



M. bovis 2017 Cleaning, Disinfection, and Waste Management Procedure

Mycoplasma bovis is killed by all disinfectants and hot water when used properly. Follow the protocol below for cleaning and disinfection of boots, drains, equipment, and vehicles. Standard hygienic practices for cleaning of processing rooms and personal gear are sufficient to kill *M. bovis* when followed correctly.

Definitions:

Detergents are often used to assist with removing dirt and organic material from surfaces. Thorough cleaning allows the disinfectant to make good contact directly with the microorganism. This is required to ensure an effective disinfection especially when the surface is heavily contaminated with organic matter, such as dirt and faeces.

Disinfectants (including chemicals and hot water exceeding 60 degrees Celsius) are products which are applied directly to the surface of a piece of equipment (not skin or hide) to destroy or inactivate a microorganism such as *Mycoplasma bovis*.

*Most commonly citric acid 0.2% is used for disinfection against *M. bovis*. (1 teaspoon citric acid to 1 litre of water). Contact time 10 minutes.*

Virkon (1%) and trigene are also acceptable disinfectants for use – please follow instructions on the label.

Hot water means water with a surface contact temperature exceeding 60 degrees Celsius.

Sanitisers are products applied to the skin which destroy or irreversibly inactivate microorganisms such as *Mycoplasma bovis*.

Chemicals used to disinfect against *Mycoplasma bovis* must be approved chemicals by MPI (<http://www.foodsafety.govt.nz/industry/general/maintenance-compounds/>) orASUREQuality (<https://assessedproducts.asurequality.com/>).

Note: Labels contain important information on the proper use and hazards of a chemical. Attention must be given to the proper use of a product with regard to its application, effectiveness, and associated hazards (human, animal, and environment).

Method of use:

1. **Removal of organic load.** Wash the area that is to be disinfected. Water discharge should be contained for treating. Organic material forms a physical barrier that protects microorganisms from contact with the disinfectant and may also neutralise it. When the removal of organic material is difficult or impossible, i.e. when treating organic waste, appropriate disinfectants must be used.

2. **Disinfectant concentration.** Follow the instructions on the label. Consider any potential dilution of the disinfectant by residual wash water. For citric acid, a concentration of at least 0.2% is recommended.
3. **Application method:** surfaces may be treated with a disinfectant solution by wiping, brushing and spraying. Knapsack sprayers or low pressure washers can be used. Generally an application of 0.4ml/m² (achieved by low pressure sprayers) is recommended as a minimum application rate.
4. **Contact time:** appropriate contact times are essential. The minimum contact time needed is normally stated on the product label and areas disinfected should be well soaked to avoid drying before the end of the required contact time. For citric acid the recommended contact time is 10 minutes.

Specific applications:

Equipment/Boots:

- Must be washed and disinfected after handling potentially infectious material or handling infected stock in the yards.
- Remove as much dirt and organic debris prior to disinfecting.
- Allow sufficient contact time for the disinfectant.
- Change the disinfection solution regularly (at least daily) or when contaminated with organic material or used frequently (not applicable if sprayers are being used).

By-products (i.e. offal, bones, hides & skins) from cattle from restricted properties only (does not apply to NODs):

- Must be transported in leak-proof containers.
- Containers must be disinfected.

For more information about handling by-products – see MBovis2017.Permits and By-products.v1
from the Operational Spec: Organism Management

Drains:

- Clean and disinfect last.

Vehicles transporting animals:

- Animals originating from Restricted Places (RPs) and Notices of Direction (NODs) will be identified on the ASD as coming from a property under MPI movement control. The animal movement also requires a permit but this permit is not required to accompany the animals.
- The ASD does not distinguish between animals originating from an RP versus a property operating under a NOD – both will be indicated as “under MPI movement control” (section 2.3 on ASD).
- To determine which cleaning option below is required, it is imperative that the property status information is made known to the transporter and processor prior to and at the time of transport. The best means to do this is for the permit to accompany the animals. **If the**

status of the property is unknown or unclear to the transporter and processor then the default status is RP (Option B).

Option A: Vehicles transporting cattle from a Notice of Direction (NOD):

- The stock crate must be thoroughly washed down in the truck cleaning facility at the meat plant.
- The effluent tank must be emptied and resealed.

Option B: Vehicles transporting cattle from Restricted Properties (RPs):

- Initial cleaning to remove dirt and organic material. High pressure spraying equipment may be used but overspray must be contained.
- Commence cleaning at the top and move to the bottom. Wash the underside of the vehicle, wheel wells, and chassis.
- Use of a detergent in the cleaning step will enhance the cleaning process.
- Cleaning outcome required: all gross contamination has been removed prior to disinfection step.
- Apply the disinfectant with a low pressure sprayer and allow its proper contact time to elapse (10 minutes for citric acid).
- The effluent tank must be emptied before and after disinfection.

Verification of vehicle cleaning and disinfection:

Verification of cleaning and disinfection (if applicable) must be carried out for each vehicle. This can be completed by the operator, AsureQuality, or MPI VS and a record must be kept. The record can be a specific checklist or comment on yards process control sheet. As guidance, an example of a vehicle cleaning and disinfection verification check sheet has been attached to this procedure - see below.

Verification should ensure:

- Adequate cleaning of the vehicle (no loose organic material). Vehicles will not be pre-op clean but should not have loose faecal material present.
- Disinfection has been completed, if required. If hot water is used, ensure temperature exceeds 60 degrees Celsius.
- Effluent has been disposed of at the plant.
- Effluent cap is not leaking (if leaking, this should be dealt with by the transport company. A blue latex glove over the cap will reduce leakage in the meantime).

Waste Management:

The outcome required is that waste is contained until treated or that further movement of the waste poses no risk of transmission of Mycoplasma bovis to susceptible animals.

The requirements and recommendations below refer to effluent from the cleaning of transport, yards, and processing of cattle from restricted places:

If untreated liquid waste is contained and ducted to municipal treatment facility with subsequent discharge into the sea or approved watercourse, no further action is required.

Untreated waste requirements:

- No susceptible animals shall come into contact with untreated waste once it leaves the waste system at the meat plants.
- If untreated waste is to be used on pasture, it is recommended that a minimum of a 60 day stand down period is adhered to prior to allowing animals to graze on the pasture.
- Untreated solid waste must only be disposed of at a controlled landfill site, with no risk of subsequent effluent generation from the landfill to pasture.
- The number of collections of untreated waste from the meat plants is to be minimized. Meat plants processing animals from restricted places must be the last point of collection. The transporter must then go direct to the waste treatment / landfill site, NOT to any other sites for waste collection.

Treated waste requirements:

- If waste is to be treated, this must happen within 24 hours of the waste being generated.
- Treatment must be done using a registered chemical following the manufacturer's instructions for use.
- The treatment procedure needs to be documented in the meat plant's Risk Organism Response Plan.
- Treated effluent can be used on pasture – follow the standard industry guidelines.

MPI/AQ *Mycoplasma bovis* vehicle verification:

Plant ID:

Date:

Transporter:

Class of stock:

Driver:

Truck/Truck and trailer

Truck registration:

Driver clean at arrival:	
Truck clean at arrival (undercarriage):	
Effluent cap closed:	
Effluent discharged on plant:	
Truck cleaned inside and out:	
Citric acid contact time (10 min):	
Driver's hygienic process before leaving:	
Other comments: (e.g. permit viewed)	

Truck driver signed

MPI/AQ signed