PIG	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Macrocyclic lactones						
Abamectin	FAT	0.005	0.02	300	0	0
Doramectin	FAT	0.005	0.1	300	2	1[a]
Emamectin	FAT	0.005	Not set	300	0	0
Eprinomectin	FAT	0.005	Not set	300	0	0
Ivermectin	FAT	0.005	0.02	300	2	1[b]
Moxidectin	FAT	0.005	Not set	300	0	0
ANTIBIOTICS						
Aminoglycosides						
Apramycin	KIDNEY	0.5	2.0	300	0	0
Dihydrostreptomycin	KIDNEY	0.1	0.3	300	0	0
Gentamycin	KIDNEY	0.1	Not set	300	0	0
Neomycin	KIDNEY	0.1	10.0	300	2	0
Streptomycin	KIDNEY	0.1	0.3	300	0	0
Antibiotics						
Dimetridazole	MUSCLE	0.001	0.0001	300	0	0
Metronidazole	MUSCLE	0.001	Not set	300	0	0
Ronidazole	MUSCLE	0.0003	Not set	300	0	0
Antimicrobials						
Chloramphenicol	MUSCLE	0.0003	Not set	300	0	0
Florfenicol	MUSCLE	0.02	0.5	300	0	0
Thiamphenicol	MUSCLE	0.02	Not set	300	0	0
β-lactams						
Amoxycillin	KIDNEY	0.01	0.01	300	0	0
Ampicillin	KIDNEY	0.01	Not set	300	0	0
Cloxacillin	KIDNEY	0.1	Not set	300	0	0
Penicillin G (benzylpenicillin)	KIDNEY	0.01	0.06	300	0	0
Cephalosporins						
Ceftiofur	KIDNEY	0.2	Not set	300	0	0
Cefuroxime	KIDNEY	0.1	Not set	300	0	0
Cephalonium	KIDNEY	0.1	Not set	300	0	0
Lincosamides						
Lincomycin	KIDNEY	0.05	0.2	300	0	0

PIG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Macrolides						
Erythromycin	KIDNEY	0.1	0.3	300	0	0
Tilmicosin	KIDNEY	0.2	1.0	300	0	0
Tylosin	KIDNEY	0.1	0.2	300	0	0
Sulfonamides						
Sulfadiazine	KIDNEY	0.05	0.1	300	0	0
Sulfadimidine (sulfamethazine)	KIDNEY	0.05	0.1	300	0	0
Sulfadoxine	KIDNEY	0.05	0.1	300	0	0
Sulfafurazole	KIDNEY	0.05	Not set	300	0	0
Sulfamerazine	KIDNEY	0.05	Not set	300	0	0
Sulfamethoxydiazine	KIDNEY	0.05	Not set	300	0	0
Sulfapyridine	KIDNEY	0.05	Not set	300	0	0
Sulfaquinoxaline	KIDNEY	0.05	Not set	300	0	0
Sulfathiazole	KIDNEY	0.05	Not set	300	0	0
Sulfatroxazole	KIDNEY	0.05	0.1	300	0	0
Tetracyclines						
Chlortetracycline	KIDNEY	0.05	0.6	300	8	0
Doxycycline	KIDNEY	0.05	Not set	300	0	0
Oxytetracycline	KIDNEY	0.1	0.6	300	13	1[c]
Tetracycline	KIDNEY	0.1	Not set	300	0	0
ANTICOCCIDIALS						
Amprolium	LIVER	0.01	Not set	301	0	0
Lasalocid	LIVER	0.01	0.7	301	2	0
Maduramicin	LIVER	0.01	Not set	301	0	0
Monensin	LIVER	0.01	Not set	301	0	0
Narasin	LIVER	0.01	Not set	301	0	0
Nicarbazin	LIVER	0.01	Not set	301	0	0
Salinomycin	LIVER	0.01	0.1	301	0	0
HORMONES						
Resorcylic acid lactones						
Zearalanol (α) (zeranol)	LIVER	0.002	Not set	300	0	0
Stilbenes						
Dienoestrol	LIVER	0.0002	Not set	300	0	0
Diethylstilboestrol	LIVER	0.0002	Not set	300	0	0
Hexoestrol	LIVER	0.0002	Not set	300	0	0

PIG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
OTHER VETERINARY DRUGS						
β-agonists						
Cimaterol	LIVER	0.003	Not set	301	0	0
Clenbuterol	LIVER	0.001	Not set	301	0	0
Mabuterol	LIVER	0.001	Not set	301	0	0
Ractopamine	LIVER	0.003	0.2	301	63	0
Salbutamol	LIVER	0.003	Not set	301	0	0
Zilpaterol	LIVER	0.003	Not set	301	0	0
Non-steroidal anti-inflammatory drugs						
Flunixin	LIVER	0.01	Not set	300	0	0
Ketoprofen	LIVER	0.02	Not set	300	0	0
Oxyphenbutazone	LIVER	0.05	Not set	300	0	0
Phenylbutazone	LIVER	0.05	Not set	300	0	0
Tolfenamic acid	LIVER	0.005	0.1	300	0	0
Other						
Carbadox	LIVER	0.005	Not set	300	0	0
Olaquindox	LIVER	0.005	0.3	300	0	0
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FAT	0.02	0.2	300	1	0
Chlordane	FAT	0.02	0.2	300	0	0
DDT	FAT	0.1	5.0	300	0	0
Endosulfan	FAT	0.02	0.2	300	0	0
Endrin	FAT	0.05	Not set	300	0	0
HCB	FAT	0.02	1.0	300	0	0
HCH	FAT	0.02	0.3	300	0	0
Heptachlor	FAT	0.02	0.2	300	0	0
Lindane (γ-HCH)	FAT	0.1	2.0	300	0	0
Methoxychlor	FAT	0.1	Not set	300	0	0
Mirex	FAT	0.02	Not set	300	0	0

PIG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Organophosphates						
Chlorfenvinphos	FAT	0.05	Not set	300	0	0
Chlorpyrifos	FAT	0.1	0.5	300	0	0
Chlorpyrifos-methyl	FAT	0.02	0.05	300	0	0
Coumaphos	FAT	0.2	Not set	300	0	0
Diazinon	FAT	0.1	0.7	300	0	0
Ethion	FAT	0.1	Not set	300	0	0
Famphur	FAT	0.02	Not set	300	0	0
Fenitrothion	FAT	0.02	Not set	300	0	0
Fenthion	FAT	0.05	Not set	300	0	0
Malathion	FAT	0.2	1.0	300	0	0
Phosmet	FAT	0.1	Not set	300	0	0
Temephos	FAT	0.1	Not set	300	0	0
Synthetic pyrethroids						
Bifenthrin	FAT	0.02	2.0	300	0	0
Bioresmethrin	FAT	0.02	Not set	300	0	0
Cyfluthrin	FAT	0.02	0.5	300	0	0
Cyhalothrin	FAT	0.02	0.5	300	0	0
Cypermethrin	FAT	0.02	0.05	300	0	0
Deltamethrin	FAT	0.02	0.1	300	3	0
Fenvalerate	FAT	0.02	1.0	300	0	0
Flumethrin	FAT	0.02	Not set	300	0	0
Permethrin	FAT	0.02	1.0	300	0	0
Other						
Spinosad	FAT	0.01	1.0	300	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FAT	0.03	0.2	300	0	0
Aroclor 1260	FAT	0.03	0.2	300	0	0
Metals						
Cadmium	LIVER	0.02	1.25	300	123	0
Lead	LIVER	0.02	0.5	300	34	0
Mercury	LIVER	0.01	No limit	300	42	n/a

PIG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Mycotoxins						
Zearalanol (β) (taleranol)	LIVER	0.002	No limit	300	0	n/a
Zearalanone	LIVER	0.002	No limit	300	1	n/a
Zearalenol (α)	LIVER	0.002	No limit	300	0	n/a
Zearalenol (β)	LIVER	0.002	No limit	300	0	n/a
Zearalenone	LIVER	0.002	No limit	300	0	n/a

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

Not defined Standards not defined in urine and faeces.

n/a Australian Standard does not apply. No limit set or defined.

[a] Animal was inadvertently sold within the withholding period.

[b] Sow was inadvertently moved from a farrowing paddock (where she had access to ivermectin in feed) to a sale pen. Animal was subsequently sold. Warning letter issued.

[c] Exact residue source could not be confirmed. Residue may have been the result of either a medicated pre-mix feed ration or on-farm cross contamination.

POULTRY	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTIBIOTICS						
Aminoglycosides						
Apramycin	LIVER	0.5	1.0	300	0	0
Dihydrostreptomycin	LIVER	0.1	Not set	300	0	0
Gentamycin	LIVER	0.1	Not set	300	0	0
Neomycin	LIVER	0.1	0.5	300	0	0
Streptomycin	LIVER	0.1	Not set	300	0	0
β-lactams						
Amoxycillin	LIVER	0.01	0.01	300	0	0
Ampicillin	LIVER	0.01	Not set	300	0	0
Cloxacillin	LIVER	0.1	Not set	300	0	0
Penicillin G (benzylpenicillin)	LIVER	0.01	Not set	300	0	0
Cephalosporins						
Ceftiofur	LIVER	0.2	Not set	300	0	0
Cefuroxime	LIVER	0.1	Not set	300	0	0
Cephalonium	LIVER	0.1	Not set	300	0	0
Lincosamides						
Lincomycin	LIVER	0.05	0.1	300	0	0
Macrolides						
Erythromycin	LIVER	0.1	0.3	300	0	0
Tilmicosin	LIVER	0.2	Not set	300	0	0
Tylosin	LIVER	0.1	0.2	300	0	0
Sulfonamides						
Sulfadiazine	LIVER	0.05	0.1	300	0	0
Sulfadimidine (sulfamethazine)	LIVER	0.05	0.1	300	0	0
Sulfadoxine	LIVER	0.05	Not set	300	0	0
Sulfafurazole	LIVER	0.05	Not set	300	0	0
Sulfamerazine	LIVER	0.05	Not set	300	0	0
Sulfamethoxydiazine	LIVER	0.05	Not set	300	0	0
Sulfapyridine	LIVER	0.05	Not set	300	0	0
Sulfaquinoxaline	LIVER	0.05	0.1	300	0	0
Sulfathiazole	LIVER	0.05	Not set	300	0	0
Sulfatroxazole	LIVER	0.05	Not set	300	0	0

POULTRY (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Tetracyclines						
Chlortetracycline	LIVER	0.05	0.6	300	0	0
Doxycycline	LIVER	0.05	Not set	300	0	0
Oxytetracycline	LIVER	0.1	0.6	300	0	0
Tetracycline	LIVER	0.1	Not set	300	0	0
HORMONES						
Resorcylic acid lactones						
Zearalanol (α) (zeranol)	LIVER	0.002	Not set	30	0	0
Stilbenes						
Dienoestrol	LIVER	0.0002	Not set	30	0	0
Diethylstilboestrol	LIVER	0.0002	Not set	30	0	0
Hexoestrol	LIVER	0.0002	Not set	30	0	0
ENVIRONMENTAL CONTAMINANTS						
Mycotoxins						
Zearalanol (β) (taleranol)	LIVER	0.002	No limit	30	0	n/a
Zearalanone	LIVER	0.002	No limit	30	0	n/a
Zearalenol (α)	LIVER	0.002	No limit	30	0	n/a
Zearalenol (β)	LIVER	0.002	No limit	30	0	n/a
Zearalenone	LIVER	0.002	No limit	30	0	n/a

LOR Limit of reporting (mg/kg).
Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.
No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.
Not defined Standards not defined in urine and faeces.
n/a Australian Standard does not apply. No limit set or defined.

RATITE (emu)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Macrocyclic lactones						
Abamectin	FAT	0.005	Not set	1	0	0
Doramectin	FAT	0.005	Not set	1	0	0
Emamectin	FAT	0.005	Not set	1	0	0
Eprinomectin	FAT	0.005	Not set	1	0	0
Ivermectin	FAT	0.005	Not set	1	0	0
Moxidectin	FAT	0.005	Not set	1	0	0
ANTIBIOTICS						
Aminoglycosides						
Apramycin	KIDNEY	0.5	1.0	2	0	0
Dihydrostreptomycin	KIDNEY	0.1	Not set	2	0	0
Gentamycin	KIDNEY	0.1	Not set	2	0	0
Neomycin	KIDNEY	0.1	10.0	2	0	0
Streptomycin	KIDNEY	0.1	Not set	2	0	0
Antibiotics						
Dimetridazole	MUSCLE	0.0001	0.0001	2	0	0
Metronidazole	MUSCLE	0.001	Not set	2	0	0
Ronidazole	MUSCLE	0.001	Not set	2	0	0
β-lactams						
Amoxycillin	KIDNEY	0.01	0.01	2	0	0
Ampicillin	KIDNEY	0.01	Not set	2	0	0
Cloxacillin	KIDNEY	0.1	Not set	2	0	0
Penicillin G (benzylpenicillin)	KIDNEY	0.01	Not set	2	0	0
Cephalosporins						
Ceftiofur	KIDNEY	0.2	Not set	2	0	0
Cefuroxime	KIDNEY	0.1	Not set	2	0	0
Cephalonium	KIDNEY	0.1	Not set	2	0	0
Lincosamides						
Lincomycin	KIDNEY	0.05	0.1	2	0	0
Macrolides						
Erythromycin	KIDNEY	0.1	0.3	2	0	0
Tilmicosin	KIDNEY	0.2	Not set	2	0	0
Tylosin	KIDNEY	0.1	0.2	2	0	0

RATITE (emu) (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Sulfonamides						
Sulfadiazine	KIDNEY	0.05	0.1	2	0	0
Sulfadimidine (sulfamethazine)	KIDNEY	0.05	0.1	2	0	0
Sulfadoxine	KIDNEY	0.05	Not set	2	0	0
Sulfafurazole	KIDNEY	0.05	Not set	2	0	0
Sulfamerazine	KIDNEY	0.05	Not set	2	0	0
Sulfamethoxydiazine	KIDNEY	0.05	Not set	2	0	0
Sulfapyridine	KIDNEY	0.05	Not set	2	0	0
Sulfaquinoxaline	KIDNEY	0.05	0.1	2	0	0
Sulfathiazole	KIDNEY	0.05	Not set	2	0	0
Sulfatroxazole	KIDNEY	0.05	Not set	2	0	0
Tetracyclines						
Chlortetracycline	KIDNEY	0.05	0.6	2	0	0
Doxycycline	KIDNEY	0.05	Not set	2	0	0
Oxytetracycline	KIDNEY	0.1	0.6	2	0	0
Tetracycline	KIDNEY	0.1	Not set	2	0	0
OTHER VETERINARY DRUGS						
β-agonists						
Cimaterol	LIVER	0.003	Not set	1	0	0
Clenbuterol	LIVER	0.001	Not set	1	0	0
Mabuterol	LIVER	0.001	Not set	1	0	0
Ractopamine	LIVER	0.003	Not set	1	0	0
Salbutamol	LIVER	0.003	Not set	1	0	0
Zilpaterol	LIVER	0.003	Not set	1	0	0
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FAT	0.02	0.2	1	0	0
Chlordane	FAT	0.02	Not set	1	0	0
DDT	FAT	0.1	5.0	1	1	0
Endosulfan	FAT	0.02	0.2	1	0	0
Endrin	FAT	0.05	Not set	1	0	0
HCB	FAT	0.02	1.0	1	0	0
HCH	FAT	0.02	0.3	1	0	0
Heptachlor	FAT	0.02	Not set	1	0	0
Lindane (γ-HCH)	FAT	0.1	0.7	1	0	0
Methoxychlor	FAT	0.1	Not set	1	0	0
Mirex	FAT	0.02	Not set	1	0	0

RATITE (emu) (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Organophosphates						
Chlorfenvinphos	FAT	0.05	Not set	1	0	0
Chlorpyrifos	FAT	0.1	0.1	1	0	0
Chlorpyrifos-methyl	FAT	0.02	0.05	1	0	0
Coumaphos	FAT	0.2	Not set	1	0	0
Diazinon	FAT	0.1	Not set	1	0	0
Ethion	FAT	0.1	Not set	1	0	0
Famphur	FAT	0.02	Not set	1	0	0
Fenitrothion	FAT	0.02	Not set	1	0	0
Fenthion	FAT	0.05	Not set	1	0	0
Malathion	FAT	0.2	1.0	1	0	0
Phosmet	FAT	0.1	Not set	1	0	0
Temephos	FAT	0.1	Not set	1	0	0
Synthetic pyrethroids						
Bifenthrin	FAT	0.02	0.05	1	0	0
Bioresmethrin	FAT	0.02	Not set	1	0	0
Cyfluthrin	FAT	0.02	0.01	1	0	0
Cyhalothrin	FAT	0.02	Not set	1	0	0
Cypermethrin	FAT	0.02	0.05	1	0	0
Deltamethrin	FAT	0.02	0.01	1	0	0
Fenvalerate	FAT	0.02	0.05	1	0	0
Flumethrin	FAT	0.02	Not set	1	0	0
Permethrin	FAT	0.02	0.1	1	0	0
Other						
Spinosad	FAT	0.01	0.2	1	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FAT	0.03	0.2	1	0	0
Aroclor 1260	FAT	0.03	0.2	1	0	0

LOR Limit of reporting (mg/kg).
Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

RATITE (ostrich)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Macrocyclic lactones						
Abamectin	FAT	0.005	Not set	1	0	0
Doramectin	FAT	0.005	Not set	1	0	0
Emamectin	FAT	0.005	Not set	1	0	0
Eprinomectin	FAT	0.005	Not set	1	0	0
Ivermectin	FAT	0.005	Not set	1	0	0
Moxidectin	FAT	0.005	Not set	1	0	0
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FAT	0.02	0.2	1	0	0
Chlordane	FAT	0.02	Not set	1	0	0
DDT	FAT	0.1	5.0	1	0	0
Endosulfan	FAT	0.02	0.2	1	0	0
Endrin	FAT	0.05	Not set	1	0	0
HCB	FAT	0.02	1.0	1	0	0
HCH	FAT	0.02	0.3	1	0	0
Heptachlor	FAT	0.02	Not set	1	0	0
Lindane (γ-HCH)	FAT	0.1	0.7	1	0	0
Methoxychlor	FAT	0.2	Not set	1	0	0
Mirex	FAT	0.02	Not set	1	0	0
Organophosphates						
Chlorfenvinphos	FAT	0.05	Not set	1	0	0
Chlorpyrifos	FAT	0.1	0.1	1	0	0
Chlorpyrifos-methyl	FAT	0.02	0.05	1	0	0
Coumaphos	FAT	0.2	Not set	1	0	0
Diazinon	FAT	0.1	Not set	1	0	0
Ethion	FAT	0.1	Not set	1	0	0
Famphur	FAT	0.02	Not set	1	0	0
Fenitrothion	FAT	0.02	Not set	1	0	0
Fenthion	FAT	0.05	Not set	1	0	0
Malathion	FAT	0.2	1.0	1	0	0
Phosmet	FAT	0.1	Not set	1	0	0
Temephos	FAT	0.1	Not set	1	0	0

RATITE (ostrich) (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Synthetic pyrethroids						
Bifenthrin	FAT	0.02	0.05	1	0	0
Bioresmethrin	FAT	0.02	Not set	1	0	0
Cyfluthrin	FAT	0.02	0.01	1	0	0
Cyhalothrin	FAT	0.02	Not set	1	0	0
Cypermethrin	FAT	0.02	0.05	1	0	0
Deltamethrin	FAT	0.02	0.01	1	0	0
Fenvalerate	FAT	0.02	0.05	1	0	0
Flumethrin	FAT	0.02	Not set	1	0	0
Permethrin	FAT	0.02	0.1	1	0	0
Other						
Spinosad	FAT	0.01	0.2	1	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FAT	0.03	0.2	1	0	0
Aroclor 1260	FAT	0.03	0.2	1	0	0
Metals						
Cadmium	LIVER	0.02	No limit	2	1	n/a
Lead	LIVER	0.02	0.5	2	0	0
Mercury	LIVER	0.01	No limit	2	0	n/a

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

SHEEP	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Benzimadazoles						
Triclabendazole	LIVER	0.1	2.0	325	0	0
Imidazothiazoles						
Levamisole	LIVER	0.01	1.0	325	8	0
Morantel	LIVER	0.01	2.0	325	0	0
Macrocyclic lactones						
Abamectin	FAT	0.005	0.05	325	3	0
Doramectin	FAT	0.005	0.1	325	0	0
Emamectin	FAT	0.005	Not set	325	0	0
Eprinomectin	FAT	0.005	Not set	325	0	0
Ivermectin	FAT	0.005	0.02	325	0	0
Moxidectin	FAT	0.005	0.5	325	56	0
Salicylanilides						
Closantel	LIVER	0.1	5.0	329	1	0
ANTIBIOTICS						
Aminoglycosides						
Apramycin	KIDNEY	0.5	2.0	410	0	0
Dihydrostreptomycin	KIDNEY	0.1	0.3	410	0	0
Gentamycin	KIDNEY	0.1	Not set	410	0	0
Neomycin	KIDNEY	0.1	10.0	410	0	0
Streptomycin	KIDNEY	0.1	0.3	410	0	0
Antimicrobials						
Chloramphenicol	MUSCLE	0.0003	Not set	340	0	0
Florfenicol	MUSCLE	0.02	Not set	340	0	0
Thiamphenicol	MUSCLE	0.02	Not set	340	0	0
β-lactams						
Amoxycillin	KIDNEY	0.01	0.01	410	0	0
Ampicillin	KIDNEY	0.01	Not set	410	0	0
Cloxacillin	KIDNEY	0.1	Not set	410	0	0
Penicillin G (benzylpenicillin)	KIDNEY	0.01	0.06	410	0	0
Cephalosporins						
Ceftiofur	KIDNEY	0.2	Not set	410	0	0
Cefuroxime	KIDNEY	0.1	Not set	410	0	0
Cephalonium	KIDNEY	0.1	Not set	410	0	0

SHEEP (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Lincosamides						
Lincomycin	KIDNEY	0.05	Not set	410	0	0
Macrolides						
Erythromycin	KIDNEY	0.1	0.3	410	0	0
Tilmicosin	KIDNEY	0.2	Not set	410	0	0
Tylosin	KIDNEY	0.1	Not set	410	0	0
Sulfonamides						
Sulfadiazine	KIDNEY	0.05	0.1	410	0	0
Sulfadimidine (sulfamethazine)	KIDNEY	0.05	0.1	410	0	0
Sulfadoxine	KIDNEY	0.05	0.1	410	0	0
Sulfafurazole	KIDNEY	0.05	Not set	410	0	0
Sulfamerazine	KIDNEY	0.05	Not set	410	0	0
Sulfamethoxydiazine	KIDNEY	0.05	Not set	410	0	0
Sulfapyridine	KIDNEY	0.05	Not set	410	0	0
Sulfaquinoxaline	KIDNEY	0.05	Not set	410	0	0
Sulfathiazole	KIDNEY	0.05	Not set	410	0	0
Sulfatroxazole	KIDNEY	0.05	0.1	410	0	0
Tetracyclines						
Chlortetracycline	KIDNEY	0.05	Not set	410	0	0
Doxycycline	KIDNEY	0.05	Not set	410	0	0
Oxytetracycline	KIDNEY	0.1	0.6	410	0	0
Tetracycline	KIDNEY	0.1	Not set	410	0	0
ANTICOCCIDIALS						
Amprolium	LIVER	0.01	Not set	325	0	0
Lasalocid	LIVER	0.01	0.7	325	0	0
Maduramicin	LIVER	0.01	Not set	325	0	0
Monensin	LIVER	0.01	Not set	325	0	0
Narasin	LIVER	0.01	Not set	325	0	0
Nicarbazin	LIVER	0.01	Not set	325	0	0
Salinomycin	LIVER	0.01	Not set	325	0	0
HORMONES						
Resorcylic acid lactones						
Zearalanol (α) (zeranol)	LIVER	0.002	Not set	315	0	0

SHEEP (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Steroids						
19-Nortestosterone (17-α)	URINE	0.001	Not defined	315	56	n/a
19-Nortestosterone (17-β)	URINE	0.001	Not defined	315	0	n/a
Boldenone (17-α)	URINE	0.001	Not defined	315	0	n/a
Boldenone (17-β)	URINE	0.001	Not defined	315	0	n/a
Methandriol	URINE	0.005	Not defined	315	0	n/a
Stanozolol	URINE	0.001	Not defined	315	0	n/a
Stanozolol (16-hydroxy)	URINE	0.001	Not defined	315	0	n/a
Trenbolone	LIVER	0.002	Not set	315	0	0
Stilbenes						
Dienoestrol	LIVER	0.0002	Not set	315	0	0
Diethylstilboestrol	LIVER	0.0002	Not set	315	0	0
Hexoestrol	LIVER	0.0002	Not set	315	0	0
OTHER VETERINARY DRUGS						
β-agonists						
Cimaterol	LIVER	0.003	Not set	370	0	0
Clenbuterol	LIVER	0.001	Not set	370	0	0
Mabuterol	LIVER	0.001	Not set	370	0	0
Ractopamine	LIVER	0.003	Not set	370	0	0
Salbutamol	LIVER	0.003	Not set	370	0	0
Zilpaterol	LIVER	0.003	Not set	370	0	0
Non-steroidal anti-inflammatory drugs						
Flunixin	LIVER	0.01	Not set	329	0	0
Ketoprofen	LIVER	0.02	Not set	329	0	0
Oxyphenbutazone	LIVER	0.05	Not set	329	0	0
Phenylbutazone	LIVER	0.05	Not set	329	0	0
Tolfenamic acid	LIVER	0.005	Not set	329	0	0

SHEEP (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Amidines						
Cyromazine	KIDNEY	0.05	0.2	332	1	0
Dicyclanil	KIDNEY	0.05	0.3	332	0	0
Melamine	KIDNEY	0.05	Not set	332	0	0
Benzoyl ureas						
Chlorfluazuron	FAT	0.01	Not set	325	2	2[a]
Diflubenzuron	FAT	0.01	0.05	325	1	0
Fluazuron	FAT	0.01	Not set	325	0	0
Triflumuron	FAT	0.01	2.0	325	8	0
Organochlorines						
Aldrin and dieldrin	FAT	0.02	0.2	785	1	0
Chlordane	FAT	0.02	0.2	785	0	0
DDT	FAT	0.1	5.0	785	0	0
Endosulfan	FAT	0.02	0.2	785	0	0
Endrin	FAT	0.05	Not set	785	0	0
HCB	FAT	0.02	1.0	785	0	0
HCH	FAT	0.02	0.3	785	0	0
Heptachlor	FAT	0.02	0.2	785	0	0
Lindane (γ-HCH)	FAT	0.1	2.0	785	0	0
Methoxychlor	FAT	0.1	Not set	785	0	0
Mirex	FAT	0.02	Not set	785	0	0
Organophosphates						
Chlorfenvinphos	FAT	0.05	0.2	785	0	0
Chlorpyrifos	FAT	0.1	0.5	785	0	0
Chlorpyrifos-methyl	FAT	0.02	0.05	785	0	0
Coumaphos	FAT	0.2	Not set	785	0	0
Diazinon	FAT	0.1	0.7	785	3	0
Ethion	FAT	0.1	Not set	785	0	0
Famphur	FAT	0.02	Not set	785	0	0
Fenitrothion	FAT	0.02	Not set	785	0	0
Fenthion	FAT	0.05	Not set	785	0	0
Malathion	FAT	0.2	1.0	785	0	0
Phosmet	FAT	0.1	Not set	785	0	0
Temephos	FAT	0.1	3.0	785	0	0

SHEEP (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Synthetic pyrethroids						
Bifenthrin	FAT	0.02	2.0	785	0	0
Bioresmethrin	FAT	0.02	Not set	785	0	0
Cyfluthrin	FAT	0.02	0.5	785	0	0
Cyhalothrin	FAT	0.02	0.5	785	0	0
Cypermethrin	FAT	0.02	0.5	785	3	0
Deltamethrin	FAT	0.02	0.2	785	1	0
Fenvalerate	FAT	0.02	1.0	785	0	0
Flumethrin	FAT	0.02	Not set	785	0	0
Permethrin	FAT	0.02	1.0	785	0	0
Other						
Spinosad	FAT	0.01	1.0	325	1	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FAT	0.03	0.2	785	0	0
Aroclor 1260	FAT	0.03	0.2	785	0	0
Metals						
Cadmium	LIVER	0.02	1.25	325	258	4[b]
Lead	LIVER	0.02	0.5	325	163	5[c]
Mercury	LIVER	0.01	No limit	325	23	n/a
Mycotoxins						
Zearalanol (β) (taleranol)	LIVER	0.002	No limit	315	0	n/a
Zearalanone	LIVER	0.002	No limit	315	0	n/a
Zearalenol (α)	LIVER	0.002	No limit	315	3	n/a
Zearalenol (β)	LIVER	0.002	No limit	315	4	n/a
Zearalenone	LIVER	0.002	No limit	315	2	n/a

LOR Limit of reporting (mg/kg).
Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.
No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.
Not defined Standards not defined in urine and faeces.
n/a Australian Standard does not apply. No limit set or defined.

[a] Contamination of pasture from nearby building sites; in the other case no residue source could be confirmed.
[b] These residues were below the action level for traceback.
[c] Access to old batteries and metal waste was identified in one instance. In the others, no obvious source of contamination was found.

WILD BOAR	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FAT	0.02	0.2	30	1	0
Chlordane	FAT	0.02	0.2	30	0	0
DDT	FAT	0.1	5.0	30	1	0
Endosulfan	FAT	0.02	0.2	30	0	0
Endrin	FAT	0.01	Not set	30	0	0
HCB	FAT	0.02	1.0	30	0	0
HCH	FAT	0.02	0.3	30	0	0
Heptachlor	FAT	0.02	0.2	30	0	0
Lindane (γ-HCH)	FAT	0.1	2.0	30	0	0
Methoxychlor	FAT	0.1	Not set	30	0	0
Mirex	FAT	0.02	Not set	30	0	0
Organophosphates						
Chlorfenvinphos	FAT	0.05	Not set	30	0	0
Chlorpyrifos	FAT	0.1	0.5	30	0	0
Chlorpyrifos-methyl	FAT	0.02	0.05	30	1	1[a]
Coumaphos	FAT	0.2	Not set	30	0	0
Diazinon	FAT	0.1	0.7	30	0	0
Ethion	FAT	0.1	Not set	30	0	0
Famphur	FAT	0.02	Not set	30	0	0
Fenitrothion	FAT	0.02	Not set	30	0	0
Fenthion	FAT	0.05	Not set	30	0	0
Malathion	FAT	0.2	1.0	30	0	0
Phosmet	FAT	0.1	Not set	30	0	0
Temephos	FAT	0.1	Not set	30	0	0
Synthetic pyrethroids						
Bifenthrin	FAT	0.02	2.0	30	0	0
Bioresmethrin	FAT	0.02	Not set	30	0	0
Cyfluthrin	FAT	0.02	0.5	30	0	0
Cyhalothrin	FAT	0.02	0.5	30	0	0
Cypermethrin	FAT	0.02	0.05	30	0	0
Deltamethrin	FAT	0.02	0.1	30	0	0
Fenvalerate	FAT	0.02	1.0	30	0	0
Flumethrin	FAT	0.02	Not set	30	0	0
Permethrin	FAT	0.02	1.0	30	0	0

WILD BOAR (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FAT	0.03	0.2	30	0	0
Aroclor 1260	FAT	0.03	0.2	30	0	0
Metals						
Cadmium	LIVER	0.02	1.25	25	14	0
Lead	LIVER	0.02	0.5	25	23	1[b]
Mercury	LIVER	0.01	No limit	25	1	n/a

LOR Limit of reporting (mg/kg).
Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.
No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.
n/a Australian Standard does not apply. No limit set or defined.

[a] Access to treated grain from an old silo.
[b] Traceback inconclusive. Residue source could not be confirmed.

Discussion: egg results

The sampling program for eggs in 2008–2009 included organochlorines, and nitroimidazoles in addition to antimicrobials, nitrofurans, anticoccidials and chloramphenicol.

Of the 115 egg samples that were subject to 1120 analyses, two residues of the anticoccidial nicarbazin were found (0.034 mg/kg and 0.011 mg/kg respectively). As there is no Australian Standard for nicarbazin, both residues were contraventions.

The exact cause of each residue could not be determined, but it is likely that cross-contamination occurred during feed manufacturing for one residue, and the other was thought to be from cross-contamination during transport.

Outlook

NRS anticipates that a project monitoring plan similar to that of 2008–2009 will operate in 2009–2010.

EGG	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTIBIOTICS						
Aminoglycosides						
Apramycin	WHOLE	0.5	Not set	20	0	0
Dihydrostreptomycin	WHOLE	0.1	Not set	20	0	0
Gentamycin	WHOLE	0.1	Not set	20	0	0
Neomycin	WHOLE	0.1	0.5	20	0	0
Streptomycin	WHOLE	0.1	Not set	20	0	0
Antibiotics						
Dimetridazole	WHOLE	0.0001	0.0003	20	0	0
Metronidazole	WHOLE	0.0001	Not set	20	0	0
Ronidazole	WHOLE	0.0001	Not set	20	0	0
Antimicrobials						
Chloramphenicol	WHOLE	0.2	Not set	20	0	0
β-lactams						
Amoxycillin	WHOLE	0.01	0.01	20	0	0
Ampicillin	WHOLE	0.01	Not set	20	0	0
Cloxacillin	WHOLE	0.1	Not set	20	0	0
Penicillin G (benzylpenicillin)	WHOLE	0.01	Not set	20	0	0
Cephalosporins						
Ceftiofur	WHOLE	0.2	Not set	20	0	0
Cefuroxime	WHOLE	0.1	Not set	20	0	0
Cephalonium	WHOLE	0.1	Not set	20	0	0
Lincosamides						
Lincomycin	WHOLE	0.05	0.2	20	0	0
Macrolides						
Erythromycin	WHOLE	0.1	Not set	20	0	0
Tilmicosin	WHOLE	0.2	Not set	20	0	0
Tylosin	WHOLE	0.1	0.2	20	0	0
Nitrofurans						
1-Aminohydantoin (AHD)	WHOLE	0.001	Not set	20	0	0
3-Amino-2-oxazolidinone (AOZ)	WHOLE	0.001	Not set	20	0	0
3-Amino-5-morpholinomethyl-1,3-oxazolidin-2-one	WHOLE	0.001	Not set	20	0	0
Semicarbazide (SEM)	WHOLE	0.001	Not set	20	0	0

EGG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Sulfonamides						
Sulfadiazine	WHOLE	0.05	0.02	20	0	0
Sulfadimidine (sulfamethazine)	WHOLE	0.05	0.01	20	0	0
Sulfadoxine	WHOLE	0.05	Not set	20	0	0
Sulfafurazole	WHOLE	0.05	Not set	20	0	0
Sulfamerazine	WHOLE	0.05	Not set	20	0	0
Sulfamethoxydiazine	WHOLE	0.05	Not set	20	0	0
Sulfapyridine	WHOLE	0.05	Not set	20	0	0
Sulfaquinoxaline	WHOLE	0.05	0.01	20	0	0
Sulfathiazole	WHOLE	0.05	Not set	20	0	0
Sulfatroxazole	WHOLE	0.05	Not set	20	0	0
Tetracyclines						
Chlortetracycline	WHOLE	0.05	0.2	20	0	0
Doxycycline	WHOLE	0.05	Not set	20	0	0
Oxytetracycline	WHOLE	0.1	Not set	20	0	0
Tetracycline	WHOLE	0.1	Not set	20	0	0
ANTICOCCIDIALS						
Amprolium	WHOLE	0.02	4.0	20	0	0
Lasalocid	WHOLE	0.02	0.05	20	0	0
Maduramicin	WHOLE	0.02	Not set	20	0	0
Monensin	WHOLE	0.02	Not set	20	0	0
Narasin	WHOLE	0.02	Not set	20	0	0
Nicarbazin	WHOLE	0.01	Not set	20	2	2[a]
Salinomycin	WHOLE	0.02	0.02	20	0	0
Semduramycin	WHOLE	0.03	Not set	20	0	0

EGG (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	WHOLE	0.02	0.1	15	0	0
Chlordane	WHOLE	0.02	0.02	15	0	0
DDT	WHOLE	0.1	0.5	15	0	0
Dicofol	WHOLE	0.01	Not set	15	0	0
Endosulfan	WHOLE	0.02	0.05	15	0	0
Endrin	WHOLE	0.05	Not set	15	0	0
HCB	WHOLE	0.1	1.0	15	0	0
HCH	WHOLE	0.05	0.1	15	0	0
Heptachlor	WHOLE	0.05	0.05	15	0	0
Lindane (γ-HCH)	WHOLE	0.05	0.1	15	0	0
Methoxychlor	WHOLE	0.2	Not set	15	0	0
Mirex	WHOLE	1.0	Not set	15	0	0

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

a One residue believed to be from cross-contamination during transport. The other was suspected to have originated from cross-contamination with a feed source.

Discussion: honey results

In 2008–2009, honey samples were tested for organochlorines, organophosphates and synthetic pyrethroids as well as for antibiotics, metals, paradichlorobenzene and chloramphenicol. In total, 213 samples were subjected to 2095 analyses.

No residues above Australian Standards were found, including those of chloramphenicol or nitrofurans. Samples were also tested for metals (selenium, zinc, aluminium and lead) and although metal detections were common, they were within the expected range for honey.

Outlook

The honey industry has agreed that a similar program to that of 2008–2009 will operate during 2009–2010.

HONEY	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTIBIOTICS						
Aminoglycosides						
Dihydrostreptomycin	WHOLE	0.2	Not set	55	0	0
Neomycin	WHOLE	0.2	Not set	55	0	0
Streptomycin	WHOLE	0.2	Not set	55	0	0
Antimicrobials						
Chloramphenicol	WHOLE	0.0001	Not set	9	0	0
Macrolides						
Tylosin	WHOLE	0.2	Not set	55	0	0
Nitrofurans						
1-Aminohydantoin (AHD)	WHOLE	0.001	Not set	9	0	0
3-Amino-2-oxazolidinone (AOZ)	WHOLE	0.0002	Not set	9	0	0
3-Amino-5-morpholinomethyl-1,3-oxazolidin-2-one	WHOLE	0.0002	Not set	9	0	0
Semicarbazide (SEM)	WHOLE	0.0005	Not set	9	0	0
Sulfonamides						
Sulfadiazine	WHOLE	0.05	Not set	55	0	0
Sulfadimidine (sulfamethazine)	WHOLE	0.05	Not set	55	0	0
Sulfamerazine	WHOLE	0.05	Not set	55	0	0
Sulfamethoxazole	WHOLE	0.05	Not set	55	0	0
Sulfaquinoxaline	WHOLE	0.02	Not set	55	0	0
Sulfathiazole	WHOLE	0.02	Not set	55	0	0
Tetracyclines						
Chlortetracycline	WHOLE	0.05	Not set	55	0	0
Doxycycline	WHOLE	0.05	Not set	55	0	0
Oxytetracycline	WHOLE	0.02	0.3	55	2	0
Tetracycline	WHOLE	0.05	Not set	55	0	0
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	WHOLE	0.02	Not set	30	0	0
Chlordane	WHOLE	0.02	Not set	30	0	0
DDT	WHOLE	0.05	Not set	30	0	0
Endosulfan	WHOLE	0.02	Not set	30	0	0
Endrin	WHOLE	0.01	Not set	30	0	0
HCB	WHOLE	0.02	Not set	30	0	0

HONEY (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Organochlorines (cont'd)						
HCH	WHOLE	0.01	Not set	30	0	0
Heptachlor	WHOLE	0.02	Not set	30	0	0
Lindane (γ-HCH)	WHOLE	0.02	Not set	30	0	0
Methoxychlor	WHOLE	0.1	Not set	30	0	0
Mirex	WHOLE	0.05	Not set	30	0	0
Paradichlorobenzene	WHOLE	0.001	0.1	60	4	0
Organophosphates						
Chlorfenvinphos	WHOLE	0.01	Not set	30	0	0
Chlorpyrifos	WHOLE	0.05	Not set	30	0	0
Chlorpyrifos-methyl	WHOLE	0.05	Not set	30	0	0
Coumaphos	WHOLE	0.2	Not set	30	0	0
Diazinon	WHOLE	0.05	Not set	30	0	0
Ethion	WHOLE	0.01	Not set	30	0	0
Famphur	WHOLE	0.02	Not set	30	0	0
Fenitrothion	WHOLE	0.05	Not set	30	0	0
Fenthion	WHOLE	0.05	Not set	30	0	0
Malathion	WHOLE	0.05	Not set	30	0	0
Phosmet	WHOLE	0.1	Not set	30	0	0
Temephos	WHOLE	0.1	Not set	30	0	0
Synthetic pyrethroids						
Bifenthrin	WHOLE	0.05	Not set	30	0	0
Bioresmethrin	WHOLE	0.02	Not set	30	0	0
Cyfluthrin	WHOLE	0.05	Not set	30	0	0
Cyhalothrin	WHOLE	0.01	Not set	30	0	0
Cypermethrin	WHOLE	0.01	0.01	30	0	0
Deltamethrin	WHOLE	0.02	Not set	30	0	0
Fenvalerate	WHOLE	0.02	Not set	30	0	0
Flumethrin	WHOLE	0.005	0.005	30	0	0
Permethrin	WHOLE	0.02	Not set	30	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	WHOLE	0.05	No limit	30	0	n/a
Aroclor 1260	WHOLE	0.05	No limit	30	0	n/a

HONEY (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Metals						
Aluminium	WHOLE	0.2	No limit	50	49	n/a
Lead	WHOLE	0.01	No limit	50	39	n/a
Selenium	WHOLE	0.01	No limit	50	7	n/a
Zinc	WHOLE	0.05	No limit	50	50	n/a

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

Discussion: aquaculture

At the request of the abalone and freshwater crayfish industries, 15 samples were tested for a range of anthelmintics, antibiotics, metals, nitrofurans, organochlorines and melamine.

Common name	Species	Number of samples
Abalone	*Haliotis laevigata; H. rubra*	10
Freshwater crayfish (marron)	*Cherax canii*	5
Total		**15**

No residues were detected in any crayfish samples. The metals detected in abalone samples were either below relevant Australian Standards, or at acceptable levels for metals where no limit has been established.

Outlook

Aquaculture testing will again take place in 2009–2010.

ABALONE (aquaculture)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Macrocyclic lactones						
Abamectin	FLESH	0.005	Not set	1	0	0
Doramectin	FLESH	0.005	Not set	1	0	0
Eprinomectin	FLESH	0.005	Not set	1	0	0
Ivermectin	FLESH	0.005	Not set	1	0	0
Moxidectin	FLESH	0.005	Not set	1	0	0
ANTIBIOTICS						
Aminoglycosides						
Apramycin	FLESH	0.1	Not set	2	0	0
Dihydrostreptomycin	FLESH	0.1	Not set	2	0	0
Gentamycin	FLESH	0.1	Not set	2	0	0
Neomycin	FLESH	0.1	Not set	2	0	0
Streptomycin	FLESH	0.1	Not set	2	0	0
Antimicrobials						
Chloramphenicol	FLESH	0.0003	Not set	2	0	0
Florfenicol	FLESH	0.02	Not set	2	0	0
Thiamphenicol	FLESH	0.02	Not set	2	0	0
β-lactams						
Amoxycillin	FLESH	0.01	Not set	2	0	0
Ampicillin	FLESH	0.01	Not set	2	0	0
Cloxacillin	FLESH	0.01	Not set	2	0	0
Penicillin G (benzylpenicillin)	FLESH	0.01	Not set	2	0	0
Cephalosporins						
Ceftiofur	FLESH	0.2	Not set	2	0	0
Cefuroxime	FLESH	0.05	Not set	2	0	0
Cephalonium	FLESH	0.05	Not set	2	0	0
Lincosamides						
Lincomycin	FLESH	0.05	Not set	2	0	0
Macrolides						
Erythromycin	FLESH	0.1	Not set	2	0	0
Tilmicosin	FLESH	0.2	Not set	2	0	0
Tylosin	FLESH	0.1	Not set	2	0	0

ABALONE (cont'd) (aquaculture)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Nitrofurans						
1-Aminohydantoin (AHD)	FLESH	0.001	Not set	2	0	0
3-Amino-2-oxazolidinone (AOZ)	FLESH	0.001	Not set	2	0	0
3-Amino-5-morpholinomethyl-1,3-oxazolidin-2-one	FLESH	0.001	Not set	2	0	0
Semicarbazide (SEM)	FLESH	0.001	Not set	2	0	0
Sulfonamides						
Sulfadiazine	FLESH	0.05	Not set	2	0	0
Sulfadimidine (sulfamethazine)	FLESH	0.05	Not set	2	0	0
Sulfadoxine	FLESH	0.05	Not set	2	0	0
Sulfafurazole	FLESH	0.05	Not set	2	0	0
Sulfamerazine	FLESH	0.05	Not set	2	0	0
Sulfamethoxydiazine	FLESH	0.05	Not set	2	0	0
Sulfapyridine	FLESH	0.05	Not set	2	0	0
Sulfaquinoxaline	FLESH	0.05	Not set	2	0	0
Sulfathiazole	FLESH	0.05	Not set	2	0	0
Sulfatroxazole	FLESH	0.05	Not set	2	0	0
Tetracyclines						
Chlortetracycline	FLESH	0.02	Not set	2	0	0
Doxycycline	FLESH	0.05	Not set	2	0	0
Oxytetracycline	FLESH	0.1	Not set	2	0	0
Tetracycline	FLESH	0.1	Not set	2	0	0
PESTICIDES						
Amidines						
Cyromazine	FLESH	0.05	Not set	1	0	0
Dicyclanil	FLESH	0.05	Not set	1	0	0
Melamine	FLESH	0.05	Not set	1	0	0
Fungicides						
Leucomalachite green	FLESH	0.0003	Not set	1	0	0
Malachite green	FLESH	0.0003	Not set	1	0	0
Organochlorines						
Aldrin and dieldrin	FLESH	0.02	0.1	1	0	0
Chlordane	FLESH	0.02	0.05	1	0	0
DDT	FLESH	0.02	1.0	1	0	0
Endrin	FLESH	0.02	Not set	1	0	0
HCB	FLESH	0.02	0.1	1	0	0
Heptachlor	FLESH	0.02	0.1	1	0	0
Mirex	FLESH	0.05	Not set	1	0	0

ABALONE (cont'd) (aquaculture)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FLESH	0.03	Not set	1	0	0
Aroclor 1260	FLESH	0.03	Not set	1	0	0
Metals						
Antimony	FLESH	0.01	No limit	1	1	n/a
Cadmium	FLESH	0.01	2.0	1	1	0
Chromium	FLESH	0.05	No limit	1	1	n/a
Lead	FLESH	0.01	2.0	1	1	0
Mercury	FLESH	0.01	0.5	1	1	0

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

FRESHWATER CRAYFISH (aquaculture)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
ANTHELMINTICS						
Macrocyclic lactones						
Abamectin	FLESH	0.005	Not set	1	0	0
Doramectin	FLESH	0.005	Not set	1	0	0
Eprinomectin	FLESH	0.005	Not set	1	0	0
Ivermectin	FLESH	0.005	Not set	1	0	0
Moxidectin	FLESH	0.005	Not set	1	0	0
ANTIBIOTICS						
Aminoglycosides						
Apramycin	FLESH	0.1	Not set	1	0	0
Dihydrostreptomycin	FLESH	0.1	Not set	1	0	0
Gentamycin	FLESH	0.1	Not set	1	0	0
Neomycin	FLESH	0.1	Not set	1	0	0
Streptomycin	FLESH	0.1	Not set	1	0	0
Antimicrobials						
Chloramphenicol	FLESH	0.0003	Not set	1	0	0
Florfenicol	FLESH	0.02	Not set	1	0	0
Thiamphenicol	FLESH	0.02	Not set	1	0	0
β-lactams						
Amoxycillin	FLESH	0.01	Not set	1	0	0
Ampicillin	FLESH	0.01	Not set	1	0	0
Cloxacillin	FLESH	0.01	Not set	1	0	0
Penicillin G (benzylpenicillin)	FLESH	0.01	Not set	1	0	0
Cephalosporins						
Ceftiofur	FLESH	0.2	Not set	1	0	0
Cefuroxime	FLESH	0.05	Not set	1	0	0
Cephalonium	FLESH	0.05	Not set	1	0	0
Lincosamides						
Lincomycin	FLESH	0.05	Not set	1	0	0
Macrolides						
Erythromycin	FLESH	0.1	Not set	1	0	0
Tilmicosin	FLESH	0.2	Not set	1	0	0
Tylosin	FLESH	0.1	Not set	1	0	0

FRESHWATER CRAYFISH (aquaculture) (cont'd)	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
Nitrofurans						
1-Aminohydantoin (AHD)	FLESH	0.001	Not set	1	0	0
3-Amino-2-oxazolidinone (AOZ)	FLESH	0.001	Not set	1	0	0
3-Amino-5-morpholinomethyl-1,3-oxazolidin-2-one	FLESH	0.001	Not set	1	0	0
Semicarbazide (SEM)	FLESH	0.001	Not set	1	0	0
Sulfonamides						
Sulfadiazine	FLESH	0.05	Not set	1	0	0
Sulfadimidine (sulfamethazine)	FLESH	0.05	Not set	1	0	0
Sulfadoxine	FLESH	0.05	Not set	1	0	0
Sulfafurazole	FLESH	0.05	Not set	1	0	0
Sulfamerazine	FLESH	0.05	Not set	1	0	0
Sulfamethoxydiazine	FLESH	0.05	Not set	1	0	0
Sulfapyridine	FLESH	0.05	Not set	1	0	0
Sulfaquinoxaline	FLESH	0.05	Not set	1	0	0
Sulfathiazole	FLESH	0.05	Not set	1	0	0
Sulfatroxazole	FLESH	0.05	Not set	1	0	0
Tetracyclines						
Chlortetracycline	FLESH	0.02	Not set	1	0	0
Doxycycline	FLESH	0.05	Not set	1	0	0
Oxytetracycline	FLESH	0.1	Not set	1	0	0
Tetracycline	FLESH	0.1	Not set	1	0	0
PESTICIDES						
Fungicides						
Leucomalachite green	FLESH	0.0003	Not set	1	0	0
Malachite green	FLESH	0.0003	Not set	1	0	0

LOR Limit of reporting (mg/kg).
Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

Discussion: fish (wild-caught)

A risk-based random monitoring project for seven types of wild-caught seafood was endorsed during 2008–2009 by the Australian Seafood Industry Council and the AQIS Seafood Export Consultative Committee. The selected wild-caught species are representatives of molluscs, crustaceans and finfish that represent various levels of the food chain. Selected species, which are reviewed and may be varied each year, are sampled from a wide range of bio-geographical regions. The results of analyses provide long-term information that can be used to develop a residue profile for each area. The fish products (wild-caught) residue random monitoring projects were designed to meet AQIS export certification and EU requirements.

Samples of wild-caught molluscs, crustaceans and finfish were analysed for persistent organic pollutants, including PCBs (aroclors), environmental contaminants, mercury and methyl mercury, and heavy metals (213 samples and 991 analytical results in all). In addition, 17 samples were tested for dioxins and the results compared with EU Standards.

Group	Species sampled	Number of samples
Molluscs		
Black lip abalone	*Haliotis rubra*	39
Green lip abalone	*Haliotis laevigata*	21
Crustaceans		
Rock lobster	*Jasus edwardsii; Panulirus cygnus*	32
Tiger prawn	*Panaeus esculentus, P. merguinsis*	24
Spanner crab	*Ranina ranina*	32
Finfish		
Orange roughy	*Hoplostethus atlanticus*	32
Yellowfin tuna	*Thunnus albacares*	33
Total		**213**

All sample results complied with Australian standards (MRLs or ML as applicable), and all results from samples tested for dioxins were below the relevant EU Standards.

Outlook

NRS will again sample wild-caught seafood during 2009–2010.

ABALONE	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	MUSCLE	0.02	0.1	20	0	0
Chlordane	MUSCLE	0.02	0.05	20	0	0
DDT	MUSCLE	0.02	1.0	20	0	0
Endrin	MUSCLE	0.02	Not set	20	0	0
HCB	MUSCLE	0.02	0.1	20	0	0
Heptachlor	MUSCLE	0.02	0.05	20	0	0
Mirex	MUSCLE	0.05	Not set	20	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	MUSCLE	0.03	No limit	20	0	n/a
Aroclor 1260	MUSCLE	0.03	No limit	20	0	n/a
Metals						
Antimony	MUSCLE	0.01	No limit	18	0	n/a
Cadmium	MUSCLE	0.01	2.0	18	17	0
Chromium	MUSCLE	0.05	No limit	18	13	n/a
Lead	MUSCLE	0.01	2.0	18	0	0
Mercury	MUSCLE	0.01	0.5	17	0	0
Methyl-mercury	MUSCLE	0.025	0.5	17	0	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	5	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish ($1 pg = 1^{-9} mg$).

ORANGE ROUGHY	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	MUSCLE	0.02	0.1	10	0	0
Chlordane	MUSCLE	0.02	0.05	10	0	0
DDT	MUSCLE	0.02	1.0	10	0	0
Endrin	MUSCLE	0.02	Not set	10	0	0
HCB	MUSCLE	0.02	0.1	10	0	0
Heptachlor	MUSCLE	0.02	0.05	10	0	0
Mirex	MUSCLE	0.05	Not set	10	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	MUSCLE	0.03	0.5	10	0	0
Aroclor 1260	MUSCLE	0.03	0.5	10	0	0
Metals						
Antimony	MUSCLE	0.01	No limit	10	0	n/a
Cadmium	MUSCLE	0.01	No limit	10	0	n/a
Chromium	MUSCLE	0.05	No limit	10	0	n/a
Lead	MUSCLE	0.01	0.5	10	0	0
Mercury	MUSCLE	0.01	1.0	10	10	0
Methyl-mercury	MUSCLE	0.025	1.0	10	10	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	2	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish (1pg = 1^{-9} mg).

ROCK LOBSTER	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FLESH	0.02	0.1	10	0	0
Chlordane	FLESH	0.02	0.05	10	0	0
DDT	FLESH	0.02	1.0	10	0	0
Endrin	FLESH	0.02	Not set	10	0	0
HCB	FLESH	0.02	0.1	10	0	0
Heptachlor	FLESH	0.02	0.05	10	0	0
Mirex	FLESH	0.05	Not set	10	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FLESH	0.03	No limit	10	0	n/a
Aroclor 1260	FLESH	0.03	No limit	10	0	n/a
Metals						
Antimony	FLESH	0.01	No limit	10	0	n/a
Cadmium	FLESH	0.01	No limit	10	3	n/a
Chromium	FLESH	0.05	No limit	10	0	n/a
Lead	FLESH	0.01	No limit	10	0	n/a
Mercury	FLESH	0.01	0.5	10	9	0
Methyl-mercury	FLESH	0.025	0.5	10	8	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	2	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish (1pg = 1^{-9} mg).

SPANNER CRAB	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FLESH	0.02	0.1	10	0	0
Chlordane	FLESH	0.02	0.05	10	0	0
DDT	FLESH	0.02	1.0	10	0	0
Endrin	FLESH	0.02	Not set	10	0	0
HCB	FLESH	0.02	0.1	10	0	0
Heptachlor	FLESH	0.02	0.05	10	0	0
Mirex	FLESH	0.05	Not set	10	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FLESH	0.03	No limit	10	0	n/a
Aroclor 1260	FLESH	0.03	No limit	10	0	n/a
Metals						
Antimony	FLESH	0.01	No limit	10	0	n/a
Cadmium	FLESH	0.01	No limit	10	0	n/a
Chromium	FLESH	0.05	No limit	10	0	n/a
Lead	FLESH	0.01	No limit	10	0	n/a
Mercury	FLESH	0.01	0.5	10	10	0
Methyl-mercury	FLESH	0.025	0.5	10	10	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	2	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish (1pg = 1^{-9} mg).

TIGER PRAWN	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	FLESH	0.02	0.1	7	0	0
Chlordane	FLESH	0.02	0.05	7	0	0
DDT	FLESH	0.02	1.0	7	0	0
Endrin	FLESH	0.02	Not set	7	0	0
HCB	FLESH	0.02	0.1	7	0	0
Heptachlor	FLESH	0.02	0.05	7	0	0
Mirex	FLESH	0.05	Not set	7	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	FLESH	0.03	No limit	7	0	n/a
Aroclor 1260	FLESH	0.03	No limit	7	0	n/a
Metals						
Antimony	FLESH	0.01	No limit	7	0	n/a
Cadmium	FLESH	0.01	No limit	7	7	n/a
Chromium	FLESH	0.05	No limit	7	0	n/a
Lead	FLESH	0.01	No limit	7	0	n/a
Mercury	FLESH	0.01	0.5	7	6	0
Methyl-mercury	FLESH	0.025	0.5	7	6	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	3	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish ($1 pg = 1^{-9} mg$).

YELLOWFIN TUNA	Matrix	LOR (mg/kg)	Aust. Std (mg/kg)	Number of samples tested	Analytical findings (number of detections)	
					> LOR ≤ Aust. Std	> Aust. Std
PESTICIDES						
Organochlorines						
Aldrin and dieldrin	MUSCLE	0.02	0.1	10	0	0
Chlordane	MUSCLE	0.02	0.05	10	0	0
DDT	MUSCLE	0.02	1.0	10	0	0
Endrin	MUSCLE	0.02	Not set	10	0	0
HCB	MUSCLE	0.02	0.1	10	0	0
Heptachlor	MUSCLE	0.02	0.05	10	0	0
Mirex	MUSCLE	0.05	Not set	10	0	0
ENVIRONMENTAL CONTAMINANTS						
Chlorinated biphenyls						
Aroclor 1254	MUSCLE	0.03	0.5	10	0	0
Aroclor 1260	MUSCLE	0.03	0.5	10	0	0
Metals						
Antimony	MUSCLE	0.01	No limit	10	0	n/a
Cadmium	MUSCLE	0.01	No limit	10	0	n/a
Chromium	MUSCLE	0.05	No limit	10	0	n/a
Lead	MUSCLE	0.01	0.5	10	0	0
Mercury	MUSCLE	0.01	1.0	10	10	0
Methyl-mercury	MUSCLE	0.025	1.0	10	10	0
DIOXINS*						
	Matrix	LOR (pg/g)	EU Std (pg/g)	Number of samples tested	Number > EU Std	
Dioxins and PCBs	MUSCLE	0.1	8.0	3	0	

LOR Limit of reporting (mg/kg).

Not set No standard has been set for the chemical in an edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

No limit No standard applicable for the contaminant. The 'as low as reasonably achievable' principle applies. Detections at low levels are allowable.

n/a Australian Standard does not apply. No limit set or defined.

* Reported against the European Union Standard. The European Commission is the only authority to have set levels for fish (1pg = 1^{-9} mg).

TARGETED MONITORING

Overview

Targeted monitoring projects in Australian products are designed to meet particular management objectives relating to potential chemical residues that could pose a risk for access to export and domestic markets. Samples are collected and tested in accordance with industry requirements. Results are released to relevant authorities and to industry for action where necessary.

Outputs

Outputs of this project are results reports and advice on results that are distributed to stakeholders on a regular basis (and as needed) to meet industry objectives. During 2008–2009, NRS coordinated the financial arrangements for the projects, and the collection of 588 samples and their corresponding 18 044 analyses. NRS coordinates with the relevant authorities in planning, reporting, and communication activities as described for the projects listed below.

National organochlorine residue management project

The national organochlorine residue management (NORM) project focuses on minimising the risks of organochlorine (OC) residues occurring in beef. The beef industry and the state governments jointly fund NORM. Besides testing cattle from at-risk properties at abattoirs for OC residues, the project focuses on supporting owners of properties with identified OC contamination hazards to develop and apply on-farm property management plans to minimise the risk of OC residues occurring in livestock grazing OC-contaminated land. NRS has responsibility for national coordination of the project and manages the financial disbursements to state and territory governments and laboratories.

The SAFEMEAT[1] targeted testing working group, for which NRS provides secretariat and technical support, has met regularly to formulate an operational overhaul of the NORM project. Industry and state and territory governments are represented on the committee. Changes to NORM have been implemented progressively from July 2004, and changes to abattoir testing have applied since 1 January 2006. These changes mean that in the future the project will rely more heavily on industry-based quality assurance arrangements, and the funds budgeted for this project will therefore be lower than in previous years. For example, since 1 July 2006 there have been new arrangements for the verification of property management plans through on-farm audits as part of quality assurance programs.

National antibacterial residue minimisation project

The national antibacterial residue minimisation (NARM) project uses advisory, analytical and regulatory techniques to focus on the minimisation of antibacterial residues occurring in bobby calves. NRS has responsibility for national coordination of this project. The beef industry provides funding from its existing Industry Equalisation Account (IEA) within the NRS Special Account. State governments support the project through activities related to traceback investigation, and the extension and regulatory management of properties found to have consigned bobby calves for slaughter with violative antibacterial residues.

Targeted antibacterial residue testing project

1 SAFEMEAT is a partnership between the Australian meat and livestock industry and state and federal governments. Website: www.safemeat.com.au

The targeted antibacterial residue testing project focuses on cattle at abattoirs suspected by veterinary inspectors of having received antibacterial treatment inside the required withholding period. The project combines targeted testing, quality assurance, extension and regulation to minimise antibacterial residues in beef. NRS coordinates the project and manages the financial disbursements to others involved, such as laboratories. Like the NORM and NARM projects, this project has been reviewed by SAFEMEAT. The project will continue to provide AQIS veterinary officers at export abattoirs with the capacity to test samples for antibacterial residues from suspect cattle.

Endosulfan residues in beef

Endosulfan is an insecticide widely used on cotton and other field crops and orchards in relation to pest outbreaks. It has the potential to contaminate cattle when they graze pasture or crops previously sprayed with endosulfan, or if they are fed contaminated feedstuffs. During recent years, this project has operated on a much smaller scale than previously, because of a much lower residue risk. Changes in the approved use of endosulfan, past actions to mitigate risk, and seasonal circumstances have all combined to reduce the risk of residues occurring.

NRS chairs the endosulfan technical group that monitors endosulfan use and levels of residue risk throughout the major chemical usage period associated with the early growing season for cotton and some horticultural crops. NRS continues to have responsibility for national coordination of the project. The group reports regularly to SAFEMEAT between October and February, with decisions on any actions dependent on assessments of residue risks current at that time. The project is reviewed by SAFEMEAT each year, and operational details for 2009–2010 are expected to be similar to those for 2008–2009.

Hormonal growth promotant audit project

The European Union (EU) prohibits the importation of animals treated with hormonal growth promotants (HGP) and their products. Australia has developed a HGP-free accreditation scheme that allows Australian cattle producers to supply the EU market. On-farm third-party audits (coordinated by AUSMEAT Limited) are used to monitor compliance with accreditation requirements. NRS manages the testing of samples taken during these audits and disburses industry funds to the industry third party auditor, state and territory governments, AQIS and the Australian Pesticides & Veterinary Medicines Authority to pay for verification audits performed on various aspects of the project.

Livestock production assurance scheme

Through an agreement with the Sheepmeat Council of Australia, the sheepmeat industry funded its participation in the livestock production assurance (LPA) scheme from its existing IEA within the NRS Special Account. This assurance scheme for sheepmeat underpins the sheep National Vendor Declaration (NVD) form, by encouraging sheepmeat producers to maintain auditable records to support statements made in the NVD. The NVD helps the industry to manage a range of contaminant risks that can affect the industry, by improving the transfer of information concerning risks along the sheepmeat supply chain. The costs to individual sheepmeat producers of participation in LPA were met from sheepmeat IEA funds. In supporting the sheep NVD, LPA activities are directed at preventing contaminants in sheepmeat products that have the potential to cause loss of confidence by consumers in both domestic and overseas markets.

Sheep targeted antibacterial residue testing project

The sheep targeted antibacterial residue testing (START) project commenced in May 2007. It focuses on sheep at abattoirs suspected by veterinary inspectors of having received antibacterial treatment inside the required withholding period. NRS coordinates the project and manages the financial disbursements to others involved, such as laboratories. The project provides AQIS veterinary officers at export abattoirs with the capacity to test samples for antibacterial residues from suspect sheep.

Residue management audits

The National Residue Survey engaged AUSMEAT Ltd (a subsidiary of Meat & Livestock Australia) in a three-year contract to conduct cattle property management audits throughout Australia. With a value of $7 million, the contract commenced on 1 January 2009, and will allow for up to 4000 property audits per annum for three years in the first instance. The audits will be undertaken throughout Australia as part of a comprehensive cattle industry residue management program covering monitoring and auditing. The audits will be based on elements of the Meat & Livestock Australia livestock production quality assurance scheme.

Performance

PERFORMANCE INDICATOR ONE

Delivery of projects in accordance with agreements between NRS and participating industries, in consultation with AQIS/regulatory authorities, including annually reviewed agreements, with respect to:

- project design
- turnaround time from sampling to presentation of test results
- reporting of contraventions to regulatory authorities.

Achievements	
Sampling design and turnaround times (where applicable)	Outcomes were achieved consistent with industry plans for each of the projects.
Results reported by laboratories	Contraventions were reported to NRS by contracted laboratories within agreed timeframes.
Reporting of residue levels exceeding Australian Standards to regulatory authorities and industry	NRS sent details of contraventions to state or territory government regulatory authorities (as applicable) and to industry for traceback. Results above half the appropriate MRL may lead to a property risk assessment and the development of residue management plans for those properties with significant organochlorine residue risks. Corrective action is taken when significant antibiotic or endosulfan residue risks are identified. Results of the traceback and actions taken to prevent future residue incidents were reported back to NRS by the government regulatory authorities (where applicable).

PERFORMANCE INDICATORS TWO AND THREE

Presentation of high-quality and timely plans and reports on results to industry and government, and where relevant, trading partners; and interaction and communication with industry and government participants is direct and effective.

Achievements	
Industry consultation	NRS developed targeted monitoring programs in consultation with industry.
Reporting to industry	NRS reported results to the appropriate authorities within agreed timeframes.
Analytical results reported in a timely manner	In the targeted monitoring projects, 588 samples were taken and 18 044 analyses were completed. NRS released the analytical results to the relevant authorities to undertake traceback investigations and sent the residue result summaries to SAFEMEAT.