

SURVEY REPORT ON THE DISTRIBUTION AND WASTE DISPOSAL OF BANANAS BY THE ASSOCIATION OF AUSTRALIAN BANANA WHOLESALERS

BACKGROUND

Biosecurity Australia (BA) has prepared a revised draft import risk analysis (IRA) report for the importation of mature hard green Cavendish bananas from the Philippines. To help evaluate the potential quarantine risks associated with the requested importation of Philippine bananas, information on the distribution of Australian bananas and disposal of banana waste was collected. This was provided in part through a survey of members of the Association of Australian Banana Wholesalers (AABW). Information from the survey has been used in an indicative way to provide values for the model that aided the IRA team in determining the potential risks associated with pests and diseases.

SURVEY METHODOLOGY

The survey was facilitated through the Secretariat of the AABW, with the questionnaire (Appendix 1) being faxed to 29 AABW members in December 2005. Responses to the survey were received by the Secretariat via fax in December 2005 and January 2006. To ensure the confidentiality of AABW members, the Secretariat collated the responses and forwarded them to BA.

RESULTS

A variety of data was collected from this survey of AABW members. The results below are a summary of these responses and represent the simple counts, averages or proportions across the relevant responding group of AABW members. BA's use of information derived from this survey remains its responsibility.

1. Survey participation

- Twenty two of the 29 members of the AABW participated in the survey. Three AABW members were based in the *grower areas* (i.e. commercial banana growing area) and 19 members in the *other areas* (i.e. non-commercial banana growing area)

2. Bananas sold in past financial year

- 152,328 tonnes of bananas were sold in 2004–05 by the 22 AABW members that participated in the survey (AABW estimates that this accounts for about 55% of bananas distributed annually through the Australian wholesale system)
- Each AABW member sold on average 6,924 tonnes/year of bananas in 2004–05

3. Bananas disposed of as waste

- Of the 152,859 tonnes of bananas purchased in 2004–05 by the 22 responding AABW members, 0.35% (531 tonnes) was disposed of as waste
- Levels of banana waste for individual AABW members ranged from 0–1.5%
- Seven of the 22 AABW members did not dispose of any bananas as waste

4. Disposal points of banana waste

- 87% of banana waste was disposed of at a municipal tip or collected as organic waste
- 13% of banana waste was disposed of as raw material (i.e. for animal feed or untreated mulch)
- Three of the 22 AABW members disposed of all, or a proportion of their banana waste as raw material

Disposal points of banana waste by AABW members

	Disposal type		
	Municipal tip	Organic waste collection	Raw material [†]
Tonnes (#/yr)	226.9	235.7	68.6
Tonnes (%)	42.7	44.4	12.9

[†]Raw material refers to animal feed or untreated mulch

Note: figures based on the volume of bananas disposed of as waste by 22 AABW members in 2004–05; hence the actual amount sold by all AABW members was assessed to be higher

5. Disposal of empty banana cartons

- Empty banana cartons were mainly disposed of through cardboard recycling (62%)

Methods of disposal of empty banana cartons by AABW members

	Disposal type		
	Cardboard recycling	Municipal tip	Re-used
Members (#)	8	3	2
Members (%)	61.5	23.1	15.4

6. Disposal of plastic lining from empty banana cartons

- Plastic lining from empty banana cartons was mainly disposed of to the municipal tip (83%)

Methods of disposal of plastic lining from empty banana cartons by AABW members

	Disposal type	
	Municipal tip	Plastic recycling
Members (#)	10	2
Members (%)	83.3	16.7

7. Sales distribution of bananas

- 94.7% of bananas were sold to retailers, 4.9% to food service outlets and 0.4% to processors

Sales distribution of bananas by AABW members

	Sales distribution		
	Retailers [†]	Food services [‡]	Food processors
Tonnes (#/yr)	144,329	7,441	557
Tonnes (%)	94.7	4.9	0.4

[†]Retailers include supermarkets (including within a distribution chain) and grocery stores

[‡]Food services include outlets such as cafes, restaurants and hotels

Note: figures based on the volume of bananas sold by 22 AABW members in 2004–05; hence the actual amount sold by all AABW members was assessed to be higher

8. Bananas sold to retailers by AABW members

- Of the bananas sold to retailers by the 22 AABW members, 15% of sales were to retailers in the *grower areas* and 85% were to retailers in the *other areas*

Bananas sold to retailers by AABW members

	Retailer location	
	Grower areas	Other areas
Tonnes (#/yr)	22,101	122,228
Tonnes (%)	15.3	84.7

Note: figures based on the volume of bananas sold by 22 AABW members in 2004–05; hence the actual amount sold by all AABW members was assessed to be higher

9. Bananas sold to retailers by AABW members located in the *grower areas*

- Of the bananas sold to retailers by the three AABW members located in the *grower areas*, all sales were to retailers in the *grower areas*

Bananas sold to retailers by AABW members located in the *grower areas*

	Retailer location	
	Grower areas	Other areas
Tonnes (#/yr)	16,077	0
Tonnes (%)	100.0	0.0

Note: figures based on the volume of bananas sold by three AABW members in 2004–05; hence the actual amount sold by all AABW members located in the *grower areas* was assessed to be higher

10. Bananas sold to retailers by AABW members based in the *other areas*

- Of the bananas sold to retailers by the 19 AABW members located in the *other areas*, 5% of sales were to retailers in the *grower areas* and 95% to retailers in the *other areas*

Bananas sold to retailers by AABW members located in the *other areas*

	Retailer location	
	Grower areas	Other areas
Tonnes (#/yr)	6,024	122,228
Tonnes (%)	4.7	95.3

Note: figures based on the volume of bananas sold by 19 AABW members in 2004–05; hence the actual amount sold by all AABW members located in the *other areas* was assessed to be higher

ACKNOWLEDGMENT

Grateful acknowledgements are given to the members of the AABW who participated in the survey and especially to Mr Tony Imeson, Secretariat of the AABW, for facilitating the survey and collating the survey responses.

APPENDIX 1 - SURVEY QUESTIONNAIRE

Biosecurity Australia is currently preparing a draft import risk analysis (IRA) for the importation of bananas from the Philippines. The IRA would benefit greatly from data relating to the distribution chain of Australian bananas and the disposal of banana waste. Biosecurity Australia would be most grateful if you could spend 5-10 minutes answering the following questions. For the purposes of the survey, the term *banana waste* is defined as any waste derived from bananas. This includes damaged, bruised and overripe whole bananas and banana peels.

Please complete this form and fax it to me by Tuesday 20th December 2005.

Note: The information provided in this survey will be treated in strict confidence. Once the data has been collated, I will ensure that the survey sheet is destroyed.

Mr Tony Imeson

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1. What percentage of bananas do you dispose of as waste?
[%]
 2. In what proportions do you dispose your banana waste to:
 - a. [%] general garbage collection (i.e. goes to a local government tip)
 - b. [%] green waste collection
 - c. [%] raw material (i.e. for animal feed or untreated mulch)
 - d. [%] other (*please specify*) _____
 3. Do you dispose of empty banana cartons and plastic lining from banana cartons?
(*please circle one*)
 - a. yes
 - b. no

If yes go to Question 4, if no go to Question 5

4. How do you dispose of empty banana cartons and plastic lining from banana cartons? (*please specify*)

5. How many tonnes of bananas did you sell in the past financial year?
[]

6. In the past financial year what proportion of bananas did you sell directly to:
- [%] retailers (also includes supermarkets within a distribution chain)
 - [%] food service outlets (i.e. cafes, restaurants, hotels)
 - [%] food processors
 - [%] other (*please specify*) _____

For questions 7 and 8 please refer to the below map

7. In which area are you located? (*please circle one*)
- area A
 - area B
8. What proportion of bananas do you sell to retailers in:
- [%] area A
 - [%] area B
 - don't sell to retailers (*circle if required*)

