

DECONTAMINATION AND DISPOSAL OF MILK ON-FARM IN AN FMD OUTBREAK

Background

In a Foot and Mouth Disease (FMD) outbreak, if your herd is deemed to be infected or there are signs of FMD infection under the authority of the state Chief Veterinary Officer (CVO), milk will not be collected by your milk company for commercial processing.

Other farms in high risk areas may continue to have milk collected and processed, but only under special permit conditions in accordance with the Emergency Animal Disease Response Plan. Guidance on these movements can be found in the AUSVETPLAN FMD manual V5, but this is a guidance document only, and the response plan could vary from this.

If it is decided that you cannot have your milk collected for processing, you will need to decontaminate and dispose of milk on your farm. In some cases, you may be able to store it in your farm vat if it is likely that the status of your farm could be resolved quickly (and within the timelines for the safety of the milk).

These guidelines describe how farmers can decontaminate and dispose of milk on farm, if it was required during an outbreak of FMD.

Decontamination of milk

- Milk is required to be treated to inactivate the FMD virus before disposal.
- Chemicals such as formalin should not be used to treat milk as this would create a hazardous substance, reducing the options for disposal.
- Citric acid can be used to acidify the milk by stirring it in to reach pH <5 and a concentration of 0.2-0.3% citric

acid in the milk. The treated milk then needs to be held in the vat/tank for a minimum of one hour before being discharged. Continuing to stir during this period will break up the curds if they form.

Disposal of milk

- Feeding raw milk and milk products to susceptible species during an outbreak is prohibited UNLESS it is being fed to calves on the same farm.
- Decontaminated milk may be:
 - Diluted and sprayed onto pastures (in line with regulatory requirements and included in the farm effluent management plan)
 - Diluted and added to effluent pond¹ +/- then used for irrigation (in line with regulatory requirements and included in the farm effluent management plan)
 - Composted on farm²
 - Buried on farm³.

The method of disposal will be determined on the advice of the Local Control Centre (Operations division) through the Incident Action Plan. Farmers should **NOT** dispose of milk until such advice has been given.

Additional comments

- On-farm disposal of milk is only feasible for short periods (ie. a few days); it would therefore need to be used in conjunction with rapid drying off or destruction of cattle (eg. on an FMD-infected premises).
- Milk must not be permitted to run off the property or enter waterways, and managed to minimise odour.

Footnotes

- 1 Use of effluent ponds for disposal raises problems due to the high biological oxygen demand of milk. However, this method may be possible where milk can be treated and then effectively and rapidly diluted. Remedial treatments to restore aerobic decomposition may be required.
- 2 The feasibility of composting is limited by the high fat content of milk, which may reduce the effectiveness of composting and result in odour. The high fat content could also produce potentially phytotoxic compost if oxygen levels are not sufficient during composting, resulting in the formation of organic acids such as lactic and acetic acids. Milk into compost is currently used by farms set up for composting but these farms have invested in site preparation to contain runoff and have the appropriate machinery to aerate compost and processes to ensure adequate heat generated to kill pathogens, along with knowledge and experience in balancing the ingredients to make the batch.
- 3 Milk can be buried in trenches and other carcass disposal pits, given that livestock may be culled and require disposal. However, milk is very difficult to bury, because the casein component combines with clay in soils to form a colloidal barrier that prevents absorption of the fluid fraction. This results in difficulties with sealing a pit that contains both carcasses and milk. Suitability of use of burial is dependent on soil type, topography, presence of water table and waterways. If it is to be used in an outbreak it should be part of pre-incursion planning. Refer to AUSVETPLAN Disposal Manual for range of considerations.