



Australian Dairy Industry

**Represented by Australian Dairy Farmers
and Dairy Australia**

Response to:

**Consultation on use patterns for anticoagulant
rodenticide product**

Contacts

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This is a joint submission from the Australian Dairy Farmers (ADF) and Dairy Australia.

The Australian Dairy Farmers Limited (ADF) is the national peak body representing the interests of dairy farmers across Australia. ADF is a member of the National Farmers Federation.

Dairy Australia is the dairy industry-owned service company, limited by guarantee, whose members are farmers and the industry bodies, ADF and the Australian Dairy Products Federation, representing milk processors.

Position statement

Australian dairy farmers require ongoing direct access to rodenticides. Due to the existing food safety controls and regular on-farm audits (including rodenticide use practices), dairy farmers are skilled and safe users of these products.

Introduction

Dairy is a major rural industry. It has 5,213 farms directly employing 46,200 people in all Australian states. These farms generate \$4.4 billion in farmgate value. Products are internationally recognised as high quality and safe. That's why around 35% of milk production is exported to over 100 countries across the world.

Rodents on dairy farms

Rodents are serial pests on dairy farms. They pose a risk to infrastructure, human and animal health and the food safety of milk and meat produced. Risks from uncontrolled rodents are listed in **Table 1**, indicating that the cost of suboptimal control would be significant. Australian dairy farms are generally managed around cows grazing pasture and returning to a milking facility twice daily to be milked.

Most dairy farms feed grain in the form of a crushed grain mix or pellets to the cows while they are being milked, with the average dairy farm feeding between 1 – 2t grain per cow per year (approx. 2.5kg per cow twice daily). Therefore, this necessitates milk storage and cooling facilities and grain storage (silos) to both be in close proximity to the milking facility. Other key facilities are often located close to the milking facility for management ease, including calf rearing facilities (in which open troughs of grain are often available to calves), machinery sheds, hay sheds, workshops, and commonly a house or staff living quarters. This co-location of food sources (grain) and nesting sites (hay and other sheds) make rodents a significant problem around milking facilities, sheds and dairy yards. Farmers must control these risks, both from a commercial perspective and under food safety licence regulatory arrangements.

Table 1 - Risks from uncontrolled rodents on dairy farms

Risk	
Food Safety - Milk	Excrement or carcasses entering milk lines or vats
Food Safety - Meat	Transmission of <i>Salmonella</i> spp. via contaminated feed. Dairy cattle are more likely to shed <i>Salmonella</i> in their faeces than beef cattle or sheep, and therefore may present a higher risk of gut-content contamination of meat. ¹

¹ Vanselow, B. A., Hornitzky, M. A., Walker, K. H., Eamens, G. J., Bailey, G. D., Gill, P. A., ... & Renilson, S. (2007). Salmonella and on-farm risk factors in healthy slaughter-age cattle and sheep in eastern Australia. *Australian Veterinary Journal*, 85(12), 498-502.

Human health and Work Health and Safety	Dairy farms are workplaces for approximately 24,000 people in Australia, and farmers must provide safe environments for employees, minimising the zoonotic risk from both directly from rodents and indirectly from other animals (cattle, cats, dogs) on farm. <i>Salmonella spp.</i> infection either direct or via other animals, and Leptospirosis via direct infection are considered important work health and safety risks.
Damage to infrastructure	At the most basic, dairies have large electronic infrastructure to draw the milk from the cow's udders (typically 20+ cows at once), pump it to a milk storage area, rapidly cool and then store the milk in refrigerated vats to wait for pick up by milk tankers. Other electrical equipment required in or near dairies may include grain augers and roller mills, motors to power rotary platforms, computer systems, wash system control panels, fridges and freezers (for storing veterinary medicines and colostrum), hot water systems required for effectively cleansing milk lines, electric fence systems, pumps for washing equipment and yards and effluent and irrigation, tractors and other machinery, solar panels, automatic cow monitoring systems, automatic (robotic) calf feeding systems and computers, all of which are vulnerable to damage from rodents.
Cattle health and welfare	<p>Dairy cattle are susceptible to diseases spread by rodents via excrement (e.g. <i>Salmonella spp.</i> infection/salmonellosis) and to diseases caused by exposure to the carcass (botulism).</p> <p>Salmonellosis can spread throughout a herd, which are at particular risk during periods of increased stress such as calving. Salmonellosis causes severe, acute diarrhoea and a sudden drop in milk production and can result in significant morbidity in affected herds. Mortality from salmonellosis may be as high as 75% in untreated animals.² Calves are particularly susceptible to salmonellosis outbreaks due to group housing and shared feeding facilities.</p> <p>Botulism on dairy farms is mostly commonly caused by the contamination of conserved forages by the carcasses of animals, including rodents. Large outbreaks occur when the silage is chopped or mixed with other feeds, spreading the spores throughout the feed. Very large outbreaks have been seen on Australian dairy farms, with reports of individual farms experiencing the deaths of over 100 cattle.</p>

² Parkinson, T.J., Vermunt, J.J., Malmo, J. and Laven, R. (2019). Diseases of cattle in Australasia. Massey University Press, Auckland, New Zealand.

Managing rodents on dairy farms

Rodenticides are typically accessed by dairy farmers through rural retailers (CRT stores, MG Trading etc.). Retailers report that the most popular rodenticide used on dairy farms is bromadiolone (Bromakil®, Bromakil P®) in the form of blocks for bait stations (also available in grain, “drink” and pellets). Coumatetralyl (Racumin®) provided as sachets are also available and used by dairy farmers.

Anecdotally, while many farmers use cats for control in some areas of the farm, most use rodenticide in areas where food safety is paramount. Cats are not a suitable substitute in these areas of a dairy farm.

As we do not have access to any systematic data on rodenticide usage on Australian dairy farms, some short case studies were completed to provide examples of rodenticide usage patterns, provided in Appendix 1.

Common themes from the farmer interviews include a history of damage to electrical wiring in dairy caused by rodents, some incurring major costs. The financial burden of damage to silage and hay is harder to define, however can be significant in drought years with high fodder costs. Current solutions, mostly utilising bait stations (sometimes in combination with cats) are low-cost and effective if maintained.

Existing control measures for rodenticides in the dairy industry

To supply milk for human consumption in Australia, dairy farms must be licenced/authorised and comply with the requirements of an approved HACCP-based food safety program to ensure dairy products are safe for consumers. A mandatory requirement specifically involves managing the food safety risks posed by rodents and rodenticides. The national standards are set at a federal level by Food Standards Australia and New Zealand (FSANZ) and are implemented at a state level by State Regulatory Authorities (SRAs). The SRAs are responsible for licencing/authorising dairy businesses and ensuring compliance with food safety requirements through the supply chain, including dairy farms, transporters, processors and in some states, retailers.

Depending on the state, audits at a farm level are completed by the SRA directly or by accredited third-party auditors.

The requirements under accredited food safety programs relate to controlling the risks associated with the contamination or spoilage of milk, including:³

- managing residues risks to milk, including from agricultural and veterinary chemicals, stockfeed and pest control
- milk cooling
- animal health and treatment records
- cleaning and sanitising
- water quality
- competency of the workforce.

The number of farms under each SRA and food safety audit requirements are outlined in Table 2 below.

³ Dairy Food Safety Victoria (2013) *Technical information note: Managing farm food safety risks*. Retrieved from <https://www.dairysafe.vic.gov.au/publications-media/regulations-and-resources/technical-information-notes/production-milk/233-managing-farm-food-safety-risks-1/file>

Table 2 - State dairy food regulatory authorities⁴

State	Licenced farm numbers (2018/19)	Food safety authority	Food safety audits
Victoria	3516	Dairy Food Safety Victoria (DFSV)	Biennial audits, frequency increased for non-compliance
New South Wales	575	Food Authority NSW	“Regular” – Biennial, frequency increased for non-compliance
Tasmania	404	Tasmania Dairy Industry Authority (TDIA)	Annual audits, frequency increased for non-compliance
Queensland	356	Safe food Queensland	As required – are notified daily of performance indicators and audit outside of acceptable range
South Australia	212	Dairysafe	Annual audits - frequency increased for non-compliance
Western Australia	150	WA Department of Health Food Unit	Biennial audits, frequency increased for non-compliance

As an example, Dairy Food Safety Victoria (DFSV), the SRA for Victoria has specific requirements for the use of pest control products, including rodenticides:

Where pest control is achieved through the use of pesticides, the food safety program must describe how they are used. Pesticide use must not pose a risk of contamination to milk and be used in accordance with the manufacturer’s instructions. Pesticides must be labelled and stored in a secure manner. Records for the use of pesticides must be kept and identify:

- *the date of use*
- *who applied the pesticide*
- *the pesticide used*
- *the rate of application*
- *what area was treated.*

These requirements are auditable and recognise the importance of pest control in the farming system, by setting strict rules around food safety use.

While the state authorities set the minimum requirements, each milk processor has their own HACCP-based food safety program which must be approved by the relevant SRA to which the farmer sells their milk.

⁴ Dairy Australia (2020) *In Focus 2019: The Australian Dairy Industry*. Retrieved from https://www.dairyaustralia.com.au/-/media/dairyaustralia/documents/about-dairy-australia/key-publications/infocus-2019_final.pdf?la=en&hash=2E3AC335EB665671468CDC7EA557BD0DDFBDA067

A further example of how this is implemented in practice by Australia's largest milk processor, Saputo Dairy Australia, which operates across Victoria, South Australia, New South Wales and Tasmania is outlined below. In their food safety program, 'Simply Safe', Saputo Dairy Australia clearly outline the requirements for controlling rodents and rodenticides:

Section 7 – Farm Environment

PREMISES

Requirements:

1. *Buildings must be designed, constructed and maintained to prevent contamination of milk:*
 - i. *Lights must be constructed and located to prevent contamination of milk.*
 - ii. *Milk room must be dust and pest proof if milk vat/s have a swing lid.*
 - iii. *There must be a roof over vats with a top-opening inspection hatch.*
2. *Vat openings, including breathers are to be protected from dust and pest entry.*
3. *Dairy surrounds must not attract pests and must be maintained in a clean and tidy manner free from rubbish, disused items and animals.*

PEST MANAGEMENT

Requirements:

1. *Milking area, milk room and dairy surrounds must be free from undesirable animals and pests.*
2. *Pest control records must be kept for all pest control products used.*
3. *Baits must not be placed above animal feed, in the feed storage area or in the milk room.*

Note:

1. *Cow fly repellent is a pesticide.*
2. *Surface fly sprays are pesticides.*
3. *Pests include (but are not limited to) birds, rodents, insects and arachnids.*

Records must include:

1. *Date of use / type of pest / pesticide used / rate of application / area treated / who treated.*

Note: A map of the area treated with application sites marked and the date, product and person responsible would comply. Refer to the Agricultural Chemical Use Record Sheet.

Traceability is a key consideration for food safety programs of processors and milk transporters. Each on-farm milk collection is sampled and uniquely identified by the milk tanker operator according to standard operating procedures. This allows for efficient traceback if any residues are detected later in the process. Inhibitory substance (e.g. antibiotics, detergent chemicals etc) residue screening is performed routinely at a farm, tanker and factory milk silo level.

Additionally, the Australian Milk Residue Analysis survey involves approximately 1000 raw milk samples, taken from a representative number of farms in each dairying region in Australia, being tested for residues of a pre-determined list of antimicrobials, anthelmintics, other animal treatments, feed and environmental contaminants. The AMRA survey is overseen by the Federal Department of Agriculture, Water and the Environment (DAWE) and coordinated by Dairy Food Safety Victoria. The aggregated results from all inhibitory substance testing conducted by milk processors is also published in the annual Australian Milk Residue Analysis survey report (AMRA). In the last survey, no samples were found to be above Australian MRL.

While the active ingredients in rodenticides are not specifically included in the residue testing, the Australian dairy sector exhibits highly effective regulatory controls and a culture of reporting ensures that dairy farmers understand and take action to mitigate risk of residues in milk, and the direct and indirect risk improper use may pose to their own businesses and the broader industry.

Appendix 1 – Case studies of on dairy farm use of rodenticides

Table 3 - Case studies of on dairy farm use of rodenticides

	Farmer Response 1	Farmer Response 2
Farm Location	South East NSW	East Gippsland, Victoria
Farm Size	220-270 Milkers, 470 stock in total	350 milkers
Are rodents a problem on your farm?	Sometimes a problem (every year), control when needed	Always a problem, always have controls
To what degree are rodents an issue? How much would damage cost per year?	Rodent are periodically an issue - put in place seasonal controls. Damage to electrical wiring in sheds (dairy and other shedding) cost about \$300-400/year to replace.	Have had a lot of damage to electrical wiring in the dairy and to machinery, which is expensive to fix and a safety risk with fire. The tractor wiring which was damaged has cost about \$2000 to fix, and we have had to get the electrician out for the dairy, which was about \$500. They have also damaged the pit silage by chewing holes in the covers and have got into expensive pasture seed.
How do you typically control for rodents on farm? (baits, traps, professional services)	When required, use blocks in containers. These are used at key times, like the end of summer and mid-winter when rats and mice tend to emerge. Last year we had to bait for mid-spring as well due to drought. Typically, only have the baits out for a few weeks before taking them up again. Otherwise pets (dogs, cats) help with control, but also mean that we only bait when we need to, use containers and remove excess so they do not eat the bait or the contaminated rats/mice.	We use bait stations in key area, like around the dairy, hay shed and workshop. The baits have to be replaced every two months, and we note when we put them out and where in our QA diary. We also use mechanical cage traps to catch the rats which won't take baits.
What is your preferred product? What is the cost per year?	Bromakil blocks Typically 1 x 10L bucket - about \$150/year	Bromakil blocks for bait stations Typically 1 x 10L bucket - about \$150/year
Have you and/or staff members completed an AgVet Chemical Users course?	Yes - Both myself and my son.	Yes – I have

	Farmer Response 3	Farmer Response 4
Farm Location	South Gippsland, Victoria	North West Tasmania
Farm Size	380-400 Milkers – 800 stock in total	600 Milkers – 900 stock in total
Are rodents a problem on your farm?	Always a problem, always have controls	Always a problem, always have controls
To what degree are rodents an issue? How much would damage cost per year?	<p>Constant issue, so need to always control. Tractor and machinery wiring getting damaged can cost \$400-\$800 per machine. Have had ongoing issues with damaging high-quality milker hay. Had an incident of rats chewing on wires in dairy, causing a fire which destroyed the dairy wiring and the switchboard. This cost \$3000 to replace wiring, \$11,000 to replace switchboard and an increase in insurance premiums.</p>	<p>Constant issue but are able to keep it under control. This is a priority in order to keep the dairy and vat room clean and reduce impact on dairy hygiene. Constant electrical issues – once every 2 months replacing wiring - ~\$1000/per/year</p>
How do you typically control for rodents on farm? (baits, traps, professional services)	<p>Use bait stations and mechanical traps in machinery shed, hay shed and around dairy. Also have desexed cats at house and dairy (excluded from the vat room) which also help with controlling numbers.</p>	Use bait stations and cats (desexed)
What is your preferred product? What is the cost per year?	<p>Bromakil blocks in bait stations, sachets (Racumin®) in hay shed About \$150-200 in baits, plus cat food for 5 cats.</p>	About 1 10L bucket of blocks per year plus cat food
Have you and/or staff members completed an AgVet Chemical Users course?	Yes – all senior staff on farm	Yes – all managers have done training.

Farmer Response 5

Farm Location	South Australia
Farm Size	280 Milkers
Are rodents a problem on your farm?	Sometimes a problem, always have controls
To what degree are rodents an issue? How much would damage cost per year?	Are strict with controls as have a new dairy with lots of technical equipment easily damaged by rodents. Typically spend around \$2000 a year for the electrician to fix issues.
How do you typically control for rodents on farm? (baits, traps, professional services)	Use a professions rodent control service with bait stations. Due to the high cost of repairs on dairy, willing to pay someone else to monitor bait stations every 6 weeks and keep rat population down.
What is your preferred product? What is the cost per year?	Professional services cost approximately \$500/year
Have you and/or staff members completed an AgVet Chemical Users course?	Yes – but a while ago now.