanker, sole supplier (9)	Adventitious presence in tanker	Failure of tanker cleaning and hygiene practices	Unlikely	Not commercially significant	Desirable	Does the system address the roles and responsibilities of carriers? (9.1)
	Not able to identify from storage non-GM milk	Lack of identification and trace within process control of milk with a non-GM status - Non-segregation of milk types	Unlikely	Customer Complaint	Highly Desirable	Is there a clear process for the correct identification of product at ALL times? (9.2) If storage facilities provide for the segregation of milk types, are vats clearly identified? (9.3) Does the system require a hold and release procedure to be in place to control discharge to the tanker? (9.4) Does the system require that the non-GM status of farm be identified to the tanker driver? (9.5)
		Non-segregation of milk types	Unlikely	Customer Complaint	Highly Desirable	If storage facilities provide for the segregation of milk types, are vats clearly identified? (same as 9.3 above)
Discharge of milk into tanker, many suppliers, - milk mixed (10)	Adventitious presence in tanker	Failure of tanker cleaning and hygiene practices	Unlikely	Not commercially significant	Desirable	Does the system address the roles and responsibilities of carriers? (10.1)
	Non-GM milk not segregated	Tanker driver inadvertently adds non-GM milk to GM free tanker	Possible	Customer Complaint	Highly Desirable	If storage facilities provide for the segregation of milk types, are vats clearly identified? (10.2) Does the system require that the GM status of farm be identified to the tanker driver? (10.3)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transport to processor or regional depot (11)	None identified					
Tanker emptied at Regional depot (12)	Not able to identify origin of milk	Failure of transporter to meet Dairy Food Carrier requirements for identification and traceability	Unlikely	Rejection	Highly Desirable	Does the system require that only approved carriers are utilised? (12.1) Does the system ensure that specifications for carriers are available? (12.2) Does the system periodically review the performance of carriers? (12.3) Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (12.4)
	Failure to identify receipt of non-GM milk	No check on status of milk prior to receipt and discharge	Almost Certain	Customer Complaint	Must	Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (12.5)
Tanker emptied at Processor (13)	Not able to identify origin of milk	Failure of transporter to meet Dairy Food Carrier requirements for id and trace	Unlikely	Rejection	Highly Desirable	Does the system require that only approved carriers are utilised? (13.1) Does the system ensure that specifications for carriers are available? (13.2) Does the system periodically review the performance of carriers? (13.3) Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (13.4)
	Failure to identify receipt of GM milk	No check on status of milk prior to discharge	Almost Certain	Rejection	Must	Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (13.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage, collection and transport to processor (14)	Storage facility does not provide clear identification of non-GM milk	Vat not identified	Unlikely	Customer Complaint	Highly Desirable	Is there a clear process for the correct identification of product at all times? (14.1) Does the system require that the GM status of milk be identified to the second party? (14.2)
	Adventitious presence in tanker	Failure of tanker cleaning and hygiene practices	Unlikely	Not commercially significant	Desirable	Does the system address the roles and responsibilities of carriers? (14.3)
	Non-segregation of milk types	Tanker driver inadvertently adds non-GM milk to GM free milk vat.	Possible	Customer Complaint	Highly Desirable	If storage facilities provide for the segregation of milk types, are vats clearly identified? (14.4) Does the system require that the GM status of farm be identified to the tanker driver? (14.5)
Storage (15)	Non-GM milk not segregated from GM free milk	Did not check on GM status of milk prior to discharge from tanker	Almost certain	Customer Complaint	Must	Does the system ensure that milk is identified and that adequate traceability procedures are in place? (15.1) Does the system require that an ongoing verification program is in place to ensure the effectiveness of raw material trace? (15.2) Does the system require that a hold and release system be in place to prevent the release or distribution of unsafe food? (15.3) Does the system identify non-GM milk within its hold and release system? (15.4)
	Non-GM not segregated from conventional milk	Misdirected product (milk into incorrect silo)	Possible	Customer Complaint	Highly Desirable	Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (15.5)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Milk Processed (16)	Non-GM milk not segregated from GM free milk	Milk pulled from incorrect silo	Possible	Rejection	Highly Desirable	Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (16.1)
	Not able to identify processed non-GM milk from GM free milk at the end of processing	Product identification failure	Unlikely	Rejection	Highly Desirable	Does the system ensure that a program is in place which identifies and traces product at all stages of manufacture and storage from raw materials through to finished product? (16.2)
	Failure to meet customer specifications	Lack of awareness of customer specifications for non-GM milk products	Unlikely	Rejection	Highly Desirable	Does the system ensure that Processor is aware of customer specifications for finished product? (16.3)
Storage (17)	Not able to identify processed non-GM milk from GM free milk	Lack of identification of product with non-GM status	Unlikely	Rejection	Highly Desirable	Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (17.1) Does the program ensure that trace back and trace forward of all product is achievable? (17.2) Does the system require that an ongoing verification program is in place to ensure the effectiveness of id and trace? (17.3)
Dispatch (18)	Not able to identify processed non-GM milk from GM free milk	Product identification failure	Unlikely	Recall	Highly Desirable	Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (18.1) Is there an effective hold and release system in place to review finished product? (18.2)

**Analysis of quality systems against hazards to product segregation and identity preservation along the milk production from GM pastures and GM feeds supply chain.**

**PART A – Covers systems ISO 9001:2000, Victorian Code of Practice for Dairy Food, Warrnambool Cheese and Butter Co Systems, Tasmanian Dairy Industry Authority Code of Practice, and Bonlac Total Management System**

**PART B – Covers AQIS - AQA and FPA Systems of Inspection.**

**Part A  
Core elements**

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Authority Code of Practice	Bonlac Total Management System
<b>Core Elements</b>						
Is the system subject to some form of external audit/inspection? (C1)	Must	Yes 01 General	Yes. 1.1 Overview "Food Safety Programs will be audited on a regular basis".	Farms inspected by Warrnambool Cheese & Butter Co. Company system audited against ISO 9001:2000	Yes 1.1 Overview "Food Safety Programs will be registered with the TDIA and audited on a regular basis."	Farms inspected by TDIA against Bonlac Total Farm and Milk Supply Handbook requirements. Company system audited against ISO 9001:2000
Does the system ensure that the management understand the business responsibilities and requirements related to the application of GM technology? (C2)	Must	Yes. 5.1 Management Commitment 5.2 Customer focus – Top management shall ensure that customer requirements are determined and met with the aim of enhancing customer satisfaction.	No. However could at General Principals – G Hygiene Practices if GM technologies considered as new technology. Specifically (b) "Evaluation of new technologies, processes and product formulations to ensure that they are consistent with production of milk and dairy foods that are safe and suitable for intended purpose". Could if appropriately scoped within FSP HACCP.	Not specifically. The Quality Plus Statement from the General Manager to farmers utilising the system references customer issues. Could gain more emphasis if Milk Suppliers Policy and Quality Standards Manual referenced GM technology.	Yes. 3.3 Standards requires that "all raw milk must comply with individual company requirements". Also General Principals, Hygiene Practices, could if GM technologies considered as new technology. Specifically (b) "Evaluation of new technologies, processes and product formulations to ensure that they are consistent with production of milk and dairy foods that are safe and suitable for intended purpose".	No. Could if Milk Supply Handbook Section 6 Milk Quality referenced GM technology.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require management to be committed to issues of identity preservation and segregation? (C3)	Must	Yes 5.1 Management commitment. Specifically (a) communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements. 5.2 Customer focus. Specifically – top management shall ensure that customer requirements are determined. 5.3 Quality Policy - caters for the expectations and needs of customers. 5.4.1 Specifically – Top management shall ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within the organization.	Yes. 3.1 Introduction 3.2.8 Traceability 4.1 Introduction 4.2.5 Id and Trace 5.1 Introduction 5.2.11 Id and Trace	Not specified in terms of Management Commitment, however is fundamental across all Quality Plus and Milk Supplier Policy and Quality Standards Manual elements and backed up by connections to ISO 9001:2000 and Dairy Code of Practice where these elements are present.	Yes. 3.1 Introduction 3.2.8 Traceability 4.1 Introduction 4.2.5 Id and Trace 5.1 Introduction 5.2.11 Id and Trace	Not specified in terms of Management Commitment, however is fundamental across Total Farm and Milk Suppliers Handbook elements and backed up by connections to ISO 9001:2000 and Dairy Code of Practice where these elements are present.
Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)	Must	5.5.1 Responsibility and authority if the customer, statutory, or regulatory requirements stated. Specifically - Top management shall ensure that responsibilities & authorities are defined and communicated within the organisation	No. 3.2.10, 4.2.7, and 5.2.14 Personnel Competency require that skills and knowledge of food safety & hygiene matters relevant to the activities undertaken but no specific assignment of roles and authorities referred to.	Yes Section 15 Staff Training “List of Responsibilities.	No. 3.2.10, 4.2.7, and 5.2.14 Personnel Competency require that skills and knowledge of food safety & hygiene matters relevant to the activities undertaken but no specific assignment of roles and authorities referred to.	No. Does not specifically required that roles and responsibilities be assigned.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer / finished product specifications? (C5)	Must	6.2.2 Competence awareness and training - as these elements would affect product quality. Also at (d) where the organisation shall ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives.	Yes. 3.2.10, 4.2.7, and 5.2.14. – skills and knowledge of food safety and food hygiene matters relevant to the activities undertaken. Could gain more emphasis by referencing finished product specifications.	Yes. Section 15 Staff Training	Yes. 3.2.10, 4.2.7, and 5.2.14 - skills and knowledge of food safety and food hygiene matters relevant to the activities undertaken. The references to individual company requirements will enable the business to incorporate finished product specifications.	No. Does not specify training issues.
Does the system require clear customer and/or finished product specifications, particularly regarding GM status and tolerance levels? (C6)	Must	7.1 Planning of product realization – (a). 7.2.1 Determination of requirements related to the product – includes <u>determining</u> specified requirements, as well as those not stated by the customer but necessary for specified or intended use where known.	No. There is no reference to individual company requirements (only regulatory).	No. Could if GM specifications were referenced in Milk Supply Handbook or Quality Plus for milking practices and milk quality standards.	Yes. 3.3 Standards requires that “all raw milk must comply with individual company requirements...”.	No. Could if GM specifications referenced in Milk Supply Handbook Section 6 Milk Quality.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require verification that product meets customer specifications? (may include inspection and testing at an appropriate laboratory) (C7)	Must	7.1 Planning of product realisation. Specifically at (c) "required verification validation, monitoring, inspection and test activities specific to the product and criteria for product acceptance". 7.5.2 The organisation shall validate any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve planned results. 8.1 Measurement, analysis and improvement 8.2.4 Monitoring and measurement of product	Yes. 5.2.10 Testing Program (Note: GM not tested and not considered a food safety risk)	Yes. Milk Suppliers Policy and Quality Standards Manual. (Note: GM not tested and not considered a food safety risk)	Yes. 5.2.10 Testing Programs (Note: GM not tested and not considered a food safety risk)	Yes. Milk Supply Handbook (Note: GM not tested and not considered a food safety risk)
Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)	Must	7.4.2 Purchasing information – Specifically, "the organisation shall ensure the adequacy of specified purchase requirements prior to their communication to the supplier". 7.4.3 Verification of purchased product – "The organisation shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.	No.	No. Could if GM materials was referenced in Quality Plus FSP Working Manual for specific raw material inputs (Forage and Feed & Purchased Stock Feed).	Yes. 3.3 Standards "must comply with individual company requirements".	No. Could if GM materials referenced in Hazard Control Guidelines.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)	Must	7.2.3 Customer communication 8.2.4 Monitoring and measurement of product – “product release and service delivery shall not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority, and where applicable by the customer. 8.3 Control of non-conforming product –Specifically (b) by authorising its use, release or acceptance under concession by a relevant authority and, where applicable by the customer. Recall covered at 8.3 “When nonconforming product is detected after delivery or use has started, the organisation shall take action appropriate to the effects, or potential effects, of the nonconformity.” 8.5.2 Corrective action 8.5.3 Preventive action	3.1 Introduction 4.1 Introduction 5.1 Introduction 5.2.11 Id and Trace (specifically recall).	Yes. Milk Suppliers Policy and Quality Standards Manual “Antibiotic & other Inhibitory Substances). No formal corrective or preventive process specifically referred to.	3.1 Introduction 4.1 Introduction 5.1 Introduction 5.2.11 Id and Trace (specifically recall).	Yes. Milk Supply Handbook – Section 6 “Sensory Defects & Antibiotics – Notification”. No formal corrective or preventive process specifically referred to.
Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)	Must	8.2.2 Internal Audit 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.3 Control of non-conforming product	Yes. 3.1 Introduction 4.1 Introduction 5.1 Introduction 5.2.11 Id and Trace	Yes. Section 2 Milk Quality Standards “Antibiotic and other inhibitory substances”. Daily testing and follow up testing of a positive result found.	Yes. 3.1 Introduction 4.1 Introduction 5.1 Introduction 5.2.11 Id and Trace	Yes. Milk Supply Handbook Section 6.4.6 Sensory Defects and Antibiotics. All milk will be subject to the senses test before collection. Includes Notification of suspected problems.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require that there is product identification at each process step? (C11)	Must	7.5.3 Identification and traceability 7.5.5 Preservation of product	Yes. 3.2.8 Traceability, 4.2.5 Identification and Traceability, 5.2.11 Identification and Traceability	Not specifically referred to but fundamental element of Quality Plus FSP Working Manual, Milk Suppliers Policy and Quality Standards Manual. (stock identification covered.) ISO 9001:2000 and Dairy Code of Practice provides underlying coverage.	Yes. 3.2.8 Traceability, 4.2.5 Identification and Traceability, 5.2.11 Identification and Traceability	Not specifically referred to as a separate element within Milk Supply Handbook, but fundamental. (stock identification covered). ISO 9001:2000 and Dairy Code of Practice provides underlying coverage.
Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results) (C12)	Must	7.5.3 Identification and traceability 7.5.1 Control of production 7.5.5 Preservation of product.	3.2.8 Traceability 4.2.5 Id and Trace 5.2.7 Rework controls 5.2.11 Id and Traceability	Not specifically referred to but fundamental element of Quality Plus FSP Working Manual, Milk Suppliers Policy and Quality Standards Manual. (stock identification covered.) ISO 9001:2000 and Dairy Code of Practice provides underlying coverage.	3.2.8 Traceability 4.2.5 Id and Trace 5.2.7 Rework controls 5.2.11 Id and Traceability	Not specifically referred to but fundamental element of Milk Supply Handbook (stock identification covered in Total Farm). ISO 9001:2000 and Dairy Code of Practice provides underlying coverage.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Purchase and receipt of stock feed (1)</b>						
Does the system include requirements for stock feed declaration and/or identity preserved policy statements from suppliers? (1.1)	Highly Desirable	Yes. 7.4.1 Purchasing Process 7.4.2 Purchasing information – shall describe the product to be purchased. 7.4.3 Verification of purchased product – The organization shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.	No. Could if Section 3.2.2.4 Animal Feeds was expanded to require declarations from suppliers.	Yes – Section 11 Quality Plus FSP Working Manual (p. 11.3) – “obtain a vendor declaration or verbal statement from the suppliers that feed materials are free from unacceptable residue and are suitable for the intended purpose.”	No. Could if Section 3.2.2.4 was expanded to require declarations from suppliers.	Yes – Total Farm Section 2 (3) Stockfeed – requires that a vendor declaration be obtained and that description, ingredients & intended purpose of feed be stated.
Does the system ensure that Processor's specifications for milk harvested are clearly defined and understood particularly in relation to GM status? (1.2)	Highly Desirable	Yes. 7.1 Planning of product realization - the organization shall determine the (a) quality objectives and requirements for the product. 7.2.1 Determination of requirements related to the product. 7.2.2 Review of requirements related to the product.	No. Could if Section 3.3 Standards was expanded to include a reference to meeting individual company requirements.	Not specifically. Could if Milk Quality Standards in Milk Suppliers Policy and Quality Standards Manual defined GM specifications.	Yes. 3.3 Standards – requires that all raw milk must comply with individual company requirements.	Not specifically – Could if Total Farm Section 1 Milk Supply Guidelines and Milk Supply Handbook Section 6 defined Processor's specifications in relation to GM.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require specifications to be prepared detailing raw material requirements? (1.3)	Highly Desirable	Yes. 7.4.2 Purchasing information – shall describe the product to be purchased. The organization shall ensure the adequacy of specified purchase requirements prior to their communication to the supplier.	No. Does provide some indication of raw material requirements (ie Vet and Ag chemicals), but does not contain any raw material specification elements.	Yes, but only for specific materials such as “stock feed”. (ie Section 11 Purchased Stock feeds – p. 11.4 provides an example of a Farm procedure for purchased stock feeds, including minimum standard requirements.) Could if Purchasing element was introduced covering this requirement for all raw materials as a basic farm management protocol	No. Does provide some indication of raw material requirements (ie Vet and Ag chemicals), but does not contain any raw material specification elements.	Yes, but only for specific materials such as “stock feed”. (ie Section 2 Total Farm (3) Stockfeed “specify when buying feed that it complies with stock feed regulations, that only registered products have been used in its preparation or to treat it, and that it is suitable for lactating cattle. Do not purchase feed of unknown or suspect status”.) Could if Purchasing element was introduced covering this requirement for all raw materials as a basic farm management protocol
Does the system ensure that suppliers are reviewed for their ability to supply to raw material requirements? (1.4)	Highly Desirable	Yes. 7.4.1 Purchasing process – select based on their ability to supply product in accordance with requirements.	No. Does not contain any approved supplier elements.	No. There are some control elements (eg Quality Plus FSP Working Manual p11.2 Controls – “...the feed should at least be obtained through a reputable supply merchant”), but does not specify any review methods. Could if Purchasing element was introduced providing for the selection and assessment and review of suppliers.	No. Does not contain any approved supplier elements apart from Dairy Food Carriers.	No. Could if Purchasing element was introduced providing for the selection and assessment and review of suppliers in Section 2 Hazard Control Guidelines.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that the supplier is aware of the importance of the segregation of GM products? (1.5)	Highly Desirable	Yes 7.4.2 Purchasing information	No. Does not contain any approved supplier or raw material specification elements.	No. Could if the management practices to be introduced (referenced at p11.3 Quality Plus FSP Working Manual) included "adventitious presence". This could then be included on the control table of minimum standard or requirements which would be advised to the supplier. (ie Section 11 Purchased Stock feeds – p.11.4)	No. Does not contain any approved supplier or raw material specification elements apart from Dairy Food Carriers.	No. Could if Section 2 Total Farm (3) Stockfeed referenced the need to provide this awareness when ordering feed.
Does the system ensure that transporters have a process for identification, and appropriate segregation during transport? (1.6)	Highly Desirable	Yes 7.4.1 Purchasing process – the organization shall evaluate and select suppliers on their ability to supply product in accordance with requirements.	No. The Code does address ID and Trace for Dairy Food Carriers, but not for raw material transporters.	No. Does not detail any management practices for transporters of purchased stock feeds only that they come from a "reputable supplier". Could If "transport" was detailed as a control on the Purchased Stock Feeds Farm Procedure (Quality Plus FSP Working Manual) minimum standard or requirement table (p 11.4)	No. The Code does address ID and Trace for Dairy Food Carriers, but not for raw material transporters.	No. Could if Section 2 Total Farm (3) Stockfeed referenced the need to review the transporter for these requirements when buying feed.
Does the system ensure that the Transporter is aware of the responsibilities and importance of the segregation of GM products? (1.7)	Highly Desirable	Yes 7.4.2 requires that purchasing information shall describe the product to be purchased including (a) requirements for approval of product, procedures, processes and equipment.	No. The Code does not address raw material specifications for transporters	No. Could if the management practices to be introduced (referenced at p11.3 Quality Plus Working Manual) included "adventitious presence". This could then be included on the control table of minimum standard or requirements which could be advised to the supplier. (ie Section 11 Purchased Stock feeds – p.11.4)	No. The Code does not address raw material specifications for transporters only Dairy Food carriers.	No. Could if Section 2 Total Farm (3) Stockfeed referenced the need to specify transport requirements to the supplier when buying feed.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that transporters have a process for identification, segregation, and trace of all products whilst in their care? (1.8)	Highly Desirable	Yes. 7.4.1 Purchasing process – evaluate and select suppliers based on their ability to meet requirements.	No. Section 3.2.8 covers Traceability, on purchased animal feeds, but does not specify any issues in relation to identification, handling, and transport of those goods.	No. Only control listed - that "products are obtained from a reputable supply merchant". Could if this was included in any evaluation criteria established for suppliers.	No. Section 3.2.8 covers Traceability, on purchased animal feeds, but does not specify any issues in relation to identification, handling, and transport of those goods.	No. Could if there was a supplier review process and this was included in an evaluation criteria for suppliers.
<b>Feed grown on farmers land using GM pastures (2)</b>						
Does the system ensure that an appropriate paddock identification and mapping process exists? (2.1)	Highly Desirable	Yes 6.4 Work environment	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include paddock identification elements to individual company and/or statutory requirements.	Yes. Section 10 Forage Feed Supply Quality Plus FSP Working Manual p10.3 Paddock Treatment Records – requires that farm paddocks are identified on a farm map.	Not specifically. Could if Section 3.2.8 Traceability was expanded to include paddock identification elements. 3.2.9. Records – Could if Individual Company requires paddock id information to be maintained.	Not specifically. Does require that <u>treated</u> paddocks be identified – Total Farm Section 2 Stock Identification and Movement p11. "Identify treated or contaminated areas and check the status of a paddock before allowing cattle to graze. Maintain a record of grazing rotations."
Does the system ensure that paddock identification is supported by well-maintained fences? (2.2)	Highly Desirable	Yes 6.3 Infrastructure 6.4 Work environment.	No. Only infrastructure addressed is Milking Premises, Storage and Equipment.	No. Could if Section 6 Dairy Environment and Waste Management included control elements for paddocks outside the immediate dairy surrounds as well as adventitious presence.	No. Only infrastructure addressed is at 3.2.4 Dairy Milking Premises, Storage and Equipment. Refers to Code of Practice for Farm Dairy Premises. This is restricted to Dairy Premises and immediate surrounds and does not go into wider farm fencing issues.	Yes. Total Farm Section 2 Stock Identification & Movement p11 "Boundaries should be checked for security."
Does the system require appropriate distances between GM and non-GM pastures? (2.3)	Highly Desirable	Yes 6.4 Work environment 7.5.1 Control of Production	No	No. Could if Section 10 Forage Feed Supply in Quality Plus FSP Working Manual addressed crop management issues for GM pastures.	No	No.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require good farming practices are implemented? (2.4)	Highly Desirable	Yes 6.2.2 Competence, awareness and training – specifically (d) “ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives”. 7.5.1 Control of production 8.5.1 – Continual improvement	Not specifically. Could if the Standards identified in Section 3 were expanded to include some GMP elements for farming (in addition to dairy production). Review of neighbouring activities covered at 3.2.2.3 and 3.2.3.2 Environmental Contaminants.	Yes. Quality Plus FSP Working Manual provides guidelines.	Not specifically. Could if the Standards identified in Section 3 were expanded to include some GMP elements for farming (in addition to dairy production). Review of neighbouring activities covered at 3.2.2.3 and 3.2.3.2 Environmental Contaminants.	Yes – Total Farm Section 2 Hazard Control Guidelines, sets out requirements for good farming practices to be followed on specific identified hazards.
Does the system require adherence to a Crop Management Plan? (2.5)	Highly Desirable	Yes 7.1 Planning of product realization – In planning for product realization, the organization shall determine (a) quality objectives and requirements for the product. 7.2.1 determination of requirements related to the product 7.2.2 Review of requirements related to the product.	No	No. Could if Section 10 Forage Feed Supply (Quality Plus FSP Working Manual) addressed GM pastures.	No	No. Could if Total Farm Section 2 Stock Movement looked for management plans in relation “contaminated areas”.
<b>Storage of stock feed on farm (3)</b>						
Does the system ensure that purchased stock feed is identified, segregated, and use is traced? (3.1)	Highly Desirable	Yes 7.4.1 Purchasing process 7.5.1 Control of Production 7.5.5 Preservation of product - “The organization shall preserve the conformity of product during internal processing and delivery to the intended destination”. Preservation shall also apply to the constituent parts of a product.	No. Could if 3.2.8 Traceability item (b) was expanded to include identification and segregation.	No. Could if Quality Plus FSP Working Manual Section 11 Purchased Stock Feeds included stock feed handling issues.	No. Could if 3.2.8 Traceability item (b) was expanded to include identification and segregation.	Not specifically. Section 2 Total Farm (3) Stockfeed could if addressed issues of on-farm storage of stock feed.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that storage of stock feed is sufficient to prevent cross contamination? (3.2)	Highly Desirable	Yes 6.4 Work environment 7.5.1 Control of production 7.5.5 Preservation of product - "Preservation shall also apply to the constituent parts of a product." 8.3 Control of non-conforming product	No. Could if 3.2.2.4 Animal Feeds specifically addressed "adventitious presence". Only looks at contamination from a MRL or MLs level.	Yes. Section 11 Quality Plus FSP Working Manual – p11.4 "prevent contamination of stored stock feeds".	No. Could if 3.2.2.4 Animal Feeds specifically addressed "adventitious presence". Only looks at contamination from a MRL or MLs level.	No. Section 2 Total Farm (3) Only looks at identification and use, not storage conditions.
Does the system ensure that suppliers are reviewed for their ability to meet requirements? (3.3)	Highly Desirable	Yes 7.4.1 Purchasing process	No. Does not contain any approved supplier elements.	No. Does not contain any approved supplier elements.	No. Does not contain any approved supplier elements.	No. Could if there was a supplier review process in Total Farm Section 2 Hazard Control Guidelines.
Does the system ensure that designated storage areas are clearly identified? (3.4)	Highly Desirable	Yes 6.3 Infrastructure – the organization shall determine provide and maintain the infrastructure needed to achieve conformity to product requirements.	No. 3.2.4 Dairy Milking premises, storage and equipment - Could if the definition of production areas included all farm storage areas to prevent the introduction of hazards and contaminants to milk.	No. Could if Section 5 Dairy Maintenance Program included farm storage areas.	No. 3.2.4 Dairy Milking premises, storage and equipment - Could if the definition of production areas included all farm storage areas to prevent the introduction of hazards and contaminants to milk.	No. There are no specific references to Farm Storage Areas.
Does the system ensure that clear directions are provided to the transporter for the handling of raw materials on site? (3.5)	Highly Desirable	Yes 7.4.2 Purchasing information	No. Does not contain any raw material specification elements.	No. Could if Quality Plus FSP Working Manual Section 11 Purchased Stock Feed included transport as a Control within Farm Procedure example 11.4	No. Does not contain any raw material specification elements.	No. Could if this information was provided when buying feed as part of a raw material specification process.
Does the system ensure appropriate cleaning practices are implemented on site? (3.6)	Highly Desirable	Yes 6.3 Work environment 7.5.1 Control of production	No. Could if Section 3.2.7 Cleaning and Sanitising was expanded to include stock feed storage areas.	No. Does not cover stock feed storage areas. Only covers dairy premises in Section 2 Quality Plus FSP Working Manual Cleaning and Sanitising	No. Could if Section 3.2.7 Cleaning and Sanitising was expanded to include stock feed storage areas.	No. Does not address stock feed storage areas?
<b>Feeding out of stock feed (4)</b>						
Does the system ensure that stock feed is clearly identified and traced? (4.1)	Highly Desirable	Yes 7.5.1 Control of production 7.5.5 Preservation of product – preservation (identification, handling) shall also apply to the constituent parts of a product.	No. 3.2.8 Traceability does not specifically require identification.	Not specifically. Quality Plus FSP Working Manual Section 11 Purchased Stock Feed only indicates that rations should be monitored.	No. 3.2.8 Traceability does not specifically require identification.	Yes. Total Farm Section 2 (3) Stockfeed.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require an inventory to be maintained of all stock feed? (4.2)	Highly Desirable	Yes 7.1 Planning of product realization – The organization shall plan and develop the processes needed for product realization. 7.5.1 Control of production	No. Does not specifically require an inventory.	Not specifically. Quality Plus FSP Working Manual Section 11 Purchased Stock Feed only indicates that rations should be monitored.	No. Does not specifically require an inventory.	Yes. Section 2 Total Farm (3) Stockfeed.
Does the system ensure that a stock identification and movement procedure exists? (4.3)	Highly Desirable	Yes 7.5.1 Control of production	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals.	Yes. Section 7 Animal identification	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals.	Yes. Section 2 Total Farm (2) Stock Identification and movement
Does the system ensure that stock fed GM feed are identifiable? (4.4)	Highly Desirable	Yes 7.5.1 Control of production 7.5.3 Identification and Traceability	No. Could if 3.2.8 Traceability was expanded to include identification of stock fed GM pasture or GM feed.	Not specifically. Could if Quality Plus FSP Manual Section 7 identified GM feed as a control for minimum standards or requirements.	No. Could if 3.2.8 Traceability was expanded to include identification of stock fed GM pasture or GM feed.	Yes. Section 2 (3) Total Farm Stockfeed “Record the dates of usage and to which stock batches fed”.
<b>Cattle fed on pasture (5)</b>						
Does the system ensure that a paddock identification and mapping system exists? (5.1)	Highly Desirable	Yes 6.4 Work environment 7.5.1 Control of Production	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include paddock identification elements to individual company and/or statutory requirements.	Yes. Quality Plus FSP Working Manual Section 10 Paddock Treatment Records –p10.3 “identify all farm paddocks on a map”.	Not specifically. Could if Section 3.2.8 Traceability was expanded to include paddock identification elements. 3.2.9. Records – Could if Individual Company requires paddock id information to be maintained.	Not specifically. Does require that <u>treated</u> paddocks be identified – Total Farm Section 2 Stock Identification and Movement p11. “Identify treated or contaminated areas and check the status of a paddock before allowing cattle to graze. Maintain a record of grazing rotations.”
Does the system require that GM pastures are clearly identified, both within the system and in the field? (5.2)	Highly Desirable	Yes 6.3 Infrastructure – the organization shall determine, provide and maintain the infrastructure needed to achieve conformity to product requirements. This includes (a) buildings, workspace, and associated utilities (b) process equipment (both hardware and software) (c) supporting services. 7.5.1 Control of Production	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include paddock identification elements to individual company and/or statutory requirements.	Not specifically. Could if Section 10 Quality Plus FSP Working Manual Forage Feed Supply included an element for GM pastures.	Not specifically. Could if Section 3.2.8 Traceability was expanded to include paddock identification elements. 3.2.9. Records – Could if Individual Company requires paddock id information to be maintained.	Not specifically. Could if Total Farm Section 2 Stock Identification and Movement p11 specified a check on GM pastures.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require good farming practices are implemented? (5.3)	Highly Desirable	Yes 6.2.2 Competence, awareness and training – specifically (d) “ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives”. 7.5.1 Control of production 8.5.1 Continual improvement	No. Could if the Standards identified in Section 3 were expanded to include some GMP elements for farming (in addition to dairy production). Review of neighbouring activities covered at 3.2.2.3 and 3.2.3.2 Environmental Contaminants.	Yes. Quality Plus FSP Manual sets out requirements for good farming practices to be followed on specific identified hazards.	No. Could if the Standards identified in Section 3 were expanded to include some GMP elements for farming (in addition to dairy production requirements). Review of neighbouring activities covered at 3.2.2.3 and 3.2.3.2 Environmental Contaminants. Could also if individual company requirements referred to at 3.3 include some good farming practice elements.	Yes – Total Farm Section 2 Hazard Control Guidelines, sets out requirements for good farming practices to be followed on specific identified hazards.
Does the system require adherence to a Crop Management Plan? (5.4)	Highly Desirable	Yes 7.1 Planning of product realization – In planning for product realization, the organization shall determine (a) quality objectives and requirements for the product. 7.2.1 determination of requirements related to the product 7.2.2 Review of requirements related to the product.	No.	No. Could if Section 10 Forage Feed Supply Quality Plus FSP Working Manual addressed GM pastures.	No. Could if individual company requirements require this occurs in the event of GM pasture introduction to the enterprise.	No. Could if Total Farm Section 2 (2) Stock Movement looked for management plans in relation “contaminated areas” p11. Requires that a check on the status of a paddock occur before allowing cattle to graze.
Does the system ensure that a stock identification and movement procedure exists to control the movement of stock? (5.5)	Highly Desirable	Yes 7.5.1 Control of Production 7.5.3 Identification and traceability	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals	Yes. Section 7 Animal Identification system	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals. 3.2.9 Records – could if the individual Company required these records to be kept.	Yes. Total Farm Section 2 (2) Stock Identification and movement

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that stock fed GM pastures are identifiable? (5.6)	Highly Desirable	Yes 7.5.1 Control of production 7.5.3 Identification and Traceability	No. Could if 3.2.8 Traceability was expanded to include identification of stock fed GM pasture species.	Not specifically. Could if Section 10 Forage Feed Quality Plus FSP Working Manual identified GM pastures as an element for control.	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of stock fed GM pasture species, not just treated animals. 3.2.9 Records – could if the individual Company required these records to be kept.	No. Could if Section 2 Total Farm Stock Identification and movement identified GM pastures as an element for checking.
Does the system require that a grazing rotation process exist to identify and control grazing? (5.7)	Highly Desirable	Yes 7.5.1. Control of production 7.5.3 Identification and traceability	No	Yes. Section 10 Quality Plus FSP Working Manual Forage Feed Supply	No	Yes. Total Farm Section 2 (2) Stock Identification and movement p11. “identify treated or contaminated areas and check the status of a paddock before allowing cattle to graze. Maintain a record of grazing rotations”.
Does the system ensure that stock grazed on GM pastures are identified and traced? (5.8)	Highly Desirable	Yes 7.5.1 Control of production 7.5.3 Identification and Traceability	No. Could if 3.2.8 Traceability was expanded to include identification and movement of stock fed GM pasture species.	Not specifically. Could if Section 10 Quality Plus FSP Working Manual Forage Feed Supply identified GM pastures as a control element.	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of stock fed GM pasture species, not just treated animals? 3.2.9 Records – could if the individual Company required these records to be kept.	Yes. Section 2 (2) Stock Identification and movement.
Does the system detail any unintended grazing of GM pastures (ie escapes)? (5.9)	Highly Desirable	Yes 7.5.1 Control of production 8.3 Control of non-conforming product	No	No. Could if Section 10 Forage Feed Supply Quality Plus FSP Working Manual included controls for GM pastures.	No	Not specifically. Could if Total Farm Section 2 Stock Identification and movement specified controls for GM pastures.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Purchased/agisted stock grazed on GM pastures (6)</b>						
Does the system ensure that a stock identification and movement procedure is in place? (6.1)	Highly Desirable	Yes 7.5.3 Identification and traceability	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals	Yes. Section 7 Qualities Plus FSP Working Manual.	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include identification and movement of all stock, not just treated animals. Could if the individual company required these records to be kept.	Yes. Section 2 total Farm
Does the system ensure that stock sold and purchased are identified and recorded? (6.2)	Highly Desirable	Yes 7.4.1 Purchasing process 7.5.3 Identification and Traceability 7.5.1 Control of production	No.	Yes. Section 7 Animal Identification System Quality Plus FSP Working Manual.	No. Could at 3.2.9 Records if the individual company required these records be kept.	Yes. Section 2 Total Farm Stock Identification and movement.
Does the system ensure that introduced stock is purchased from a reputable or approved supplier? (6.3)	Highly Desirable	Yes 7.4.1 Purchasing process – The organization shall evaluate and select suppliers based on their ability to supply product in accordance with the organization's requirements.	No. Does not contain any approved supplier elements	No. Only control vendor declaration.	No. Does not contain any approved supplier elements, including within the definition for a HACCP based FSP.	No. Only control vendor declaration.
Does the system require a vendor declaration and/or Identity Preserved Policy Statement to be supplied? (6.4)	Highly Desirable	Yes. 7.4.1 Purchasing Process	No. Does not contain any approved supplier or raw material specification elements, including within the definition for a HACCP based FSP.	Yes. Section 13 Livestock Purchases and Sales Quality Plus FSP Working Manual	No. Does not contain any approved supplier or raw material specification elements, including within the definition for a HACCP based FSP.	Yes Section 2 Total Farm Stock Identification and movement.
Does the system ensure specifications for cattle are available? (6.5)	Highly Desirable	Yes. 7.4.2 Purchasing information.	No. Does not contain any raw material specification elements for animals.	Not specifically. Section 13 Quality Plus FSP Working Manual Purchases and Sales provides some parameters.	No. Does not contain any raw material specification elements for animals.	Not specifically. Section 2 Total Farm Stock Identification and movement provides some parameters.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require that a check be made on agisted pastures? (6.6)	Highly Desirable	Yes. 7.4.1 Purchasing processes – to ensure that purchase product conforms to specified purchase requirements. 7.5.1 Control of production	No. Could if Section 3.2.2.3 and 3.2.3.2 Environmental Contamination was expanded to include agisted pastures and that GM pastures be reviewed (including adventitious presence) in that check.	Not specifically. Could if Section 10 Quality Plus FSP Working Manual Forage Feed Supply addressed agisted pastures.	Not Specifically. Could at 3.3 Standards if the individual company requires this check to be made. Could if Section 3.2.2.3 and 3.2.3.2 Environmental Contamination was expanded to include agisted pastures and that GM pastures be reviewed (including adventitious presence) in that check.	Yes. Section 2 Total Farm Stock Id and movement
Does a stock identification and movement process exist which caters for the identification and traceability of agisted stock? (6.7)	Highly Desirable	Yes 7.5.1 Control of production. 7.5.3 Identification and traceability	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals	No. Could if Section 10 Forage Feed Supply and Section 7 Animal Identification Quality Plus FSP Working Manual referred to adjusted stock.	Not Specifically. Could at 3.3 Standards if the individual company requires this system to be in place. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals.	Yes. Section 2 Total Farm Stock Identification and movement p.11
If such a system exists, does it require that cattle fed on GM pastures be separately identified? (6.8)	Highly Desirable	Yes 7.5.3 Identification and traceability 7.5.5 Preservation of product	No	No	Not Specifically. Could at 3.3 Standards and 3.2.9 Records if the individual company requires to this information to be maintained.	Yes. Section 2 Total Farm Stock Identification and movement.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Milk Harvested (7)</b>						
Does the system ensure that a stock identification and movement process exists to support the identification and traceability of milk introduced to the harvesting process? (7.1)	Highly Desirable	Yes. 7.5.1 Control of production 7.5.3 Identification and traceability	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include stock identification and traceability of all animals.	Yes. Section 7 Animal identification system Quality Plus FSP Working manual.	Not Specifically. Could at 3.3 Standards if the individual company requires this system to be in place. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals.	Yes. Section 2 Total Farm Stock Identification and movement.
Does this system require that cattle fed on GM pastures or feed be separately identified? (7.2)	Highly Desirable	Yes 7.5.3 Identification and traceability 7.5.1 Control of production	No. Could if Section 3.2.8 Traceability and 3.2.9. Records were expanded to include stock identification and traceability of all animals and highlight particularly those with a GM status.	No. Could if Section 10 Quality Plus FSP Working Manual Forage Feed Supply referenced GM pastures.	Not Specifically. Could at 3.3 Standards if the individual company requires this to be in place. Could if 3.2.8 Traceability was expanded to cover identification and traceability of all stock, and particularly those with a GM status.	No. Could if Section 2 Total Farm Identification and movement identified GM pastures within stock movement elements.
Does the system ensure that an appropriate time lapses before stock fed GM products no longer require segregation from stock that have not been fed GM products? (7.3)	Highly Desirable	Yes 7.5.1 Control of production and service provision – the organization shall plan and carry out production under controlled conditions including (f) the implementation of release, delivery and post-delivery activities. 7.5.5 Preservation of product.	No. Microbiological Hazards 3.2.3.1 Animal Health -does indicate that the health status of milking animals must be managed in a manner to prevent the introduction of hazards to the milk. GM feed and pastures are not considered a hazard.	Not specifically. Could if Section 4 Milking Practices Quality Plus FSP Working Manual referred to any specific withholding periods for GM pastures.	No. Microbiological Hazards 3.2.3.1 Animal Health - does indicate that the health status of milking animals must be managed in a manner to prevent the introduction of hazards to the milk. GM feed and pastures are not considered a hazard.	Not specifically. Could if Section 2 Total Farm referred to the aspect of withholding on GM pastures.

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Does the system ensure that a stock identification and movement system exists to identify stock introduced to the farm? (7.4)	Highly Desirable	Yes. 7.5.1 Control of production. 7.5.3 Identification and traceability	No. Could if 3.2.8 Traceability was expanded to cover identification and movement of all stock, not just treated animals	Yes. Section 7 Animal Identification Quality Plus FSP working manual	Not Specifically. Could at 3.3 Standards if the individual company requires this to be in place. Could if 3.2.8 Traceability was expanded to cover identification and traceability of all stock.	Yes. Section 2 Total Farm Stock identification and movement.
Does the system ensure that a Stock Sales and Purchases register exists to identify the origin of introduced stock? (7.5)	Highly Desirable	Yes 7.5.1 Control of production 7.5.3 Identification and Traceability	No	Yes. Section 13 Quality Plus FSP Working Manual Livestock Purchases and Sales.	Not Specifically. Could at 3.3 Standards if the individual company requires this to be in place.	Yes. Section 2 Total Farm Stock Identification and movement.
Does the system include requirements for a vendor declaration and/or identity preserved policy statements from suppliers? (7.6)	Highly Desirable	Yes. 7.4.1 Purchasing process 7.4.3 Verification of purchased product – The organization shall establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.	No. Does not contain any approved supplier or raw material specification elements.	Yes. Section 13 Quality Plus FSP Working Manual Livestock Purchases and Sales.	Not specifically. Does not contain any approved supplier or raw material specification elements. Could at 3.3 Standards if the individual company requires this to be in place.	Yes. Section 2 Total Farm Stock Identification and movement
Does the system ensure that a check on agisted pastures occurs? (7.7)	Highly Desirable	Yes 7.4.1 Purchasing processes – to ensure that purchase product conforms to specified purchase requirements. 7.5.1 Control of production.	No. Could if Section 3.2.2.3 Environmental Contamination was expanded to include agisted pastures and that GM pastures be reviewed (including adventitious presence) in that check.	Not specifically. Could if Section 10 Forage Feeds Quality Plus FSP Working manual addressed GM pastures.	Not specifically. Could if individual company required this information. Could if Section 3.2.2.3 Environmental Contamination was expanded to include agisted pastures and that GM pastures be reviewed (including adventitious presence) in that check.	Yes. Section 2 Total Farm Stock identification and movement.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require that this information be recorded in the stock identification and movement procedure? (7.8)	Highly Desirable	Yes 7.5.1 Control of production 7.5.3. Identification and traceability	No	No. Could if Section 10 Forage Feeds and Section 7 Stock Identification Quality Plus FSP Working manual referenced agisted pastures.	Not specifically. Could if individual company required this information.	Yes. Section 2 Total Farm Stock Identification and movement
<b>Storage in vat on farm (8)</b>						
Does the system ensure that a stock identification and movement process exists to support the identification and traceability of ALL milk introduced to the harvesting process? (8.1)	Must	Yes 7.5.3 Identification and traceability 7.5.5 Preservation of product	No. Does not specifically address identification and traceability of milk.	Yes. Section 7 Animal Identification Quality Plus FSP Working manual	Not specifically. Could if the individual company requires identification and traceability of milk at 3.3 Standards.	Yes. Section 2 Total Farm Stock Identification and movement
Does the system ensure that an identification, segregation, and traceability process exists for all milk harvested? (8.2)	Must	Yes 7.5.3 Identification and traceability	No. Does not specifically address identification and traceability of milk.	Yes. Section 4 Milking Practices Quality Plus FSP Working manual	Not specifically. Could if the individual company requires identification and traceability of milk at 3.3 Standards	Not specifically but fundamental element of management practices.
Does the system require that milk with non-GM status be clearly identified? (8.3)	Must	Yes 7.5.3 Identification and traceability 7.5.5 Preservation of product	No	No. Could if included in Milk Suppliers Handbook and Milk Quality Standards Manual.	Not specifically. Could if the individual company requires this at 3.3 Standards.	No. Could if Milk Supply Handbook Section 6 addressed non-GM or GM status.
Does the system ensure that the stock identification and traceability process is compatible with the identification and traceability process for harvesting? (8.4)	Must	Yes 7.5.1 Control of production and service provision. 7.5.3 Identification and Traceability 7.5.5 Preservation of product	No	Yes. Section 4 Quality Plus FSP Working Manual Milking Practices.	Not specifically. Could if the individual company requires this at 3.3 Standards.	Not specifically but Milk Supply Handbook relies on identification and trace.
Does the system require that "GM free" milk is harvested prior to non-GM milk and/or that appropriate cleaning is in place between batches? (8.5)	Highly Desirable	Yes 7.5.1 Control of production	No. Could if 3.2.7 Cleaning and Sanitising was expanded to include reference to cleaning activities associated with GM milk.	Not specifically. Could if listed as a control in Section 4 Quality Plus FSP Working Manual Milking Practices	Not specifically. Could if individual company requires this at 3.3 Standards. Could if 3.2.7 Cleaning and Sanitising was expanded to include reference to cleaning activities associated with GM milk.	No.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Discharge of milk into tanker - Sole Supplier (9)</b>						
Does the system address the roles and responsibilities of carriers, particularly in relation to tanker GMP and hygiene practices? (9.1)	Desirable	Yes 7.4.2 Purchasing information – specifically (b) requirements for qualification of personnel and (c) quality management system requirements.	4.2.1 Delivery and Collection 4.2.2 Transport vehicles, equipment and vessels 4.2.4 Cleaning and Sanitising 4.2.7 Personnel Competency	Yes. Milk Suppliers Policy and Quality Standards Manual	Yes 4.2.1 Delivery and collection 4.2.2 Transport vehicles, equipment and vessels 4.2.3 Cleaning and Sanitising 4.2.7 Personnel Competency	Yes. Section 7 Milk Supply Handbook
Is there a clear process for the correct identification of product at ALL times? (9.2)	Highly Desirable	Yes 7.5.3 Identification and traceability 7.5.5 Preservation of product	4.2.5 Identification and Traceability	Not specifically, but Milk Suppliers Policy and Quality Standards Manual relies on correct identification of product.	Yes 4.2.5 Identification and Traceability	Not specifically. Section 6 Milk Quality relies on correct identification of product.
If storage facilities provide for the segregation of milk types, are vats clearly identified? (9.3)	Highly Desirable	Yes 6.3 Infrastructure	4.2.5 Identification and Traceability	Yes. Section Milk Cooling & Storage	Yes 4.2.5 Identification and Traceability	Not specifically. Could if Section 7 Milk Suppliers Handbook specified vat identification.
Does the system require a hold and release procedure to be in place to control discharge to the tanker? (9.4)	Should	Yes 7.5.1 Control of production and service provision 7.5.5 Preservation of product.	Not specifically. 4.2.1 Delivery and Collection does say that milk must be transported without undue delay and in a manner that prevents the introduction of contaminants. This does not specify any hold and release procedure.	Yes. Milk Suppliers Policy and Quality Standards Manual at Section 2. "Sensory graded".	Not specifically. Could if the individual company required this at 3.3 Standards. 4.2.1 Delivery and Collection does say that milk must be transported without undue delay and in a manner that prevents the introduction of contaminants. This does not specify any hold and release procedure.	Yes. Section 6 Milk Supply Handbook "Sensory defects and antibiotics".

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require that the GM status of farm be identified to the tanker driver? (9.5)	Highly Desirable	Yes 7.5.1 Control of production and service provision – specifically (a) the availability of information that describes the characteristics of the product. 7.5.5 Preservation of product	No. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	No. Could if listed as an issue in Milk Suppliers Policy and Quality Standards Manual.	Not specifically. Could if this was a requirement of an individual company at 3.3 Standards. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	No. Could if listed as an issue in Milk Supply Handbook Section 6.
<b>Discharge of milk into tanker many suppliers - milk mixed (10)</b>						
Does the system address the roles and responsibilities of carriers, particularly in relation to tanker GMP and hygiene practices? (10.1)	Desirable	Yes 7.4.2 Purchasing information – specifically (b) requirements for qualification of personnel and (c) quality management system requirements.	4.2.1 Delivery and Collection 4.2.2 Transport vehicles, equipment and vessels 4.2.4 Cleaning and Sanitising 4.2.7 Personnel Competency	Yes. Milk Suppliers Policy and Quality Standards Manual, Section 4.	Yes 4.2.1 Delivery and collection 4.2.2 Transport vehicles, equipment and vessels 4.2.3 Cleaning and Sanitising 4.2.7 Personnel Competency	Yes. Section 7 Milk Supply Handbook Standards for Dairy Premises and other collection issues.
If storage facilities provide for the segregation of milk types, are vats clearly identified? (10.2)	Highly Desirable	Yes 6.3 Infrastructure	4.2.5 Identification and Traceability	Yes. Section Milk Cooling & Storage	Yes 4.2.5 Identification and Traceability	Not specifically. Could if Section 7 Milk Suppliers Handbook specified vat identification. Dairy Evaluation in Total Farm does check for some vat capacity and size elements.
Does the system require that the GM status of farm be identified to the tanker driver? (10.3)	Highly Desirable	Yes 7.5.1 Control of production and service provision 7.5.5 Preservation of product	No. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	Not specifically. Could if this was referenced in Milk Suppliers Policy and Quality Standards Manual in "Sensory Graded"	Not specifically. Could if this was a requirement of an individual company at 3.3 Standards. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	Not specifically. Could if Section 6 Milk Supply Handbook referenced such a check at "Sensory defects".
<b>Transport to Processor or Regional Depot (11)</b>						
Nil hazards identified						

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Tanker emptied at Regional Depot (12)</b>						
Does the system require that only approved carriers are utilised? (12.1)	Highly Desirable	Yes 7.4.1 Purchasing process	No. Does not contain any approved supplier elements. Does indicate that they demonstrate competency in skills and knowledge, but no other requirements or approvals specified.	Not specifically. Milk Suppliers Handbook and Quality Standards Manual Section 4 – Company policy for tanker drivers required to be specified.	Yes. 4.1 and 4.2.7 both reference that bulk dairy product carriers must be certified, registered, and deemed competent by the TDIA.	Not specifically.
Does the system ensure that specifications for carriers are available? (12.2)	Highly Desirable	Yes 7.4.2 Purchasing information	No. Does not contain any raw material specification elements.	Yes. Milk Suppliers Handbook and Quality Standards Section 4 Company policy for tanker drivers.	Yes. 4.1 and 4.2.7 requires that carriers be deemed competent by the TDIA.	Not specifically within Milk Supply Handbook
Does the system periodically review the performance of carriers? (12.3)	Highly Desirable	Yes 7.4.1 Purchasing process	No. Does not contain any approved supplier elements, including within the definition for a HACCP based FSP.	Not specifically. Section 4 Milk Suppliers Policy and Quality Standards Manual refers to "complaints"	Yes. 4.1 and 4.2.7 requires that carriers be deemed competent by the TDIA.	No.
Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (12.4)	Highly Desirable	Yes 7.4.2 Purchasing information	No. Could if 4.2.7 was expanded to include GM technology. As there is no reference to obtaining the Customer or Processor's raw material requirements, there is no tie back to understanding the implications for handling GM products.	Not specifically referenced in Section 4 Milk Suppliers Policy and Quality Standards Manual.	Not specifically. Could if 4.2.7 was expanded to include GM technology.	Not specifically referenced in Section 6 Milk Supply Handbook

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (12.5)	Must	Yes 7.4.3 Verification of purchased product 7.5.1 Control of production and service provision 7.5.5 Preservation of product	No. 5.2.11 Identification and Traceability does say that a program must be in place to ensure identification and traceability of manufacture and storage for raw materials through to finished product. It does specifically require the GM status of raw materials be declared prior to receipt.	No. Could if referenced in Milk Suppliers Policy and Quality Standards Manual under company policy for tanker drivers reporting abnormalities.	Not specifically unless the individual company requires the farmer to notify as part of 3.3 Standards. 5.2.11 Identification and Traceability does say that a program must be in place to ensure identification and traceability of manufacture and storage for raw materials through to finished product. It does not specifically require the GM status of raw materials be declared prior to receipt. 5.2.11 also states that any dairy based product not intended for human consumption must be clearly labelled as such. Could be applicable if GM milk was considered as not intended for human consumption (ie did not conform to individual company requirements).	No. Could if referenced in Section 6 Quality Milk Supply Handbook
<b>Tanker emptied at Regional Depot (13)</b>						
Does the system require that only approved carriers are utilised? (13.1)	Highly Desirable	Yes 7.4.1 Purchasing process	No. Does not contain any approved supplier elements. Does indicate that they demonstrate competency in skills and knowledge, but no other requirements or approvals specified.	Not specifically.	Yes. 4.1 and 4.2.7 both reference that bulk dairy product carriers must be certified, registered, and deemed competent by the TDIA.	Not specifically

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system ensure that specifications for carriers are available? (13.2)	Highly Desirable	Yes 7.4.2 Purchasing information	No	Yes. Milk Suppliers Policy and Quality Standards Handbook Company Policy for Tanker drivers.	Yes. 4.1 and 4.2.7 requires that carriers be deemed competent by the TDIA.	No.
Does the system periodically review the performance of carriers? (13.3)	Highly Desirable	Yes 7.4.1 Purchasing process	No	Not specifically. Milk Suppliers Policy and Quality Standards Manual Company Policy for Tanker drivers refers to "complaints".	Not specifically. Could if 4.2.7 was expanded to include GM technology.	No
Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (13.4)	Highly Desirable	Yes 7.4.2 Purchasing information	No. Could if 4.2.7 includes GM technology. As there is no reference to meeting the Customer or Processor's raw material requirements, there is no tie back to understanding roles and responsibilities for handling GM products.	Not specifically. Could if GM products were referenced in Section 4 Guidelines for tanker drivers Milk Suppliers Handbook and Quality Standards Manual	Not specifically. Could if 4.2.7 was expanded to include GM technology. The Farmer is required to refer to individual company requirements at 3.3 Standards. As there is no reference to obtaining the individual companies at the Carrier to Processor step, there is no tie back to understanding the implications for handling GM products unless the Farmer advises the company's requirements.	No. Could if referenced in Section 7 Standards for Dairy Premises and other collection issues Milk Supply Handbook
Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (13.5)	Must	Yes 7.4.3. Verification of purchased product 7.5.1 Control of production 7.5.5 Preservation of product	No	No. Could if referenced in Section 2 Milk Quality Standards Milk Supplies and Quality Standards Manual	No.	No. Could if referenced in Section 6 Milk Quality Milk Supply Handbook
<b>Storage, collection, and transport to processor (14)</b>						
Is there a clear process for the correct identification of product at all times? (14.1)	Highly Desirable	Yes 7.5.1 Control of production 7.5.5 Preservation of product 7.5.3 Identification and traceability	Yes 5.2.11 Identification and Traceability	Not specifically within Milk Suppliers Policy or Quality Standards Handbook	Yes 5.2.11 Identification and Traceability	Not specifically within Milk Supply Handbook.
Does the system require that the GM status of milk be identified to the second party? (14.2)	Highly Desirable	Yes 7.5.4 Customer property 7.5.5 Preservation of product	No.	No.	No.	No.

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system address the roles and responsibilities of carriers particularly in relation to GMP and hygiene? (14.3)	Desirable	7.4.2 Purchasing information	4.2.1 Delivery and Collection 4.2.2 Transport vehicles, equipment and vessels 4.2.4 Cleaning and Sanitising 4.2.7 Personnel Competency	Yes. Milk Suppliers Policy and Quality Standards Manual Section 4.	Yes 4.2.1 Delivery and Collection 4.2.2 Transport vehicles equipment and vessels 4.2.4 Cleaning and Sanitising 4.2.7 Personnel Competency.	Not specifically.
If storage facilities provide for the segregation of milk types, are vats clearly identified? (14.4)	Highly Desirable	Yes 6.3 Infrastructure	4.2.5 Identification and Traceability 5.2.11 Identification and Traceability	Not specifically required within Milk Suppliers Policy or Quality Standards Handbook	Yes 4.2.5 Identification and Traceability 5.2.11 Identification and Traceability	No specifically within Milk Supply Handbook although Total Farm requires a check on vats is undertaken.
Does the system require that the GM status of farm be identified to the tanker driver? (14.5)	Highly Desirable	Yes 7.4.3 Verification of purchased product 7.5.1 Control of production 7.5.5 Preservation of product	No. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	No. Could if listed as an issue in the Milk Suppliers Policy and Quality Standards Manual.	No. Could if 4.2.1 Delivery and Collection included a reference to notification of a GM status to control the potential for "adventitious presence".	No. Could if provided for in Section 6 of Milk Supply Handbook.
Nil hazards identified in actual transport						
<b>Storage (15)</b>						
Does the system ensure that milk is identified and that adequate traceability procedures are in place? (15.1)	Must	Yes 7.5.1 Control of production and service provision 7.5.3 Identification and traceability	5.2.11 Identification and Traceability	Not applicable	Yes 5.2.11 Identification and traceability	Not applicable
Does the system require that an ongoing verification program is in place to ensure the effectiveness of raw material trace? (15.2)	Must	Yes 7.4.3 Preservation of product	5.2.11 Identification and Traceability	Not applicable	Yes 5.2.11 Identification and Traceability	Not applicable
Does the system require that a hold and release system be in place to prevent the release or distribution of non-GM milk? (15.3)	Must	Yes 7.5.1 Control of production	5.2.8 Hold and Release (GM presence does not indicate that the food is "unsafe")	Not applicable	Yes 5.2.8 Hold and Release (GM presence does not indicate that the food is "unsafe")	Not applicable
Does the system identify non-GM within its hold and release system? (15.4)	Must	Yes 7.5.3 Identification and traceability	No. (GM presence does not indicate that the food is "unsafe")	Not applicable	No (GM presence does not indicate that the food is "unsafe")	Not applicable

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warrnambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (15.5)	Highly Desirable	Yes 6.3 Infrastructure – process equipment (hardware and software)	No. Could if 5.2.7 Rework Controls 5.2.8 Hold and Release and 5.2.10 Testing Programs 5.2.11 Identification and Traceability reference software for its capacity to handle requirements.	Not applicable	No. Could if 5.2.7 Rework Controls 5.2.8 Hold and Release and 5.2.10 Testing Programs 5.2.11 Identification and Traceability reference software for its capacity to handle requirements.	Not applicable
<b>Milk Processed (16)</b>						
Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (16.1)	Highly desirable	Yes 6.3 Infrastructure	No. Could if 5.2.7 Rework Controls 5.2.8 Hold and Release and 5.2.10 Testing Programs 5.2.11 Identification and Traceability reference software for its capacity to handle requirements.	Not applicable	No	Not applicable
Does the system ensure that a program is in place which identifies and traces product at all stages of manufacture and storage from raw materials through to finished product? (16.2)	Highly Desirable	Yes 7.5.1 control of production and service provision 7.5.3 Identification and traceability 7.5.5 Preservation of product	5.2.11 Identification and Traceability	Not applicable	5.2.11 Identification and Traceability	Not applicable
Does the system ensure that Processor is aware of customer specifications for finished product? (16.3)	Highly Desirable	Yes 7.1 Planning of product realization 7.2.1 Determination of requirements related to the product 7.2.2 Review of requirements related to the product	No. Customer specifications are not specifically addressed in the standards required of the finished product at 5.2 and 5.3	Not applicable	No	Not applicable

Issue to be addressed	Rating	ISO 9001:2000	Vic Code of Practice for Dairy Food	Warmambool Cheese & Butter Co	Tas Dairy Industry Code of Practice	Bonlac Total Management System
<b>Storage (17)</b>						
Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (17.1)	Highly Desirable	Yes 7.5.1 control of production and service provision 7.5.5 Preservation of product 7.5.3 Identification and traceability	5.2.11 Identification and Traceability	Not applicable	5.2.11 Identification and Traceability	Not applicable
Does the program ensure that trace back and trace forward of all product is achievable? (17.2)	Highly Desirable	Yes 7.5.1 Control of production and service provision 7.5.5 preservation of product	5.2.11 Identification and Traceability	Not applicable	5.2.11 Identification and Traceability	Not applicable
Does the system require that an ongoing verification program is in place to ensure the effectiveness of id and trace? (17.3)	Highly Desirable	Yes 7.5.1 control of production and service provision 7.5.2 validation of processes for production and service provision 8.2.4 Monitoring and measurement of product	5.2.11 Identification and Traceability	Not applicable	5.2.11 Identification and Traceability	Not applicable
<b>Dispatch (18)</b>						
Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (18.1)	Highly Desirable	Yes 7.5.3 identification and traceability 7.5.5 preservation of product	5.2.11 Identification and Traceability	Not applicable	5.2.11 Identification and Traceability	Not applicable
Is there an effective hold and release system in place to review finished product? (18.2)	Highly Desirable	Yes 7.5.1 Control of production and service provision 8.2.4 Monitoring and Measurement of product	5.2.8 addresses hold and distribution in relation to "unsafe" food. A GM status does not indicate that the food is unsafe.	Not applicable	5.2.8 addresses hold and distribution in relation to "unsafe" food. A GM status does not indicate that the food is unsafe.	Not applicable

## Part B Core elements

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
<b>Core elements</b>			
Is the system subject to some form of external audit/inspection? (C1)	Must	Yes. Schedule 8 Export Control (Processed Foods) Orders Part 6 Audit	Yes. Schedule 7 Export Control (Processed Foods) Orders Part 6 Division VI Inspections
Does the system ensure that the management understand the business responsibilities and requirements related to the application of GM technology? (C2)	Must	Yes. AQA Handbook Part 3 – 1. Management Responsibility, 3. Contract Review "... this requirement is about making sure you can meet the terms (written and implied) of any contract bid for.	Yes. Schedule 7 Clause 9 requires that details of the processed food and the methods of preparation are to be detailed, the operations for which approval is being sought and their scope; and a declaration by or on behalf of the occupier that the occupier will comply with the FPA system. Schedule 7 Part 1 Clause 1.3 "...the application must be accompanied by two copies of the FPA preparation control documentation and of any manuals, books, documents or work instructions referred to ...".
Does the system require management to be committed to issues of identity preservation and segregation? (C3)	Must	Yes. AQA Handbook Part 3 – 7 Product Identification and Traceability.	Yes if considered critical under HACCP and production records have this requirement. Schedule 3 Export Control (Processed Food) Orders Division V Clause 29.1 "the occupier must keep records for each lot of food processed in he establishment".
Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)	Must	Yes. AQA Handbook Part 3 – 1.2 Organization. "Duty statements need to be provided for senior staff with QA or QC responsibilities (and) other responsible staff closely involved in critical processing operations or any other aspect of the AQA arrangement. Duty statements should include supervisory responsibilities as well as functions."	Yes if considered critical under HACCP. Schedule 7 Clause 11.1(iii) - requires that duties and responsibilities for critical control points be described.
Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer / finished product specifications? (C5)	Must	Yes. AQA Handbook Part 3 – 17 Training "There must be a program for training new staff who will have quality-related responsibilities, and for keeping all staff up to date in terms of skills and knowledge relevant to their responsibilities".	Yes, but not specifically. FPA Self-help Handbook references issues under Good Manufacturing Practices including "... elements that must be in place but do not have to be documented ...personal dress, conduct and training ..." Schedule 3 Operational requirements for processed food establishments General requirements Division II Personal Hygiene and Health 12.2 "Training must include reference to other parts of these Orders". Schedule 3 Division IV Processing Clause 27 "All steps in the production process, including packaging, must be performed without unnecessary delay and under conditions which will minimise the possibility of contamination, deterioration, or the development of pathogenic and spoilage microorganisms and contamination by foreign matter."

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
Does the system require clear customer and/or finished product specifications, particularly regarding GM status and tolerance levels? (C6)	Must	Yes. AQA Handbook Part 3 - 2 Quality System - "The company must have a documented quality system that ensures all requirements, including product specifications and legislative requirements, are met."	Yes. Schedule 7 Clause 11 - Focus of System provides for the following issues to be considered within the HACCP process -(b) (iv) relevant specifications and tolerances and (c)(iv) foreign country authority requirements. Schedule 7 Clause 9 requires that details of the processed food and the methods of preparation are to be detailed, the operations for which approval is being sought and their scope; and a declaration by or on behalf of the occupier that the occupier will comply with the FPA system.
Does the system require verification that product meets customer specifications? (may include inspection and testing at an appropriate laboratory) (C7)	Must	Yes. AQA Handbook Part 3 - 9.3 Final Inspection and testing. "Procedures must be in place to prevent the dispatch of product unless all testing and inspection required under product specifications and procedures have been carried out, the product meets requirements, and the results recorded."	Yes, but not specifically. FPA Self-help Handbook references "analytical results where product standards are specified in the Orders" are required. Schedule 7 Clause 11 (b)(iv) requires that relevant specifications and tolerances for each critical step be stated and Clause 11b(v) requires that corrective action is to be taken in case of deviation from specifications and tolerances.
Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services and that some verification occurs to ensure purchases meet the specifications? (C8)	Must	Yes. AQA Handbook Part 3 – 5 Purchasing. "Purchasing of materials and services must be planned and controlled so that they conform to specified requirements. "Purchasing procedures and specifications for purchased materials and services should be documented". 5.2 Assessment of sub-contractors 5.3 Purchasing data. 5.4 Verification of purchased product "where relevant this section relates to the right of a customer to verify at source or upon receipt that purchased product conforms to requirements".	No. Schedule 3 Operational requirements for processed food establishments General Requirements Clause 23.1 Removal of obviously unfit raw material does not provide any requirement for raw material specification. Clause 24.1 Protection of Raw materials does not provide any requirement for raw material specification. Schedule 3 Division IV Clause 25.1 Raw material requirements references storage requirements within an establishment. Schedule 3 Division IV Clause 25.2 states that "Stocks of raw materials and ingredients must be used so as to ensure that the oldest stock is used first." Could if considered critical at Schedule 7 Clause 10 Process Flow and Clause 11 HACCP table.
Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)	Must	Yes. AQA Handbook Part 3 – 13 Corrective Action "A procedure must be established for investigating all incidents of non-conforming product and customer complaints as well as quality reports and routine tests to detect and eliminate real or potential causes of problems". Recall covered at AQA Handbook Part 3 – 7 Product Identification and Traceability "There must be a documented procedure for product recall".	Yes. Schedule 7 Clause 11 (b)(v) "state corrective action to be taken in case of deviation from the specifications and tolerances ...". Schedule 7 Division IV Inspections Clause 46.1, 46.2 FPA Corrective Action request Schedule 7 Division IV Inspections Clause 47.1 Obligation to rectify Recall is covered in relation to Processed food at Schedule 7 Division IV Part 7 Clause 57.1 where the Secretary may (d) "divert from a foreign country; or (e) reject for export any processed food prepared in the establishment, including processed food prepared in the establishment prior to the suspension or revocation of the FPA system of inspection that has not been exported".

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)	Must	Yes. AQA Handbook Part 3 - 12.1 Nonconformity review and disposition "The company must have procedures to prevent the inadvertent use or release of nonconforming product (ingredients, packaging, intermediate product or final product). "	Yes if considered critical within HACCP at Schedule 7 (b)(iii) "describe controls and monitoring procedures for critical control points including procedures, tests, recording of measurements and test results ..." Also Schedule 7 Clause 11.1 (c) to ensure that (i) each critical step is under control.
Does the system require that there is product identification at each process step? (C11)	Must	Yes. AQA Handbook Part 3 - 7 Product Identification and Traceability "All product must be identifiable and traceable...". 8 Process Control "The company must identify and plan the production, storage and (where appropriate) transport processes which directly affect quality and ensure that they are carried out under controlled conditions".	Yes if considered critical within HACCP at Schedule 7 (b)(iii) "describe controls and monitoring procedures for critical control points including procedures, tests, recording of measurements and test results ..."
Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results) (C12)	Must	Yes AQA Handbook Part 3 - 7 Product Identification and Traceability "The identifying marks and the records relating to each consignment must allow the origin and the treatment history of the product to be traced if requested by AQIS or a customer".	Yes if considered critical within HACCP at Schedule 7 (b)(iii) "describe controls and monitoring procedures for critical control points including procedures, tests, recording of measurements and test results ..." and production/stock records require this information to be maintained.

## Supply chain step

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
<b>Purchase and receipt of stock feed (1)</b>			
Does the system include requirements for stock feed declaration and/or identity preserved policy statements from suppliers? (1.1)z	Highly Desirable	Not applicable	Not applicable
Does the system ensure that Processor's specifications for milk harvested are clearly defined and understood particularly in relation to GM status? (1.2)	Highly Desirable	Not applicable	Not applicable
Does the system require specifications to be prepared detailing raw material requirements? (1.3)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that suppliers are reviewed for their ability to supply to raw material requirements? (1.4)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that the supplier is aware of the importance of the segregation of GM products? (1.5)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that transporters have a process for identification, and appropriate segregation during transport? (1.6)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that the Transporter is aware of the responsibilities and importance of the segregation of GM products? (1.7)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that transporters have a process for identification, segregation, and trace of all products whilst in their care? (1.8)	Highly Desirable	Not applicable	Not applicable
<b>Feed grown on farmers land GM pastures (2)</b>			
Does the system ensure that an appropriate paddock identification and mapping process exists? (2.1)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that paddock identification is supported by well-maintained fences? (2.2)	Highly Desirable	Not applicable	Not applicable
Does the system require appropriate distances between GM and non-GM pastures? (2.3)	Highly Desirable	Not applicable	Not applicable
Does the system require good farming practices are implemented? (2.4)	Highly Desirable	Not applicable	Not applicable
Does the system require adherence to a Crop Management Plan? (2.5)	Highly Desirable	Not applicable	Not applicable
<b>Storage of stock feed on farm (3)</b>			
Does the system ensure that purchased stock feed is identified, segregated, and use is traced? (3.1)	Highly Desirable	Not applicable	Not applicable

<b>Issue to be addressed</b>	<b>Rating</b>	<b>AQA System of Inspection (Approved Quality Assurance)</b>	<b>FPA System of Inspection (Food Processing Accreditation)</b>
Does the system ensure that storage of stock feed is sufficient to prevent cross contamination? (3.2)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that suppliers are reviewed for their ability to meet requirements? (3.3)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that designated storage areas are clearly identified? (3.4)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that clear directions are provided to the transporter for the handling of raw materials on site? (3.5)	Highly Desirable	Not applicable	Not applicable
Does the system ensure appropriate cleaning practices are implemented on site? (3.6)	Highly Desirable	Not applicable	Not applicable
<b>Feeding out of stock feed (4)</b>			
Does the system ensure that stock feed is clearly identified and traced? (4.1)	Highly Desirable	Not applicable	Not applicable
Does the system require an inventory to be maintained of all stock feed? (4.2)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that a stock identification and movement procedure exists? (4.3)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that stock fed GM feed are identifiable? (4.4)	Highly Desirable	Not applicable	Not applicable
<b>Cattle fed on pasture (5)</b>			
Does the system ensure that a paddock identification and mapping system exists? (5.1)	Highly Desirable	Not applicable	Not applicable
Does the system require that GM pastures are clearly identified, both within the system and in the field? (5.2)	Highly Desirable	Not applicable	Not applicable
Does the system require good farming practices are implemented? (5.3)	Highly Desirable	Not applicable	Not applicable
Does the system require adherence to a Crop Management Plan? (5.4)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that a stock identification and movement procedure exists to control the movement of stock? (5.5)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that stock fed GM pastures are identifiable? (5.6)	Highly Desirable	Not applicable	Not applicable
Does the system require that a grazing rotation process exist to identify and control grazing? (5.7)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that stock grazed on GM pastures are identified and traced? (5.8)	Highly Desirable	Not applicable	Not applicable
Does the system detail any unintended grazing of GM pastures (ie escapes)? (5.9)	Highly Desirable	Not applicable	Not applicable

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
<b>Purchased/agisted stock grazed on GM pastures (6)</b>			
Does the system ensure that a stock identification and movement procedure is in place? (6.1)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that stock sold and purchased are identified and recorded? (6.2)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that introduced stock is purchased from a reputable or approved supplier? (6.3)	Highly Desirable	Not applicable	Not applicable
Does the system require a vendor declaration and/or Identity Preserved Policy Statement to be supplied? (6.4)	Highly Desirable	Not applicable	Not applicable
Does the system ensure specifications for cattle are available? (6.5)	Highly Desirable	Not applicable	Not applicable
Does the system require that a check be made on agisted pastures? (6.6)	Highly Desirable	Not applicable	Not applicable
Does a stock identification and movement process exist which caters for the identification and traceability of agisted stock? (6.7)	Highly Desirable	Not applicable	Not applicable
If such a system exists, does it require that cattle fed on GM pastures be separately identified? (6.8)	Highly Desirable	Not applicable	Not applicable
<b>Milk Harvested (7)</b>			
Does the system ensure that a stock identification and movement process exists to support the identification and traceability of milk introduced to the harvesting process? (7.1)	Highly Desirable	Not applicable	Not applicable
Does this system require that cattle fed on GM pastures or feed be separately identified? (7.2)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that an appropriate time lapses before stock fed GM products no longer require segregation from stock that have not been fed GM products? (7.3)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that a stock identification and movement system exists to identify stock introduced to the farm? (7.4)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that a Stock Sales and Purchases register exists to identify the origin of introduced stock? (7.5)	Highly Desirable	Not applicable	Not applicable
Does the system include requirements for a vendor declaration and/or identity preserved policy statements from suppliers? (7.6)	Highly Desirable	Not applicable	Not applicable

<b>Issue to be addressed</b>	<b>Rating</b>	<b>AQA System of Inspection (Approved Quality Assurance)</b>	<b>FPA System of Inspection (Food Processing Accreditation)</b>
Does the system ensure that a check on agisted pastures occurs? (7.7)	Highly Desirable	Not applicable	Not applicable
Does the system require that this information be recorded in the stock identification and movement procedure? (7.8)	Highly Desirable	Not applicable	Not applicable
<b>Storage in vat on farm (8)</b>			
Does the system ensure that a stock identification and movement process exists to support the identification and traceability of ALL milk introduced to the harvesting process? (8.1)	Must	Not applicable	Not applicable
Does the system ensure that an identification, segregation, and traceability process exists for all milk harvested? (8.2)	Must	Not applicable	Not applicable
Does the system require that milk with non-GM status be clearly identified? (8.3)	Must	Not applicable	Not applicable
Does the system ensure that the stock identification and traceability process is compatible with the identification and traceability process for harvesting? (8.4)	Must	Not applicable	Not applicable
Does the system require that GM free milk is harvested prior to non-GM milk and/or that appropriate cleaning is in place between batches? (8.5)	Highly Desirable	Not applicable	Not applicable
<b>Discharge of milk into tanker – sole supplier (9)</b>			
Does the system address the roles and responsibilities of carriers, particularly in relation to tanker GMP and hygiene practices? (9.1)	Desirable	Not applicable	Not applicable
Is there a clear process for the correct identification of product at ALL times? (9.2)	Highly Desirable	Not applicable	Not applicable
If storage facilities provide for the segregation of milk types, are vats clearly identified? (9.3)	Highly Desirable	Not applicable	Not applicable
Does the system require a hold and release procedure to be in place to control discharge to the tanker? (9.4)	Should	Not applicable	Not applicable
Does the system require that the GM status of farm be identified to the tanker driver? (9.5)	Highly Desirable	Not applicable	Not applicable
<b>Discharge of milk into tanker many suppliers – milk mixed (10)</b>			
Does the system address the roles and responsibilities of carriers, particularly in relation to tanker GMP and hygiene practices? (10.1)	Desirable	Not applicable	Not applicable
If storage facilities provide for the segregation of milk types, are vats clearly identified? (10.2)	Highly Desirable	Not applicable	Not applicable

<b>Issue to be addressed</b>	<b>Rating</b>	<b>AQA System of Inspection (Approved Quality Assurance)</b>	<b>FPA System of Inspection (Food Processing Accreditation)</b>
Does the system require that the GM status of farm be identified to the tanker driver? (10.3)	Highly Desirable	Not applicable	Not applicable
<b>Transport to processor or regional depot (11)</b>			
Nil hazards identified			
<b>Tanker emptied at regional depot (12)</b>			
Does the system require that only approved carriers are utilised? (12.1)	Highly Desirable	Not applicable	Not applicable
Does the system ensure that specifications for carriers are available? (12.2)	Highly Desirable	Not applicable	Not applicable
Does the system periodically review the performance of carriers? (12.3)	Highly Desirable	Not applicable	Not applicable
Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (12.4)	Highly Desirable	Not applicable	Not applicable
Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (12.5)	Must	Not applicable	Not applicable
<b>Tanker emptied at Processor (13)</b>			
Does the system require that only approved carriers are utilised? (13.1)	Highly Desirable	Yes. AQA Handbook Part 3 - 5.2 Assessment of Sub-Contractors "... address the requirement by developing and documenting a system for assessing suppliers' capacity to meet requirements".	No. Section 11 b(iv) does not specifically require specifications for carriers unless these were considered critical within HACCP.
Does the system ensure that specifications for carriers are available? (13.2)	Highly Desirable	Yes. AQA Handbook Part 3 - 5 General "Purchasing of materials and services must be planned and controlled so that they conform to specified requirements". Such raw materials and services will include ... transport ...". "Purchasing procedures and specifications for purchased materials and services should be documented."	No
Does the system periodically review the performance of carriers? (13.3)	Highly Desirable	Yes. AQA Handbook Part 3 - 5.2 Assessment of Sub-Contractors "... address the requirement by developing and documenting a system for assessing suppliers' capacity to meet requirements".	No

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
Does the system address the roles and responsibilities of carriers and the importance of the segregation of GM products? (13.4)	Highly Desirable	Yes. AQA Handbook Part 3 - 1.2 Organisation "duty statements need to be prepared for ... other responsible staff closely involved in critical processing operations or any other aspect of the AQA arrangement ..." 5.1 General "Purchasing of materials and services must be planned and controlled ...such raw materials and services include ingredients ... transport ...".	No. Could if considered within the HACCP table at Section 11(b) "for each critical step: (iii) describe controls and monitoring procedures for critical control points including procedures, tests, recording of measurements and test results and duties and responsibilities ..."
Does the system specifically require that the GM status of supplied raw materials be declared prior to receipt? (13.5)	Must	Yes AQA Handbook Part 3 - 9.1 Receiving inspection and testing "... incoming ingredients and packaging materials are not used until they have been verified as conforming to specifications".	No. Some raw material requirements are covered in Schedule 3 Export Control (Processed Food) Orders General Operational requirements for food processed food establishments at 24.1 Protection of raw material, 25.1 and 25.2 Raw material requirements, however these do not require verification of purchased product. They cover cross-contamination and stock rotation issues.
<b>Storage, collection and transport to processor (14)</b>			
Is there a clear process for the correct identification of product at all times? (14.1)	Highly Desirable	Yes AQA Handbook Part 3 - 7 Product Identification and Traceability "All product must be identifiable and traceable ...".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the system require that the GM status of milk be identified to the second party? (14.2)	Highly Desirable	Yes AQA Handbook Part 3 - 3 Contract Review "... address the requirement by developing and documenting procedures to review contracts for sale of goods and services produced ... to ensure clients' requirements are documented and understood ... consideration must be given to food safety aspects, including any assumptions the client may be making about the stability or shelf life of the product and compliance with legal requirements ..." Also 5.4 Verification of purchased product "where relevant, this section relates to the right of a customer to verify at source or upon receipt that purchased product conforms to requirements."	No. Could if considered critical within the process flow and HACCP.
Does the system address the roles and responsibilities of carriers particularly in relation to GMP and hygiene? (14.3)	Desirable	Yes. AQA Handbook Part 3, 1.2 Organization "Duty statements need to be provided for ... other responsible staff closely involved in critical processing operations, or any other aspect of the AQA arrangement ..."	No. Schedule 3 Export Control (Processed Food) Orders Operational requirements for processed food establishments general requirements covers GMP and hygiene issues specific to the premises. The FPA arrangements consider hygiene and sanitation procedures would be covered within GMP and therefore it is not necessary to include within HACCP tables unless the establishment is high risk.

<b>Issue to be addressed</b>	<b>Rating</b>	<b>AQA System of Inspection (Approved Quality Assurance)</b>	<b>FPA System of Inspection (Food Processing Accreditation)</b>
If storage facilities provide for the segregation of milk types, are vats clearly identified? (14.4)	Highly Desirable	Yes. AQA Handbook Part 3, 8 Process Control "The company must identify and plan the production, storage, and (where appropriate) transport processes which directly affect quality and ensure that they are carried out under controlled conditions".	Yes if this information was required to support Schedule 3 Export Control (Processed Food) Orders operational requirements for processed food establishments. Division V Other requirements 29.2 Processing and Production Records "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the system require that the GM status of farm be identified to the tanker driver? (14.5)	Highly Desirable	Yes. AQA Handbook Part 3, 8 Process Control "The company must identify and plan the production, storage, and (where appropriate) transport processes which directly affect quality and ensure that they are carried out under controlled conditions".	No unless considered critical within the process flow and HACCP.
Nil hazards identified in actual transport			
<b>Storage (15)</b>			
Does the system ensure that milk is identified and that adequate traceability procedures are in place? (15.1)	Must	Yes. AQA Handbook Part 3, 7 Product Identification and Traceability "All product must be identifiable and traceable ... The identifying marks and the records relating to each consignment must allow the origin and the treatment history of the product to be traced if requested by AQIS or a customer".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the system require that an ongoing verification program is in place to ensure the effectiveness of raw material trace? (15.2)	Must	Yes. AQA Handbook Part 3, 9.1 Receiving Inspection and Testing "The quality of raw materials has a significant bearing on the quality of the finished product ... it is therefore important to ensure that incoming ingredients and packaging materials are not used until they have been verified as conforming to specifications."	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division IV Hygiene requirements for processing Raw Material requirements 25.1 "Raw materials ingredients and packaging stored in an establishment must be (a) maintained under conditions that will prevent spoilage; and (b) protected against contamination; and (c) protected against damage. 25.2 "Stocks of raw materials and ingredients must be used so as to ensure that the oldest stock is used first".
Does the system require that a hold and release system be in place to prevent the release or distribution of non-GM milk? (15.3)	Must	Yes. AQA Handbook Part 3, 9.1 Receiving Inspection and Testing "... it is therefore important to ensure that incoming ingredients and packaging materials are not used until they have been verified as conforming to specifications."	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division IV Prevention of cross-contamination 26.1 Effective measures must be taken to prevent cross-contamination of processed food".

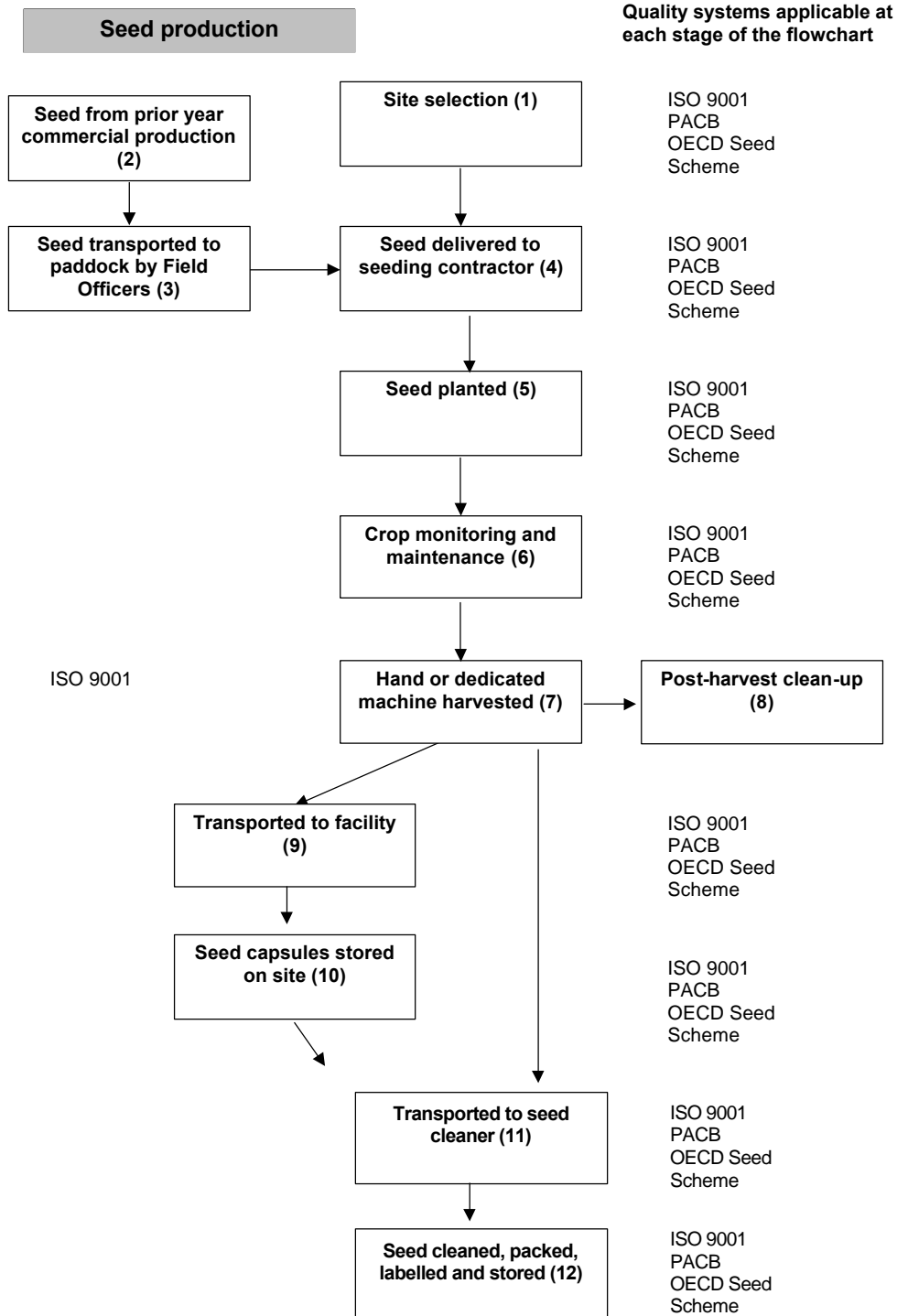
<b>Issue to be addressed</b>	<b>Rating</b>	<b>AQA System of Inspection (Approved Quality Assurance)</b>	<b>FPA System of Inspection (Food Processing Accreditation)</b>
Does the system identify non-GM within its hold and release system? (15.4)	Must	Yes. AQA Handbook Part 3, 9.1 Receiving Inspection and Testing "Where appropriate controls on raw materials should be addressed using the HACCP approach". "Any incoming material used prior to clearance because of urgent production requirements must be subject to procedures which will result in the detection of product if the subsequent raw material tests show nonconformance".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division IV Prevention of cross-contamination 26.1 Effective measures must be taken to prevent cross-contamination of processed food".
Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (15.5)	Highly Desirable	No. Could if this was included in AQA Handbook 3, 8.2 Special Processes "these are processes the correct application of which cannot be determined by checking the product ... this means that appropriate controls must be imposed on the process itself by appropriately trained and authorised personnel with appropriate checks which are fully recorded".	No. Could if this requirement was added to Schedule 3 Operational requirements for processed food establishments general requirements at Division V Other requirements.
<b>Milk Processed (16)</b>			
Does the system require regular checks on the ability of software to provide segregation and/or operate correctly? (16.1)	Highly desirable	No. Could if this was included in AQA Handbook 3, 8.2 Special Processes "these are processes the correct application of which cannot be determined by checking the product ... this means that appropriate controls must be imposed on the process itself by appropriately trained and authorised personnel with appropriate checks which are fully recorded".	No. Could if this requirement was added to Schedule 3 Operational requirements for processed food establishments general requirements at Division V Other requirements.
Does the system ensure that a program is in place which identifies and traces product at all stages of manufacture and storage from raw materials through to finished product? (16.2)	Highly Desirable	Yes. AQA Handbook Part 3, 7 Product Identification and Traceability	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the system ensure that Processor is aware of customer specifications for finished product? (16.3)	Highly Desirable	Yes. AQA Handbook Part 3, 3 Contract Review "... developing and documenting procedures to review contracts for sale of goods and services produced ... to ensure clients' requirements are documented and understood, and differences of opinion are resolved".	Yes. Schedule 7 Clause 9 requires that details of the processed food and the methods of preparation are to be detailed, the operations for which approval is being sought and their scope; and a declaration by or on behalf of the occupier that the occupier will comply with the FPA system.

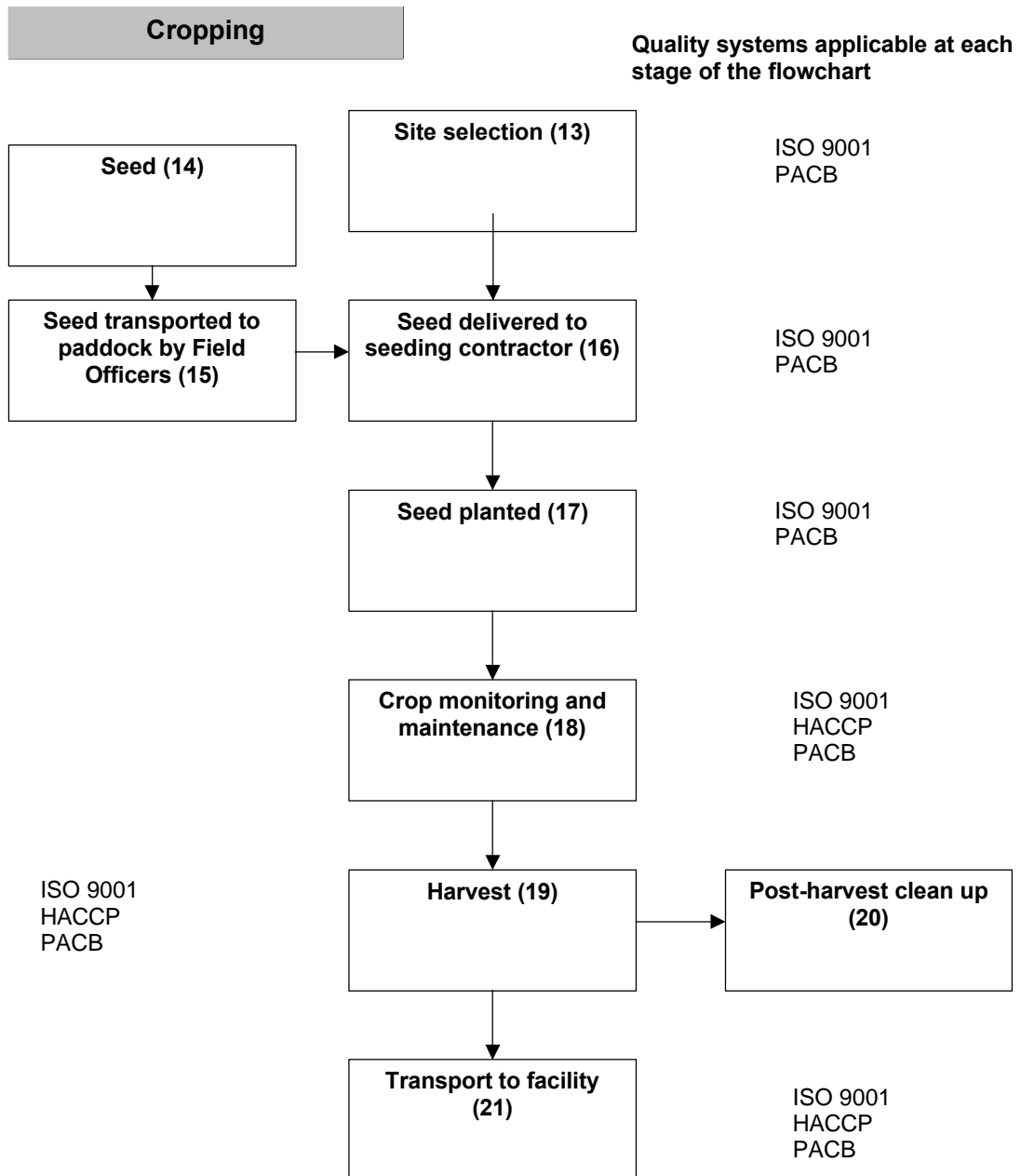
Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
<b>Storage (17)</b>			
Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (17.1)	Highly Desirable	Yes. AQA Handbook Part 3, 7 Product Identification and Traceability	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the program ensure that trace back and trace forward of all product is achievable? (17.2)	Highly Desirable	Yes. AQA Handbook Part 3, 7 Product Identification and Traceability "The identifying marks and the records relating to each consignment must allow the origin and the treatment history of the product to be traced if requested by AQIS or a customer". 8 Process Control "The company must identify and plan the production, storage and (where appropriate) transport processes which directly affect quality, and ensure that they are carried out under controlled conditions".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Does the system require that an ongoing verification program is in place to ensure the effectiveness of id and trace? (17.3)	Highly Desirable	Yes. AQA Handbook Part 3, 9.2 In-process inspection and testing "By monitoring the process and the product the manufacturer will be able to identify any problems and take appropriate action".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."

Issue to be addressed	Rating	AQA System of Inspection (Approved Quality Assurance)	FPA System of Inspection (Food Processing Accreditation)
<b>Dispatch (18)</b>			
Does the system ensure that a program is in place which identifies product at all stages of manufacture and storage from raw materials through to finished product? (18.1)	Highly Desirable	Yes. AQA Handbook Part 3, 7 Product Identification and Traceability	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."
Is there an effective hold and release system in place to review finished product? (18.2)	Highly Desirable	Yes. AQA Handbook Part 3, 9.3 Final Inspection and Testing "Procedures must be in place to prevent the dispatch of product unless all testing and inspection required under product specifications and procedures have been carried out, the product meets requirements, and results are recorded".	Yes. Schedule 3 Export Control (Processed Food) Orders sets out general operational requirements for processed food establishments. Division V Other requirements 29.1 Processing and Production Records - "The occupier of an establishment must keep records for each lot of food processed in the establishment." 29.2 "The records must show processing details, including records of quantities, processing temperatures and times, details of sampling and any other records that are relevant to showing that the food is processed in accordance with these Orders."

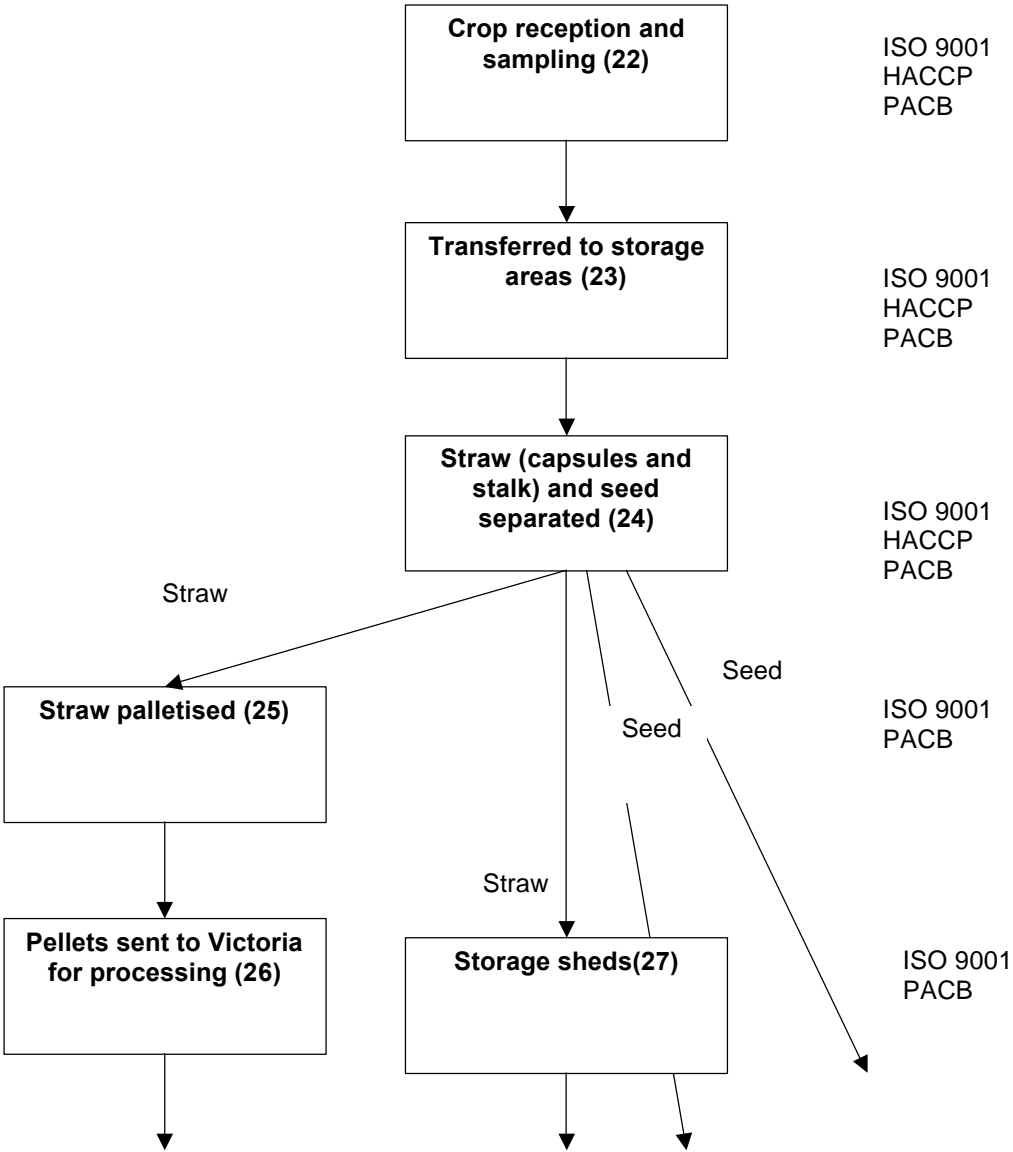
# Poppies

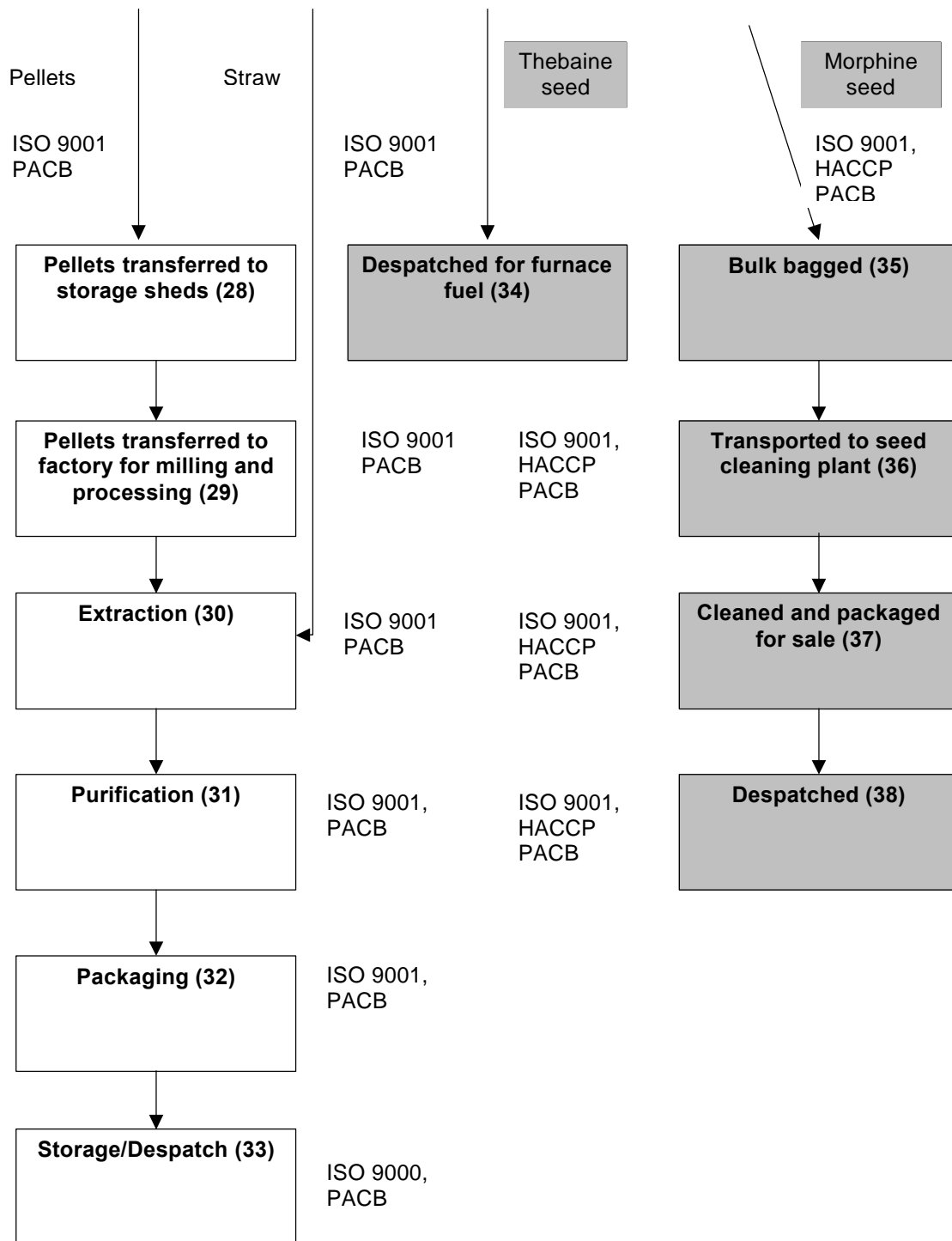
## Supply Chain Mapping for poppies destined for active pharmaceutical ingredients





**Processing**





## Risk Assessment for poppies destined for active pharmaceutical ingredients

### Seed crop

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Site selection (1)	Adventitious presence in seed harvested from paddock.	Carry over seed from previous poppy crops	Unlikely	Rejection	Highly Desirable	Does the system ensure a suitable length of time since previous poppy crop and that cultural practices have been employed to stimulate germination and control volunteer poppies? (1.1) Does the system require historical paddock records to be available to assist with identification of volunteers? (1.2) Does the system require documented specifications / selection criteria for growers / sites? (1.3)
		Cross pollination from neighbouring crop	Likely	Rejection	Must	Does the system require an appropriate distance be maintained between seed crop and other commercial or seed poppy crops? (1.4)
	Loss of control of crop	Grower not bound by contract.	Rare	Rejection	Highly Desirable	Does the system require formal arrangements between grower and company / technology provider? (1.5)
Seed from prior year commercial production (2)	Adventitious presence in seed harvested from paddock.	Seed used not of desired genetic purity	Unlikely	Recall	Must	Does the system require seed used for growing future seed crops to be of known and acceptable genetic purity? (2.1)
		Incorrect seed used to plant seed crop	Possible	Recall	Must	Does the system require seed used for growing future seed crops to be clearly identified (variety, GM status)? (2.2)
Seed transported to paddock by Field Officers (3)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (3.1)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed transported to paddock by Field Officers (3) (contd)	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require seed to be securely packaged prior to transport? (3.2) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (3.3)
Seed delivered to seeding contractor (4)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (4.1) Does the system require this identification to be securely fixed to bag/seed container? (4.2) Does the system require documented specifications for seeding contractor? (4.3)
Seed planted (5)	Adventitious presence in material harvested from paddock.	Seed drill not thoroughly cleaned prior to planting	Likely	Rejection	Must	Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing varieties or GM status? (5.1) Does the system require that flushed material is identified and appropriately dealt with? (5.2) Does the system require that seeder cleaning takes place at an appropriate place and that material cleaned from seeder is appropriately dealt with? (5.3)
		Seed cleaned from drill not clearly identified.	Possible	Customer Complaint	Highly Desirable	Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (5.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed planted (5) (contd)	Adventitious presence in material harvested from paddock.	Incorrect variety planted	Unlikely	Rejection	Highly Desirable	Does the system ensure appropriate management of seed stocks by seeding contractor (security of excess seed, identity preservation of seed whilst in control of seeding contractor)? (5.5)
	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require identification and traceability information to be available for all seed crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (5.6) Consideration should also be given to recording location of neighbouring crops. Does the system require seed crop variety / GM status to be clearly identified and for this information to be readily available to the operator? (5.7)
Crop monitoring and maintenance (6)	Adventitious presence in seed harvested from paddock.	Seed crop not monitored for purity prior to harvest	Unlikely	Rejection	Highly Desirable	Does the system require seed crops are monitored for purity? (6.1)
Hand or dedicated machine harvested (7)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed crops to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (7.1) Does the system require this identification to be securely fixed to bag / container? (7.2) Does the system require documented specifications for harvest crew/harvest contractor? (7.3)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Hand or dedicated machine harvested (7) (contd)	Adventitious presence in material harvested from paddock.	Harvest equipment not thoroughly cleaned prior to harvesting	Likely	Rejection	Must	Does the system ensure harvest equipment is thoroughly cleaned or flushed and inspected prior to commencing harvest, particularly when changing varieties or GM status? (7.4) Does the system require that flushed material is identified and appropriately dealt with? (7.5) Does the system require that harvest equipment cleaning takes place at an appropriate place and that material cleaned from harvester is appropriately dealt with? (7.6)
Post-harvest clean-up (8)	Adventitious presence of poppies in subsequent crops	Germination of volunteers	Likely	Rejection	Must	Does the system require post harvest management of poppy paddocks to minimise volunteers? (8.1) Does the system require monitoring of subsequent crops (including pasture) for poppies? (8.2)
Transported to facility (9)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (9.1) Does the system require this identification to be securely fixed to bag / container? (9.2)
	Adventitious presence in material harvested from paddock.	Bins/bags not thoroughly cleaned prior to harvest.	Likely	Rejection	Must	Does the system ensure bins / bags are thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (9.3) Does the system require that bin / bag cleaning takes place in an appropriate place and that material cleaned from bins/bags is appropriately dealt with? (9.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transported to facility (9) (contd)	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require harvested material is securely packaged prior to transport? (9.5) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (9.6)
Seed capsules stored on site (10)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (10.1) Does the system require this identification to be securely fixed to bag / container? (10.2)
Transported to seed cleaner (11)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (11.1) Does the system require this identification to be securely fixed to bag / container? (11.2)
	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require seed to be securely packaged prior to transport? (11.3) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (11.4)
Seed cleaned, packed labelled and stored (12)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (12.1) Does the system require this identification to be securely fixed to bag / container? (12.2)

<b>Supply chain step</b>	<b>Potential problem</b>	<b>Cause</b>	<b>Likelihood</b>	<b>Severity</b>	<b>Rating</b>	<b>Issue to be addressed</b>
Seed cleaned, packed labelled and stored (12) (contd)	Adventitious presence in seed.	Seed cleaning equipment not sufficiently clean of other poppy seed or other seed crops being cleaned.	Likely	Rejection	Must	Does the system ensure seed-cleaning equipment is thoroughly cleaned or flushed and inspected before cleaning, particularly when changing varieties or GM status? (12.3) Does the system require that material cleaned or flushed from the equipment is identified and appropriately dealt with? (12.4)

## Cropping

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Site selection (13)	Adventitious presence in material harvested from paddock.	Carry over seed from previous poppy crops	Unlikely	Customer complaint	Highly Desirable	Does the system ensure a suitable length of time since previous poppy crop and cultural practices employed to stimulate germination and control of volunteer poppies? (13.1) Does the system require historical paddock records to be available to assist with identification of volunteers? (13.2) Does the system require documented specifications / selection criteria for growers / sites? (13.3)
		Cross pollination from neighbouring crop	Likely	Rejection	Must	Does the system require an appropriate distance be maintained between crops of different variety, GM and non-GM and seed poppy crops? (13.4)
	Loss of control of crop	Grower not bound by contract.	Rare	Rejection	Highly Desirable	Does the system require formal arrangements between grower and company / technology provider? (13.5)
Seed (14)	Adventitious presence in material harvested from paddock.	Seed used not of desired genetic purity	Unlikely	Rejection	Highly Desirable	Does the system require seed be of known and acceptable genetic purity? (14.1)
		Incorrect seed used to plant seed crop	Possible	Recall	Must	Does the system require seed used for growing future seed crops to be clearly identified (variety, GM status)? (14.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed transported to paddock by Field Officers (15)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (15.1)
	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require seed to be securely packaged prior to transport? (15.2) Does the system require roadsides monitored for volunteers and appropriate action taken? (15.3)
Seed delivered to seeding contractor (16)	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (16.1) Does the system require this identification to be securely fixed to bag/seed container? (16.2) Does the system require documented specifications for seeding contractor? (16.3)
Seed planted (17)	Adventitious presence in material harvested from paddock.	Seed drill not thoroughly cleaned prior to planting	Likely	Customer complaint	Highly Desirable	Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing varieties or GM status? (17.1) Does the system require that flushed material is identified and appropriately dealt with? (17.2) Does the system require that cleaning takes place at an appropriate place and that material cleaned from seeder is appropriately dealt with? (17.3)
		Seed cleaned from drill not clearly identified.	Possible	Rejection	Highly Desirable	Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (17.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Seed planted (contd)	Adventitious presence in material harvested from paddock.	Incorrect variety planted	Possible	Recall	Must	Does the system ensure appropriate management of seed stocks by seeding contractor (security of excess seed, identity preservation of seed whilst in control of seeding contractor)? (17.5)
	Seed variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require identification and traceability information to be available for all crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (17.6) Consideration should also be given to recording location of neighbouring crops. Does the system require seed variety / GM status to be clearly identified and for this information to be readily available to the operator? (17.7)
Crop monitoring and maintenance (18)	Crop identity unknown (variety, GM status)	Crop not "variety" tested prior to harvest.	Possible	Recall	Must	Does the system require crop identity be confirmed prior to harvest? (18.1)
	Adventitious presence in material harvested from paddock.	Seeds introduced via machinery, personnel, soil movement, or irrigation run off.	Possible	Not commercially significant	Highly Desirable	Does the system require crop hygiene practices to be implemented? (18.2) Does the system require good farming practices to be implemented? (18.3)
Harvest (19)	Crop variety / identity unknown	Loss of identification and traceability information	Unlikely	Rejection	Highly Desirable	Does the system require crops to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (19.1) Does the system require physical paddock identification? (19.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Harvest (contd) (19)	Adventitious presence in material harvested from paddock.	Harvest equipment not thoroughly cleaned prior to harvest	Likely	Not commercially significant	Highly Desirable	Does the system ensure harvest equipment is thoroughly cleaned or flushed and inspected prior to harvest, particularly when changing varieties or GM status? (19.3) Does the system require that flushed material is identified and appropriately dealt with? (19.4) Does the system require that cleaning takes place at an appropriate place and that material cleaned from harvester is appropriately dealt with? (19.5) Does the system require documented specifications for harvest crew/harvest contractor? (19.6)
	Volunteer poppies on land adjacent to poppy paddock	Material transferred from harvester to truck outside paddock or too close to paddock edge.	Possible	Not commercially significant	Highly Desirable	Does the system require harvest practices to minimise spread of seed from poppy paddock to surrounds? (19.7)
	Volunteer poppies along roadside	Seed spillage between paddocks	Almost certain	Not commercially significant	Highly Desirable	Does the system require harvest equipment is thoroughly cleaned before leaving paddock? (19.8)
Post-harvest clean-up (20)	Adventitious presence of poppies in subsequent crops	Germination of volunteers	Likely	Rejection	Must	Does the system require post harvest management of poppy paddocks to minimise volunteers? (20.1) Does the system require monitoring of subsequent crops (including pasture) for poppies? (20.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Transport to facility (21)	Crop variety / identity unknown	Loss of identification and traceability information	Possible	Rejection	Highly Desirable	Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (21.1) Does the system require this identification to be documented and travel with the load? (21.2)
	Adventitious presence in material harvested from paddock.	Truck not thoroughly cleaned prior to planting	Likely	Not commercially significant	Highly Desirable	Does the system ensure trucks are is thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (21.3) Does the system require that cleaning takes place at an appropriate place and that material cleaned from truck is appropriately dealt with? (21.4) Does the system require documented specifications for transport contractor? (21.5)
	Volunteer poppies along roadside	Spillage en route Seed transported in mud on tyres, on sides of truck.	Almost certain	Not commercially significant	Highly Desirable	Does the system require the load be secured prior to transport? (21.6) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (21.7) Does the system require good farming practices to be implemented? (21.8)

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## Processing

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Crop reception and sampling (22)	Crop identity unknown (variety, GM status)	Crop identification details not available or incorrect	Possible	Recall	Must	Does the system ensure crop identification paperwork accompanies each truck from the paddock to crop reception? (22.1)
	Crop identity incorrect	Failure of all previous identification and traceability procedures	Unlikely	Recall	Highly Desirable	Does the system require verification of crop variety / GM status? (22.2)
Transferred to storage areas (23)	Adventitious presence in material received at factory.	Material unloaded into incorrect pit/pile	Possible	Recall	Must	Does the system require material identity is confirmed prior to unloading truck? (23.1)
		Incorrect material transferred to factory.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (23.2)
		Storage area not thoroughly cleaned prior to changing variety/GM status	Possible	Not commercially significant	Highly Desirable	Does the system ensure storage areas are is thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (23.3)
		Insufficient physical separation between different variety/GM status	Possible	Recall	Must	Does the system require physical separation of material once unloaded? (23.4)
Straw and seed separated (24)	Product identity unknown (variety, GM status)	Straw and seed incorrectly identified after separation	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (24.1)

## Straw

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Straw palletised (25)	Adventitious presence in material received at factory.	Equipment not thoroughly cleaned prior to changing variety/GM status	Possible	Customer complaint	Highly Desirable	Does the system ensure equipment is thoroughly cleaned or flushed and inspected prior to pelletising, particularly when changing varieties or GM status? (25.1) Does the system require that flushed material is identified and appropriately dealt with? (25.2)
	Product identity unknown (variety, GM status)	Straw incorrectly identified after pelletising	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (25.3)
Pellets transported to Victoria for processing (26)	Product identity unknown (variety, GM status)	Product not or incorrectly identified after pelletising	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (26.1)
	Adventitious presence in material received at factory.	Storage facilities, bags / bins not thoroughly cleaned before loading.	Possible	Not commercially significant	Highly Desirable	Does the system require storage facilities / bags / bins to be thoroughly cleaned and inspected prior to loading? (26.2)
Storage sheds (27)	Adventitious presence in material received at factory.	Incorrect material transferred to factory.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (27.1)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Storage sheds (27) (contd)	Adventitious presence in material received at factory.	Storage areas not thoroughly cleaned prior to changing variety/GM status	Possible	Not commercially significant	Highly Desirable	Does the system ensure storage areas are thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (27.2) Does the system require that flushed material is identified and appropriately dealt with? (27.3)
Pellets transferred to storage sheds (28)	Adventitious presence in material received at factory.	Incorrect material transferred to factory.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (28.1)
		Storage areas not thoroughly cleaned prior to changing variety/GM status	Possible	Not commercially significant	Highly Desirable	Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (28.2) Does the system require that flushed material is identified and appropriately dealt with? (28.3)
Pellets transferred to factory for milling and processing (29)	Adventitious presence in material received at factory.	Incorrect material transferred to factory.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (29.1)
		Equipment not thoroughly cleaned prior to changing variety/GM status	Possible	Customer complaint	Highly Desirable	Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (29.2) Does the system require that flushed material is identified and appropriately dealt with? (29.3)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Extraction (30)	Adventitious presence in material used for extraction.	Incorrect material transferred to extraction plant.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (30.1)
	Adventitious presence in extracted material	Continuous processing operation	Possible	Recall	Must	Does the system require segregation practices between varieties/GM status products? (30.2)
		Equipment not thoroughly cleaned prior to changing variety/GM status	Possible	Customer complaint	Highly Desirable	Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (30.3) Does the system require that flushed material is identified and appropriately dealt with? (30.4)
Purification (31)	Adventitious presence in material used for purification	Incorrect material transferred to purification.	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (31.1)
	Adventitious presence in purified material	Continuous processing operation	Possible	Recall	Must	Does the system require segregation practices between varieties/GM status products? (31.2)
		Processing plant not cleaned between different varieties/GM status product	Possible	Customer complaint	Highly Desirable	Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (31.3) Does the system require that flushed material is identified and appropriately dealt with? (31.4)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Packaging (32)	Product identity unknown (variety, GM status). (Recognise that the final product will not incorporate any GM material but could be a customer requirement for product to be produced from particular variety/GM status poppies)	Identification and traceability procedures insufficient.	Possible	Recall	Must	Does the system require product identification procedures be implemented on site? (32.1) Does the system require packed product to be clearly and permanently labelled? (32.2)
Storage/ despatch (33)	Product identity unknown (variety, GM status). (Recognise that the final product will not incorporate any GM material but could be a customer requirement for product to be produced from particular variety/GM status poppies)	Identification and traceability procedures insufficient.	Possible	Recall	Must	Does the system require product identification procedures be implemented on site? (33.1)

**Seed (NB most likely that seed will not be sold for culinary purposes in the event GM poppies established)**

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Despatched for furnace fuel (34)	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require the load be secured prior to transport? (34.1) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (34.2)
Bulk bagged (35)	Seed variety / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (35.1) Does the system require this identification to be securely fixed to bag / container? (35.2)
Transported to seed cleaning plant (36)	Seed variety / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (36.1)
	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require the load be secured prior to transport? (36.2) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (36.3)
Cleaned and packaged for sale (37)	Seed variety / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (37.1) Does the system require this identification to be securely fixed to bag / container? (37.2)

Supply chain step	Potential problem	Cause	Likelihood	Severity	Rating	Issue to be addressed
Cleaned and packaged for sale (37)	Adventitious presence in seed.	Seed cleaning equipment not sufficiently clean of other poppy seed or other seed crops being cleaned. Seed cleaning equipment not sufficiently cleaned after poppy seed processed.	Likely	Rejection	Must	Does the system require seed cleaning equipment to be thoroughly cleaned or flushed and inspected before, after and between different varieties / GM status poppy seeds? (37.3)  Does the system require that material cleaned or flushed from the equipment is identified and appropriately dealt with? (37.4) Does the system require documented specifications for seed cleaner (NB may be cleaned in house)? (37.5)
	Seed identity incorrect	Failure of all previous identification and traceability procedures	Unlikely	Recall	Highly Desirable	Does the system require verification of crop variety / GM status? (37.6)
Despatched (38)	Seed variety / identity unknown	Loss of identification and traceability information	Possible	Recall	Must	Does the system require material to be clearly and securely identified (variety, GM status)? (38.1)
	Volunteer poppies along roadside	Spillage en route	Possible	Not commercially significant	Highly Desirable	Does the system require the load be secured prior to transport? (38.2) Does the system require roadsides to be monitored for volunteers and appropriate action taken? (38.3)

**Analysis of quality systems against hazards to product segregation and identity preservation along the poppies to active pharmaceutical ingredients supply chain.**

**Core elements**

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Scheme for the varietal certification of Crucifer seed and other oil or fibre species seed moving in international trade, 2000
Is the system subject to some form of external audit/inspection? (C1)	Must	Yes 0.1 <i>General</i>	Yes, system is overseen by PACB and state police although no formal QA audit.	Yes, independent field inspections carried out by or on behalf of Designated Authority. 6 <i>Control of the Production of Basic and Certified Seed</i> and Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed</i> .
Does the system ensure that the management understand the business responsibilities and requirements related to the application of GM technology? (C2)	Must	Yes, 5.1 <i>Management Commitment</i> requires communication of the importance of meeting customer as well as statutory and regulatory requirements to the organisation. 5.2 <i>Customer Focus</i> requires customer requirements are determined and met.	No, system is designed to ensure compliance with Australian legislative requirements and international drug conventions. Does not specifically deal with GM technology issues.	No

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require management to be committed to issues of identity preservation and segregation? (C3)	Must	Yes, 5.1 <i>Management Commitment</i> requires communication of the importance of meeting customer as well as statutory and regulatory requirements to the organisation. 5.2 <i>Customer Focus</i> requires top management to ensure customer requirements are determined and met. 5.3 <i>Quality Policy</i> requires commitment of top management and is focussed on quality objectives 5.4.1 <i>Quality objectives</i> requires top management to ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within the organisation.	No, does not specifically deal with identity preservation and segregation within the crop.	No, though implied under the scope of the scheme.
Does the system require responsibilities be assigned for issues related to identity preservation and segregation? (C4)	Must	Yes, 5.5.1 <i>Responsibility and authority</i> requires that top management shall ensure that responsibilities and authorities are defined and communicated within the organisation.	No, does not specifically deal with identity preservation and segregation within the crop.	No
Does the system ensure that key individuals are trained and understand their responsibilities, particularly regarding issues related to achieving customer/finished product specifications? (C5)	Must	Yes, 6.2.2 <i>Competence, awareness and training</i> requires personnel to be aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives and are appropriately trained.	No, does not specifically deal with training and responsibilities as related to customer specifications.	No

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require clear customer specifications, particularly regarding GM status and tolerance levels? (C6)	Must	Yes, 7.1 <i>Planning of product realization</i> requires the organisation to determine the quality objectives and requirements of the product 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine requirements specified by the customer, as well as those not stated by the customer but necessary for specified or intended use and statutory and regulatory requirements.	No	No, although specifications for seed are set within the scheme Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed</i> 6 <i>Varietal Purity of seed crops.</i>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require verification that product meets customer specifications? (may include inspection and testing at an appropriate laboratory) (C7)	Must	<p>Yes, 7.1 <i>Planning of product realization</i> requires the organisation to determine the required verification, validation, monitoring and test activities specific to the product and the criteria for product acceptance</p> <p>7.5.2 <i>Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p> <p>8.1 <i>Measurement, analysis and improvement</i> requires demonstration of conformity of the product.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires monitoring and measurement of the characteristics of the product to verify product requirements have been met.</p>	No	Yes, 6 <i>Control of the Production of Basic and Certified Seed</i> and 7 <i>Post-Control Tests of Basic and Certified seed</i> require seed lots to be sampled for a variety of traits, including analytical (genetic) purity.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure that clear supplier specifications exist covering the GM status of raw materials and services, and that some verification occurs to ensure purchases meet the specifications? (C8)	Must	Yes, 7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier. 7.4.3 <i>Verification of purchased product</i> requires the organisation to establish and implement inspection or other activities to ensure the purchased product meets purchase requirements.	No	No, although specifications for seed are set within the scheme Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed 6 Varietal Purity of seed crops</i> . Other raw materials and services are not specifically covered.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<p>Does the system require appropriate corrective and preventive actions to be taken including customer notification of contamination or suspected contamination, and where relevant, a formal recall procedure? (C9)</p>	<p>Must</p>	<p>Yes 7.2.3 <i>Customer communication</i> requires the organisation to have effective arrangements for communicating with customers.  8.2.4 <i>Monitoring and measurement of product</i> requires that product shall not be released until planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and where applicable, by the customer.  8.3 <i>Control of nonconforming product</i> addresses identification and control of product that does not meet product requirements and specifically seeking customer authorisation to release product. Provision for recall activities under requirement for organisation to take appropriate action if nonconforming product detected after delivery or use has started.  8.5.2 <i>Corrective action</i>  8.5.3 <i>Preventive action</i>  8.3 <i>Control of nonconforming product</i></p>	<p>No</p>	<p>Partial, if seed does not conform to type in post control testing the Maintainer will be informed and the seed will not be Certified. If the seed has been released to seed distributors it is the responsibility of the seed distributor to trace sales if this is possible (Stuart Smith, DPIWE pers. com).</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system include a formal process such as an internal audit to identify loss of identity, mix-ups, product non-conformity or other significant problems? (C10)	Must	<p>Yes 8.2.2 <i>Internal audit</i> requires that the organisation conduct internal audits at planned intervals.</p> <p>8.2.3 <i>Monitoring and measurement of processes</i> requires the application of suitable methods for monitoring and measuring system processes to determine the ability of the processes to achieve planned results.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires monitoring and measurement of the product to verify compliance with product specifications.</p> <p>8.3 <i>Control of non-conforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.</p>	No	No
Does the system require that there is product identification at each process step? (C11)	Must	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> includes the requirement for product identification.</p>	No	<p>Yes. 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p> <p>10 <i>Re-labelling and Re-fastening in Another Country</i> specifies requirements for these activities</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure trace back and trace forward both within the business and to suppliers and customers? (includes seed batch numbers, testing results). (C12)	Must	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). It is also a requirement that where traceability is a requirement the organisation will control and record the unique identification of the product.</p> <p>7.5.1 <i>Control of production and service provision</i> requires production to be carried out under controlled conditions</p> <p>7.5.5 <i>Preservation of product</i> includes identification and control of handling, packaging, storage and protection of the product.</p>	Partial, system does specify area to be grown and identity of farmer under general conditions. Crops grown under licence to company providing trace forward.	<p>Yes. 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.</p> <p>Appendix 3 Reference Numbers for Certificates and Seed Lots details how reference numbers are to be created.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details labelling requirements including inclusion of the reference number.</p>

**Supply chain step:**

**Seed Crop**

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Site selection (1)</b>				
Does the system ensure a suitable length of time since previous poppy crop and that cultural practices have been employed to stimulate germination and control volunteer poppies? (1.1)	Highly Desirable	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.	Partial, General Conditions 8 requires any regrowth of poppy from seed from any previous year to be destroyed.	Yes, Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed A1 Previous Cropping</i> requires that the grower specify previous cropping in each seed field and reject fields that do not have a cropping history in accordance with regulations of the Designated Authority. Minimum time intervals are specified.
Does the system require historical paddock records to be available to assist with identification of volunteers? (1.2)	Highly Desirable	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions ("conformity to requirements").	No	Yes. Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed A1 Previous Cropping</i> requires that the grower specify previous cropping in each seed field and reject fields that do not have a cropping history in accordance with regulations of the Designated Authority. Minimum time intervals are specified.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications / selection criteria for growers / sites? (1.3)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications.	Partial, grower must not have criminal record, paddock must be properly fenced and clearly defined (pers. comm.)	Partial, Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed A1 Previous Cropping</i> specifies requirements for sites. There are no specific requirements for growers.
Does the system require an appropriate distance be maintained between seed crop and other commercial or seed poppy crops? (1.4)	Must	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	No	Yes Appendix 2 <i>Minimum Requirements for the Production of Basic and Certified Seed A2 Isolation</i> requires specifies control mechanisms for different reproductive mechanisms (eg isolation distances for cross-pollinating species).

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require formal arrangements between grower and company / technology provider? (1.5)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production a licence must exist with one of the two licensed manufacturers.	Yes, licence required to grow crop and only issued after contract obtained to grow for one of two licensed manufacturers.	No
<b>Seed from prior year commercial production (2)</b>				
Does the system require seed used for growing future seed crops to be of known and acceptable genetic purity? (2.1)	Must	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.	No	Yes. Whole certification scheme is designed to achieve this. Includes requirements for testing (6 Control of the Production of Basic and Certified Seed), restricting the number of generations from parental material (5 Production of Basic and Certified Seed) and in field inspection (Appendix 2A <i>Varietal Purity in seed crops</i> )

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require seed used for growing future seed crops to be clearly identified (variety, GM status)? (2.2)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.	No	Yes. 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Seed transported to paddock by Field Officers (3)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (3.1)	Highly Desirable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	No	<p>Yes 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.</p> <p>9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional.</p>
Does the system require seed to be securely packaged prior to transport? (3.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination.</p> <p>These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.</p>	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Yes 8 <i>Sampling and Fastening</i> specifies seed to be fastened in such a way that they cannot be opened without destroying fastening or leaving a trace of being opened.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (3.3)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing volunteer poppies.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	No
<b>Seed delivered to sowing contractor (4)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (4.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Yes 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified. Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag/seed container? (4.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	Yes, 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).
Does the system require documented specifications for seeding contractor? (4.3)	Highly Desirable	<p>Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.</p> <p>7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier.</p> <p>Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications</p>	No	No

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Seed planted (5)</b>				
Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing varieties or GM status? (5.1)	Must	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity.
Does the system require that flushed material is identified and appropriately dealt with? (5.2)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that seeder cleaning takes place at an appropriate place and that material cleaned from seeder is appropriately dealt with? (5.3)	Must	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity
Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (5.4)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity
Does the system ensure appropriate management of seed stocks by seeding contractor (security of excess seed, identity preservation of seed whilst in control of seeding contractor)? (5.5)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<p>Does the system require identification and traceability information to be available for all seed crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (5.6)</p> <p>Consideration should also be given to recording location of neighbouring crops.</p>	<p>Highly Desirable</p>	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). It is also a requirement that where traceability is a requirement the organisation will control and record the unique identification of the product</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions (“conformity to requirements”).</p>	<p>Partial, is a requirement that all roadside crops carry a warning sign. Requirement to advise PACB of area to be grown and identity of farmer under general conditions. Crops grown under licence to company providing trace forward.</p>	<p>Yes, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.</p> <p>9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional. No specific requirement for farm map.</p>
<p>Does the system require seed crop variety / GM status to be clearly identified and for this information to be readily available to the operator? (5.7)</p>	<p>Highly Desirable</p>	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	<p>No, although is a requirement that all roadside crops carry a warning sign. Requirement to advise PACB of variety planted (pers. comm.).</p>	<p>Yes 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.</p> <p>9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional.</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Crop monitoring and maintenance (6)</b>				
Does the system require seed crops are monitored for purity? (6.1)	Highly Desirable	Yes, 8.1 <i>Measurement, analysis and improvement General</i> requires that the organisation plan and implement monitoring, measurement and analysis to demonstrate conformity of the product. 8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.	No	Yes, 6 <i>Control of the Production of Basic and Certified Seed</i> requires that a production and field inspection take place. Specifically 6.2.2 requires that “the Designated Authority must satisfy itself by inspection of the plants at an appropriate stage or stages during production that the lot is acceptable.”
<b>Hand or dedicated machine harvest (7)</b>				
Does the system require seed crops to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (7.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Partial, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. le 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag / container? (7.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	<p>Partial, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process.</p> <p>le 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications for harvest crew/harvest contractor? (7.3)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity
Does the system ensure harvest equipment is thoroughly cleaned or flushed and inspected prior to commencing harvest, particularly when changing varieties or GM status? (7.4)	Must	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.	No	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (7.5)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity
Does the system require that harvest equipment cleaning takes place at an appropriate place and that material cleaned from harvester is appropriately dealt with? (7.6)	Must	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity
<b>Post-harvest clean-up (8)</b>				
Does the system require post harvest management of poppy paddocks to minimise volunteers? (8.1)	Must	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production it is a licence requirement that volunteers are controlled.	Yes, General Conditions 6 requires steps to be taken within 7 days of harvest to destroy any remaining crop material on the land where the crop was grown.	No.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require monitoring of subsequent crops (including pasture) for poppies? (8.2)	Must	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production it is a licence requirement must exist with one of the two licensed manufacturers 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.	Yes, General Conditions 8 requires any regrowth of poppy from seed from any previous year to be destroyed.	No.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Transport to facility (9)</b>				
Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (9.1)	Highly Desirable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	No	<p>Partial 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag / container? (9.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	<p>Partial, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p>
Does the system ensure bins / bags are thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (9.3)	Must	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.</p>	No	<p>No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that bin / bag cleaning takes place in an appropriate place and that material cleaned from bins/bags is appropriately dealt with? (9.4)	Must	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	No, although purpose is to ensure these sorts of contamination events do not occur, there is no specific element that covers this activity.
Does the system require harvested material is securely packaged prior to transport? (9.5)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	No, requirements for security of packaging refers to finished, certified seed, although purpose of scheme is to ensure contamination events do not occur.
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (9.6)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing volunteer poppies.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	No

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Seed capsules stored on site (10)</b>				
Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (10.1)	Highly Desirable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	No	<p>Partial 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag / container? (10.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	<p>Partial, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Transported to seed cleaner (11)</b>				
Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (11.1)	Highly Desirable	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	No	<p>Partial 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified.</p> <p>Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional</p>

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag / container? (11.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	<p>Partial, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. Further requirements for identification refer to finished product and it is not clear what requirements exist for in process. However, given the requirements for finished product, the identity must be maintained in process. I.e. 9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p>
Does the system require seed to be securely packaged prior to transport? (11.3)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.</p>	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	No, requirements for security of packaging refers to finished, certified seed, although purpose of scheme is to ensure contamination events do not occur.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (11.4)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing volunteer poppies.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	No
<b>Seed cleaned, packed, labelled and stored (12)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (12.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Yes 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme. 9 <i>Identification of Contents of Seed Containers</i> requires that the contents of each container shall be identified. Appendix 4 <i>Specification for the OECD label or marking of seed containers</i> details how seed is to be labelled and requires labelling be in English or French with translation into any other language optional.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag / container? (12.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	<p>Yes, 1 <i>General</i> states that seed shall, as a minimum, be produced, processed, sampled, labelled and fastened in accordance with the Rules and Directions of the scheme.</p> <p>9 <i>Identification of Contents of Seed Containers</i> addresses identification and the permanency of such identification (eg 9.1.1 specifies tie-on labels are only allowed in conjunction with a seal).</p>
Does the system ensure seed-cleaning equipment is thoroughly cleaned or flushed and inspected before cleaning, particularly when changing varieties or GM status? (12.3)	Must	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>	No	No, although purpose of scheme is to ensure contamination events do not occur.

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that material cleaned or flushed from the equipment is identified and appropriately dealt with? (12.4)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	No	No, although purpose of scheme is to ensure contamination events do not occur.

## Cropping

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Site selection (13)</b>				
Does the system ensure a suitable length of time since previous poppy crop and cultural practices employed to stimulate germination and control of volunteer poppies? (13.1)	Highly Desirable	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.	Partial yes, General Conditions 8 requires any regrowth of poppy from seed from any previous year to be destroyed.	Not Applicable
Does the system require historical paddock records to be available to assist with identification of volunteers? (13.2)	Highly Desirable	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions ("conformity to requirements").	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications / selection criteria for growers / sites? (13.3)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications.	Partial, grower must not have criminal record, paddock must be properly fenced and clearly defined (pers. comm.)	Not Applicable
Does the system require an appropriate distance be maintained between crops of different variety, GM and non-GM and seed poppy crops? (13.4)	Must	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require formal arrangements between grower and company / technology provider? (13.5)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production a licence must exist with one of the two licensed manufacturers.	Yes, licence required to grow crop and only issued after contract obtained to grow for one of two licensed manufacturers.	Not Applicable
<b>Seed (14)</b>				
Does the system require seed be of known and accepted genetic purity? (14.1)	Highly Desirable	Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product. 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (14.2)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
<b>Seed transported to paddock by Field Officers (15)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (15.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require seed to be securely packaged prior to transport? (15.2)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Not Applicable
Does the system require roadsides monitored for volunteers and appropriate action taken? (15.3)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing volunteer poppies.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Seed delivered to seeding contractor (16)</b>				
Does the system require seed to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (16.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system require this identification to be securely fixed to bag/seed container? (16.2)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications for seeding contractor? (16.3)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications	No	Not Applicable
<b>Seed planted (17)</b>				
Does the system ensure seeding equipment is thoroughly cleaned or flushed and inspected prior to planting, particularly when changing varieties or GM status? (17.1)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (17.2)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	No	Not Applicable
Does the system require that cleaning takes place at an appropriate place and that material cleaned from seeder is appropriately dealt with? (17.3)	Highly Desirable	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	No	Not Applicable
Does the system require seed removed from drill to be clearly identified (variety, GM status, waste) and appropriately dealt with? (17.4)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure appropriate management of seed stocks by seeding contractor (security of excess seed, identity preservation of seed whilst in control of seeding contractor)? (17.5)	Must	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications	No	Not Applicable
Does the system require identification and traceability information to be available for all crops, including records such as farm maps detailing where crop is planted and seed batch identification details? (17.6) Consideration should also be given to recording location of neighbouring crops.	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). It is also a requirement that where traceability is a requirement the organisation will control and record the unique identification of the product 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 4.2.4 <i>Control of records</i> requires that records are maintained to substantiate actions ("conformity to requirements").	Partial, is a requirement that all roadside crops carry a warning sign. Requirement to advise PACB of area to be grown and identity of farmer under general conditions. Crops grown under licence to company providing trace forward	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require seed variety / GM status to be clearly identified and for this information to be readily available to the operator? (17.7)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No, although is a requirement that all roadside crops carry a warning sign. Requirement to advise PACB of variety planted (pers. comm.).	Not Applicable
<b>Crop monitoring and maintenance (18)</b>				
Does the system require crop identity be confirmed prior to harvest? (18.1)	Must	Yes 8.1 <i>Measurement, analysis and improvement General</i> requires that monitoring and measurement and analysis be undertaken to demonstrate conformity of the product. 8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.	No	Not Applicable
Does the system require crop hygiene practices to be implemented? (18.2)	Highly Desirable	Partial 7.5.1 <i>Control of production and service provision</i> requires production be carried out under controlled conditions. Crop hygiene practices could be considered to constitute "controlled conditions".	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require good farming practices to be implemented? (18.3)	Highly Desirable	Partial 7.5.1 <i>Control of production and service provision</i> requires production be carried out under controlled conditions. Good farming practices could be considered to constitute "controlled conditions".	No, although Crop Location Security Assessment Form completed which includes basic assessment of fences, security, distance to residence and presence of obstacles.	Not Applicable
<b>Harvest (19)</b>				
Does the system require crops to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (19.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No, although is requirement for PACB to be advised of variety. (Pers. comm.)	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require physical paddock identification? (19.2)	Highly Desirable	<p>Yes 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>6.3 <i>Infrastructure</i> requires that the necessary infrastructure needed to achieve conformity to product requirements is available.</p>	No, although is a requirement that all roadside crops carry a warning sign.	Not Applicable
Does the system ensure harvest equipment is thoroughly cleaned or flushed and inspected prior to harvest, particularly when changing varieties or GM status? (19.3)	Highly Desirable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (19.4)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	No	Not Applicable
Does the system require that cleaning takes place at an appropriate place and that material cleaned from harvester is appropriately dealt with? (19.5)	Highly Desirable	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements	No	Not Applicable
Does the system require documented specifications for harvest crew/harvest contractor? (19.6)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require harvest practices to minimise spread of seed from poppy paddock to surrounds? (19.7)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides and other paddocks are not licensed sites.	Yes, Security Bulletin No 2 specifies that trucks are to be loaded in poppy paddocks and not over fences.	Not Applicable
Does the system require harvest equipment is thoroughly cleaned before leaving paddock? (19.8)	Highly Desirable	Yes, 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides and other paddocks are not licensed sites.	Yes, Security Bulletin No 2 specifies that trucks and harvesting machinery are to be cleaned off before leaving poppy paddocks.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Post-harvest clean-up (20)</b>				
Does the system require post harvest management of poppy paddocks to minimise volunteers? (20.1)	Must	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production it is a licence requirement that volunteers are controlled.	Yes, an offence under the Tasmanian Poisons Act to allow unlicensed plants to remain.	Not Applicable
Does the system require monitoring of subsequent crops (including pasture) for poppies? (20.2)	Must	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements and in the case of poppy production it is a licence requirement must exist with one of the two licensed manufacturers 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Transport to facility (21)</b>				
Does the system require harvested material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (21.1)	Highly Desirable	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system require this identification to be documented and travel with the load? (21.2)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure trucks are is thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (21.3)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	Yes, Security Bulletin No 2 specifies that trucks and harvesting machinery are to be cleaned off before leaving poppy paddocks.	Not Applicable
Does the system require that cleaning takes place at an appropriate place and that material cleaned from truck is appropriately dealt with? (21.4)	Highly Desirable	Yes 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications for transport contractor? (21.5)	Highly Desirable	Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed. 7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier. Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products	No	Not Applicable
Does the system require the load be secured prior to transport? (21.6)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (21.7)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing volunteer poppies.	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable
Does the system require good farming practices to be implemented? (21.8)	Highly Desirable	Partial 7.5.1 <i>Control of production and service provision</i> requires production be carried out under controlled conditions. Good farming practices could be considered to constitute "controlled conditions".	No, although Crop Location Security Assessment Form completed which includes basic assessment of fences, security, distance to residence and presence of obstacles.	Not Applicable

## Processing

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Crop reception and sampling (22)</b>				
Does the system ensure crop identification paperwork accompanies each truck from the paddock to crop reception? (22.1)	Must	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require verification of crop variety / GM status? (22.2)	Highly Desirable	<p>Yes <i>8.1 Measurement, analysis and improvement General</i> requires that monitoring and measurement and analysis be undertaken to demonstrate conformity of the product.</p> <p><i>8.2.4 Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p> <p><i>7.5.2 Validation of processes for production and service provision</i> requires the validation of production and service provision processes where the resulting output cannot be verified by subsequent monitoring or measurement. Validation shall demonstrate the ability of these processes to achieve the planned results.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Transferred to storage areas (23)</b>				
Does the system require material identity to be confirmed prior to unloading truck? (23.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires preservation of product conformity, including identity, during internal processing and delivery to intended destination. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (23.2)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure storage areas are is thoroughly cleaned and inspected prior to loading, particularly when changing varieties or GM status? (23.3)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.	No	Not Applicable
Does the system require physical separation of material once unloaded? (23.4)	Must	Yes, 6.3 <i>Infrastructure</i> requires that the infrastructure required to achieve conformity with product requirements be available, including buildings and workspaces.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Straw and seed separated (24)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (24.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
<b>Straw pelletised (25)</b>				
Does the system ensure equipment is thoroughly cleaned or flushed and inspected prior to pelletising, particularly when changing varieties or GM status? (25.1)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (25.2)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (25.3)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Pellets transported to Victoria for processing (26)				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (26.1)	Must	<p>Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p>	No	Not Applicable
Does the system require storage facilities / bags / bins to be thoroughly cleaned and inspected prior to loading? (26.2)	Highly Desirable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Storage sheds (27)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (27.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system ensure storage areas are thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (27.2)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (27.3)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable
Pellets transferred to storage sheds (28)				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (28.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (28.2)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	No	Not Applicable
Does the system require that flushed material is identified and appropriately dealt with? (28.3)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Pellets transferred to factory for milling and processing (29)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (29.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (29.2)	Highly Desirable	Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements. 6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements. 7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (29.3)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable
<b>Extraction (30)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (30.1)		M u s t  Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require segregation practices between varieties/GM status products? (30.2)	Must	<p>Yes 6.3 <i>Infrastructure</i> requires the organisation to determine, provide and maintain the infrastructure required to achieve conformity to product specifications.</p> <p>6.4 <i>Work Environment</i> requires the work environment be managed to achieve conformity to product requirements.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of product be preserved during internal processing.</p>	No	Not Applicable
Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (30.3)	Highly Desirable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (30.4)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable
<b>Purification (31)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (31.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require segregation practices between varieties/GM status products? (31.2)	Must	<p>Yes 6.3 <i>Infrastructure</i> requires the organisation to determine, provide and maintain the infrastructure required to achieve conformity to product specifications.</p> <p>6.4 <i>Work Environment</i> requires the work environment be managed to achieve conformity to product requirements.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of product be preserved during internal processing.</p>	No	Not Applicable
Does the system ensure equipment is thoroughly cleaned or flushed and inspected, particularly when changing varieties or GM status? (31.3)	Highly Desirable	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service</i> provision specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require that flushed material is identified and appropriately dealt with? (31.4)	Highly Desirable	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable
<b>Packaging (32)</b>				
Does the system require product identification procedures be implemented on site? (32.1)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require packed product to be clearly and permanently labelled? (32.2)	Must	Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.	No	Not Applicable
<b>Storage/despatch (33)</b>				
Does the system require product identification procedures be implemented on site? (33.1)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization).	No	Not Applicable

## Seed

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Despatched for furnace fuel (34)</b>				
Does the system require the load be secured prior to transport? (34.1)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Not Applicable
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (34.2)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Bulk bagged (35)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (35.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system require this identification to be securely fixed to bag / container? (35.2)	Must	Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
<b>Transported</b> to seed cleaning plant (36)				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (36.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable
Does the system require the load be secured prior to transport? (36.2)	Highly Desirable	Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions. 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (36.3)	Highly Desirable	Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable
<b>Cleaned and packaged for sale (37)</b>				
Does the system require material to be clearly identified (variety, GM status) and for this information to be readily available to the operator? (37.1)	Must	Yes 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization). 7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing. 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require this identification to be securely fixed to bag/container? (37.2)	Must	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	Not Applicable
Does the system require seed cleaning equipment to be thoroughly cleaned or flushed and inspected before, after and between different varieties / GM status poppy seeds? (37.3)	Must	<p>Yes 6.3 <i>Infrastructure</i> requires that process equipment be maintained to achieve conformity of product requirements.</p> <p>6.4 <i>Work environment</i> requires the work environment is managed to achieve conformity to product requirements.</p> <p>7.5.1 <i>Control of production and service provision</i> specifies that the organisation shall carry out production under controlled conditions which includes the implementation of monitoring.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require material cleaned or flushed from the equipment is identified and appropriately dealt with? (37.4)	Must	Yes, 7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing. 7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization) 8.3 <i>Control of nonconforming product</i> requires that product which does not conform to product requirements is identified and controlled to prevent its unintended use.	Partial, poppy material must always remain on licensed site. However specifics of handling within the site are not addressed.	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require documented specifications for seed cleaner (NB may be cleaned in house)? (37.5)	Must	<p>Yes, 7.4.1 <i>Purchasing process</i> requires that the organisation select suppliers based on their ability to supply product/service in accordance with the organisation's requirements. Criteria for selection need to be developed.</p> <p>7.4.2 <i>Purchasing information</i> requires that information describing the product or service to be purchased exists and is communicated to the supplier.</p> <p>Also requires under 7.4.3 <i>Verification of purchased product</i> that the organisation inspects purchased products against the specifications</p> <p>INHOUSE Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product.</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require verification of crop variety / GM status? (37.6)	Highly Desirable	<p>Yes 7.1 <i>Planning of product realisation</i> requires the organisation to plan and develop processes specific to the product.</p> <p>7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing.</p> <p>8.2.4 <i>Monitoring and measurement of product</i> requires that characteristics of the product be monitored/measured to verify product requirements have been met.</p>	No	Not Applicable
<b>Despatched (38)</b>				
Does the system require material to be clearly identified (variety, GM status)? (38.1)	Must	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires that information describing the characteristics of the product be available.</p> <p>7.5.3 <i>Identification and traceability</i> requires that, where appropriate, the product shall be identified throughout the process (product realization)</p> <p>7.5.5 <i>Preservation of product</i> requires that the identity of product be preserved during internal processing and delivery to the intended destination.</p>	No	Not Applicable

Issue to be addressed	Rating	ISO 9001:2000	Poppy Advisory & Control Board	OECD Seed Scheme
Does the system require the load be secured prior to transport? (38.2)	Highly Desirable	<p>Yes 7.5.1 <i>Control of production and service provision</i> requires production take place under controlled conditions.</p> <p>7.5.5 <i>Preservation of product</i> requires that the conformity of the product be maintained during internal processing and delivery to intended destination. These system elements are concerned with integrity of product not potential contamination of environment by product, however as is regulatory requirement 7.2.1 <i>Determination of requirements related to the product</i> requires compliance with statutory and regulatory requirements related to the product.</p>	Yes, an offence under Section 292 of the Traffic (Road Rules) Regulations 1999 not to properly secure a load on a vehicle.	Not Applicable
Does the system require roadsides to be monitored for volunteers and appropriate action taken? (38.3)	Highly Desirable	<p>Yes, 7.2.1 <i>Determination of requirements related to the product</i> requires the organisation to determine statutory and regulatory requirements. Legal requirement that poppy material must always remain on licensed site; roadsides are not licensed sites. Issue of who is responsible for monitoring and removing</p>	Yes, and is involved with monitoring roadsides and responding to roadside regrowth.	Not Applicable