Guide for producers consigning cattle to meat processing facilities in the cattle tick free zone

This document provides information for producers wanting to consign cattle to a meat processing facility in the cattle tick free zone.

Information in this document aims to assist cattle producers to minimise their risk from introducing cattle tick onto a meat processing facility and either eliminate or minimise the use of chemicals on cattle going to slaughter.

A ***meat processing facility*** is defined under the *Biosecurity Act 2014* as "an abattoir or other facility at which designated animals are killed for meat for trade or commerce".

General Biosecurity Obligation

The *Biosecurity Act 2014* imposes the general biosecurity obligation which requires all persons who deal with biosecurity matter (cattle tick) or a carrier (cattle), if they know or ought reasonably to know that it poses a biosecurity risk, to take all reasonable and practical measures to prevent or minimise the risk.

The owner or consignee of cattle, the transport operator and the meat processing facility owner/operator have a general biosecurity obligation to take all reasonable and practical measures to minimise the likelihood of causing a biosecurity risk (risk minimisation requirement). The meat processing facility owner/operator may choose the risk minimisation requirement (inspection and/or treatment) that they will accept for cattle being introduced to their meat processing facility. Cattle cannot be moved to or received into the meat processing facility unless the producer has complied with the risk minimisation requirement chosen by the meat processing facility owner/operator.

What are the risk minimisation requirement options?

Cattle (which are classed as high risk cattle tick carriers) may be introduced into meat processing facilities in the cattle tick free zone from a place in the cattle tick infested zone when the risk minimisation requirements have been satisfied and, where applicable, an acceptable ***biosecurity certificate*** has been issued by an accredited certifier stating the carrier meets the risk minimisation requirements.

The biosecurity manual provides a number of options that meet the risk minimisation requirements. The options for moving cattle into or through the cattle tick free zone or a prescribed facility include:

1) Cattle tick free manual inspection and chemical treatment

This procedure presents a very low risk of introducing cattle ticks. This option requires an acceptable biosecurity certificate issued by an accredited certifier and the cattle may be unloaded and spelled at any place in the cattle tick free zone.

Achieving a cattle tick free manual inspection will generally require the cattle to have two or more chemical treatments and these are timed to allow the chemical to be effective on all stages of the tick lifecycle, level of cattle tick infestation, management strategies and chemical resistance.

Treatments may be by plunge dip, spray (acaricides) or pour-on, injectable (endectocides) chemicals at appropriate intervals or a combination of these chemicals.

These treatments, depending on what is used, would commence 14 to 28 days prior to presenting the cattle for clearance.

2) Cattle tick free visual inspection and chemical treatment

This procedure means that there are no adult cattle ticks observed during the procedure but some cattle ticks, particularly larval or nymphal stages may be present and the treatment will reduce the level of risk. This option requires an acceptable biosecurity certificate issued by an accredited certifier.

Cattle tick free visual inspection may be achieved by one or more preliminary chemical treatments or adoption of management practices that will minimise exposure or allow the environment and these practices to reduce the level of visible adult cattle ticks.

3) Cattle tick free manual inspection

This procedure is an option for prescribed facilities (feedlots or meat processing facility). This procedure means that no cattle ticks are found during the crush side inspection by an accredited certifier. This option requires an acceptable biosecurity certificate issued by an accredited certifier.

4) Adult cattle tick free manual inspection (without supervised treatment)

This procedure means that there are no adult cattle ticks detected during the manual inspection of the carrier. Larval or nymph cattle ticks may be present and a level of risk remains that the meat processing facility is required to manage. This option requires an acceptable biosecurity certificate issued by an accredited certifier.

This option may be achieved by one or more chemical treatments or adoption of management practices that will minimise exposure or allow the environment and these practices to reduce the level of adult cattle ticks.

Practices that may assist producers meet their General Biosecurity Obligation

In meeting their general biosecurity obligation, producers may adopt various management practices that utilise environmental conditions to achieve a high level of tick control that may enable the presentation of cattle free of adult cattle ticks without chemical treatment.

1) Cattle are held under feedlot conditions

Hold cattle in a ***feedlot,*** "bare earth" or other hard standing area or feed pad environment for a period of more than 21 days. Pens and handling facilities, including the boundaries of such areas should be kept free of vegetation at all times. This may result in most cattle ticks detaching from the cattle. As this environment is not conducive for cattle tick survival there is little likelihood for larval ticks attaching resulting in the ability to achieve an adult cattle tick free inspection.

2) Pasture rotation or spelling

Pasture spelling or rotation helps reduce cattle tick populations if correctly done.

A property having cell grazing, pasture rotation or a pasture spelling system that has paddocks that have been free of all cattle tick carriers for a period of greater than 90 days may achieve an adult cattle tick free inspection.

Larval cattle tick survival on pasture is limited; they will desiccate and die if cattle or other suitable host species are not present. Pasture spelling or rotation periods free of host species will vary significantly across Queensland and even with similar localities.

In hot dry environments, larval survival is as little as four weeks whereas in cooler moist environments survival may be more than four months. Other factors that will influence larval survival are local microclimate areas influenced by pasture type, ground cover and soil types.

Each property has to determine what is feasible under its grazing and animal management and production system.

Prior to presentation for inspection, cattle are moved into such a paddock and held entirely within this paddock for at least 21 days to allow engorged cattle ticks to detach and to minimise reinfestation with any larval cattle ticks.

3) Cultivation and cropping

Cultivation and cropping provide similar environmental conditions as pasture spelling and may be used to reduce cattle tick infestations.

This may provide an opportunity to achieve an adult cattle tick free inspection particularly where an early turnoff from the crop is used. Cultivation will provide a period that will reduce larval ticks in the paddock and early turn off before larval reinfestation from cattle introduced to the cultivation can occur. The longer the grazing on cultivation occurs the greater the possibility of larval tick infestation.

Use of cultivation and cropping will also be influenced by the time of the year, time the crop has been planted before grazing, prior grazing of the paddock and headlands or other areas within the paddock not cultivated.

Cultivation and cropping is most likely to be beneficial in winter fodder crop systems or opportunity grazing of grain crop residue fodder.

4) Rotation grazing with lower risk carriers

This concept is similar to pasture spelling but will allow some utilisation of pasture through other low risk cattle tick carriers. The periods of grazing are difficult to assess and will have a wide variation as there may still be some propagation of cattle ticks from the low risk carrier and a level of cattle tick infestation in the paddock at all times.

5) Burning of pasture

Burning of pasture may contribute to a reduction in the larval cattle tick populations but it is unlikely to eliminate or substantially reduce cattle tick populations. There are a number of variables such as timing and intensity of the burning and this is not likely to be used for cattle in preparation for slaughter.

NOTE: A chemical treatment in association with any of these practices (1-5) may result in achieving an adult cattle tick free inspection in a shorter period and may provide a more flexible period for moving cattle as adult cattle tick free without further treatment.

6) Chemical treatment and resistance testing

The use of chemicals for clearance of stock or for general tick management is dependent on treatment procedure used achieving maximum effectiveness through proper application and susceptibility of the ticks to the chemical (resistance).

Testing of ticks for chemical resistance is an important management tool. Resistance testing could inform the choice of an appropriate treatment that will reduce ineffective and costly tick control and the risk of chemical residues.

For organic production systems, the use of chemicals is not a suitable option and advice from the organic certification authority should be sought as to the suitability of any product used.

The use of natural or organic products (e.g. *natural pyrethrin)* may be considered. Cattle treated with a natural pyrethrin may be able to achieve adult cattle tick freedom 48 to 96 hours after treatment. Reliance on natural pyrethrin will depend on the chemical resistance profile of the cattle tick population on the property as resistance to the synthetic pyrethroids (e.g. cypermethrin, flumethrin etc.) will provide resistance to the natural pyrethrin.

7) Cattle tick and tick fever are notifiable

The presence of cattle tick or tick fever at a place (including a meat processing facility) in the cattle tick free zone is a notifiable incident for which a person is required to advise an inspector under the *Biosecurity Act 2014* and Biosecurity Regulation 2016.