

Biosecurity Act 2014

Procedure for the use of chemical treatments on cattle tick carriers (CT-CTC)

Purpose

This procedure describes the steps that must be taken when the Biosecurity Manual states that a chemical treatment is to be used on a cattle tick carrier to meet:

- an obligation to eradicate cattle tick (see also “Procedure for eradicating cattle tick from infested land”; or
- a risk minimisation requirement for the movement of a cattle tick carrier.

Scope

This procedure may be used by the following persons to comply with the risk minimisation requirements:

- an accredited certifier for the purpose of issuing a biosecurity certificate under chapter 15 of the *Biosecurity Act 2014* (the Act). The risk minimisation requirements may include a supervised chemical treatment (supervised by an accredited certifier) or an owner treatment for which the owner must give an accredited certifier records as evidence of the treatment.
- an owner of a cattle tick carrier conducting either an owner treatment or a supervised treatment as part of the risk minimisation requirements for the movement of a cattle tick carrier.

To meet the risk minimisation requirements, a chemical treatment, using at least one of the methods detailed in this procedure (plunge dip; hand spraying; injectable or pour-on products) must be conducted.

Definitions

acaricide – an externally applied chemical with a label claim that effectively controls all life cycle stages of the cattle tick

cattle tick carrier – means a designated animal that is a member of any of the following groups of animals –

- (a) bison
- (b) buffalo
- (c) the family *Camelidae*
- (d) cattle
- (e) deer
- (f) the family *Equidae*
- (g) goats
- (h) sheep

chemicals – acaricides or endectocides used for treatment of cattle tick carriers by plunge dipping, spraying, pour-on or injectable application that include a label claim for the control of cattle ticks

dip or dipping – means to completely immerse a cattle tick carrier in an acaricide in a vat, bath or apparatus of any kind used in connection with the dipping of animals

endectocide - an anti-parasitic chemical that is effective against internal and external parasites

hand-spray or spray – means to thoroughly wet the entire skin of a cattle tick carrier with an effective acaricide using spray equipment that delivers a low-pressure high-volume output, either through a 12V or petrol/diesel driven motor

high risk tick carrier – means a cattle tick carrier other than a low risk tick carrier

injectable – means an effective external-parasite destroying endectocide which is applied to a cattle tick carrier subcutaneously (by injecting under the skin)

low risk tick carrier – means a cattle tick carrier that is a member of any of the following groups of animals – the family *Camelidae*; the family *Equidae*; goats; sheep

owner treatment – a treatment using one of the methods specified in this procedure, applied by a person moving a cattle tick carrier, to meet the risk minimisation requirements of the Biosecurity Manual

pour-on – means an effective external-parasite destroying endectocide which is applied to a cattle tick carrier topically along the mid-line of the back, in a narrow strip between the withers and butt of the tail or as per manufacturer's recommendations

resistance – means a chemical treatment is no longer effective in killing cattle tick

supervised treatment – a treatment using one of the methods specified in this procedure, supervised by an accredited certifier for the purpose of issuing a biosecurity certificate under chapter 15 of the Act

Plunge Dip

The person using a dip must ensure the acaricide in the dip is maintained at the manufacturers recommended concentration before undertaking any treatment for the purposes of complying with the risk minimisation requirements.

This will require the person using the facility to meet the risk minimisation requirements to submit dip samples to a laboratory facility for testing either:

- on a monthly basis during the recognised tick season; or
- within 30 days prior to using the facility.

The person maintaining the dip must keep records of the most recent laboratory testing reports or must record the following details of the report:

- laboratory name and number;
- testing date;
- chemical name; and
- test result.

A Biosecurity Queensland inspector or accredited certifier may take samples or require additional samples be collected and submitted from time to time to demonstrate that the chemical in the dip is at the correct concentration.

To comply with the risk minimisation requirements, a facility used to dip cattle tick carriers must:

1. Maintain the recommended concentration of acaricide in the dip by ensuring:
 - the capacity of the dip is accurately calibrated so that the correct ratios of acaricide and water are added;

- the dip is accurately calibrated so that replenishment (topping up) is done accurately;
- the dip volume is monitored on a regular basis during the tick season, and the dip volume must not be allowed to drop by more than 2,000 litres before replenishing:
 - replenishment should be carried out as required to minimise the effect of stripping. The amount of chemical added must be calculated based on the volume of water added;
 - water only may be added to compensate for loss through evaporation;
 - adjustments must be made to compensate for flooding;
- samples of dipping fluid from each dip in use must be submitted monthly to a laboratory for analysis of chemical concentration;
- adjustments to the chemical concentration are done promptly when analyses are advised. Any analytical results that differ by +/- 30% from recommended concentration should be treated cautiously - partial adjustment is recommended pending results of a further sample;
- the dip's volume must be recorded before and after each day's dipping, always taking the measurement at the same point;
- the dip, sump, crush, draining pen and surrounds must be kept clean to prevent undue pollution of the dip;
- acaricide must be measured accurately and premixed in water before adding to the dip. If possible, chemical should be added on non-dipping days or stirred thoroughly prior to dipping;

2. Keep detailed records of the following information:

- date of activity;
- loss of water through evaporation or excess water entering the dip through flooding;
- volume of water added for evaporation loss;
- volume of water and acaricide added for topping up or compensating for flooding;
- volume of dipping fluid at commencement of dipping;
- volume of dipping fluid at completion of dipping;
- number and species of stock dipped; and
- laboratory results of samples submitted, where relevant;

3. The following dip management processes do not form part of the risk minimisation requirements but are best practice methods to ensure stock safety and optimal results:

- the plug between the dip and the sump or draining pen should be removed prior to dipping and replaced after dipping to prevent flooding;
- adequate stirring should be undertaken prior to dipping stock. Stirring can be done either mechanically by a pump, or by dipping a number of stock (20 to 50 depending on the acaricide). Any stock used as stirrers must be re-dipped;
- care should be taken when dipping stock to ensure safety of stock and people;
- over-heated or stressed stock should not be dipped;
- adults and young stock should be dipped separately;

- speed and frequency of stock entering the dip should be monitored and regulated to prevent accidents and ensure the entire beast, including the head/ears are wet.

Hand Spraying

A person using hand spraying to comply with risk minimisation requirements may only treat the following cattle tick carriers:

1. Low risk tick carriers
2. High risk cattle tick carriers
 - deer
 - cattle, buffalo and bison, only if one of the following conditions are met:
 - the animal is able to be led and can be tied up during treatment; or
 - small numbers of animals require treatment when a plunge dip cannot be adequately stirred. In this case consideration may also be given to using an injectable or pour-on endectocide; or
 - small numbers of animals with wide sets of horns (e.g. longhorn or buffalo) are presented, and safe entry into a plunge dip cannot be ensured. In this case, consideration may also be given to using an injectable or pour-on endectocide.

To comply with the risk minimisation requirements, a person using the hand-spraying method to treat cattle tick carriers must:

1. Prepare and maintain the recommended concentration of acaricide in the spray unit by ensuring:
 - the total capacity of the spray tank is accurately measured so that the correct ratio by volume of acaricide and water are added;
 - the spray tank is calibrated so that the amount of acaricide and water prepared is correct to complete the treatment;
 - acaricide is measured accurately before being added to the water in the spray tank;
 - for a **supervised treatment** – the acaricide must be added to the water in the presence of the accredited certifier prior to treatment.
2. Maintain the spray unit as follows:
 - spray tank, hoses and hand piece are maintained in good working order. There should be no leaks from the hand piece, hoses or tank;
 - the unit must deliver a low-pressure high-volume output and the hand piece must be able to be adjusted to control the required flow dependant on the situation;
 - adequate stirring is undertaken prior to spraying any cattle tick carriers (stirring can be done mechanically by using the hand piece to re-circulate the prepared acaricide back into the spray tank).
3. Keep detailed records of the following information:
 - date of activity
 - volume of water and acaricide added;
 - volume of spraying fluid at commencement of spraying;

- volume of spraying fluid at completion of spraying;
 - number and species of stock sprayed.
4. The following spraying processes do not form part of the risk minimisation requirements but are best practice methods to ensure optimal results:
- start by aiming the nozzle at the animal's feet and bring the spray on as a fine spray at first, gradually increasing the volume output;
 - move up the front leg to the topline of the animal; work the acaricide into the coat of the animal by directing the spray horizontally across the body, leaving the head dry, until the underline is reached;
 - inspect the animal to ensure that the rump and tail have been thoroughly sprayed;
 - inspect under the front shoulder, the udder and the flank to ensure these areas have been thoroughly sprayed;
 - ensure the mane of equines has been thoroughly sprayed;
 - repeat the above steps on the opposite side of the animal;
 - commence spraying the head by standing either directly in front or slightly to the side of the animal; this should be first done as a fine spray, gradually increasing the volume output to thoroughly wet the area;
 - inspect the ears and under the jaw to ensure these areas have been thoroughly sprayed;
 - complete a thorough visual inspection of the whole animal to ensure no areas have been left untreated; watch as the animal moves to ensure all hard to access areas have been treated.

Injectable or Pour-on Products

A person using hand spraying to comply with risk minimisation requirements may only treat high risk cattle tick carriers if one of the following conditions are met:

- there is no plunge dip available to treat the cattle tick carrier; or
- small numbers of animals require treatment and a plunge dip cannot be adequately stirred; or
- small numbers of animals with wide sets of horns (e.g. longhorn or buffalo) are presented, and safe entry into a plunge dip cannot be ensured; or
- there is known resistance to acaricides currently in use in the plunge dip.

Note: if cattle tick carriers are to be treated using injectables or pour-ons, calves must also be treated. Endectocides **do not** transfer from cow to calf through the milk.

To comply with the risk minimisation requirements, a person using injectable or pour-on products to treat cattle tick carriers must:

1. Ensure that the weight of the cattle tick carrier can be accurately measured as follows:
 - the weight of the carrier receiving the treatment must be accurately measured using digital livestock scales; and
 - for a supervised treatment (other than for the purpose of s84(1)(b) of the Regulation (Moving a cattle tick carrier from infested land to the tick infested zone)), an accredited certifier must supervise the weighing of the animals; and

- for large mobs it is acceptable to visually assess the heaviest animal in the mob and only weigh that animal. If this method is used, the dose rate must be for the heaviest animal in the mob; or
- draft the animals into mobs that reflect different weight classes. The dose rate is then determined for the heaviest animal in each class.

Exceptions:

- the weighing of cattle tick carriers being moved from infested land to the infested zone (s84(1)(b) of the Regulation) need not be supervised by an accredited certifier;
- cattle tick carriers subject to an owner treatment using an injectable or pour-on need not be weighed prior to treatment; however incorrect dosage can result in infested animals being presented at the clearing facility resulting in increased costs and delays in movements and can increase the risk of developing resistance to the chemical;

2. Maintain application equipment in the following way:

- the applicator must be an automatic applicator that is able to be accurately calibrated;
- hoses are maintained in good working order; there should be no leaks from the applicator or hoses;
- needles should be either 16 gauge or 18 gauge and no longer than 15mm, and must be replaced regularly when administering injectables;
- the applicator must be approved for application of the chemical by the manufacturer; this is particularly important when using pour-ons, as some endectocides must be applied in a specific way e.g. narrow strips or fanned;
- the applicator must be calibrated to ensure the required dose is being dispensed. To calibrate, a minimum of two doses are to be dispensed into a measuring container to verify the correct dose (by volume) is being administered;
- the barrel of the applicator should be inspected regularly to ensure it is filling completely between each dose dispensed.

3. Apply the chemical as follows:

- if using an injectable endectocide:
 - the treatment must be applied subcutaneously as per the manufacturer's recommendation;
 - the dose must be administered subcutaneously and not into the muscle. The skin on the side of the neck is the preferred site for most endectocides. There should be no friction encountered when administering the dose. If friction is encountered retract the needle depth slightly until no friction is encountered;
- if using a pour-on endectocide:
 - apply steady pressure to the trigger of the applicator to minimise excessive splashing of chemical off the animal's back during treatment;
 - the pour-on must be applied topically along the mid-line of the back from the withers to the tail head of the animal or as per the manufacturer's recommendations;
 - do not apply the pour-on to wet animals;
 - do not treat if heavy rain is threatening;
- all calves must be treated individually;

4. Keep detailed records of the following information:

- endectocide name;
- endectocide application method;
- expiry date of endectocide;
- batch number of endectocide;
- weight range of cattle tick carriers being treated;
- dosage rate applied to the cattle tick carrier.

Treatment and re-inspection protocol if risk minimisation requirements not met

If a cattle tick carrier fails to meet the risk minimisation requirements for a movement, the following re-inspection procedures apply:

1. For a movement requiring a visual inspection and supervised chemical treatment, the carrier may be presented for re-inspection once in every 24 hour period following treatment, up to a maximum period of:
 - 4 days (96 hours) if treated with an acaricide; or
 - 6 days (144 hours) if treated with an endectocide;

until the carrier is found to be visually free of adult ticks (following the usual procedure for a visual inspection).
2. For a movement requiring a manual inspection – if the carrier has undergone chemical treatment, the carrier may be presented for re-inspection:
 - between 4 days (96 hours) and 7 days (168 hours) following treatment with an acaricide; or
 - between 6 days (144 hours) and 9 days (216 hours) following treatment with an endectocide.

If the carrier fails to meet the risk minimisation requirements within the above timeframes, the procedure of treatment and inspection should commence again until the carrier is found to meet the risk minimisation requirements. Re-treatment must take account of the chemical manufacturer's recommendations regarding treatment intervals.

The proposed movement of the carrier must not commence until the risk minimisation requirements are met.

Time limits on moving a high risk carrier to a prescribed facility

The movement of a high risk cattle tick carrier from the tick infested zone (section 83 of the Regulation) or tick infested land (section 84 of the Regulation) to a prescribed facility other than a clearing facility (i.e. a movement to a feedlot or abattoir) requires that the carrier is visually free of adult ticks and has undergone a supervised chemical treatment. If the risk minimisation requirements are met for the carrier, the movement must be completed either:

- within 96 hours of the risk minimisation requirements being met if the carrier has been treated with an acaricide; or
- within 144 hours of the risk minimisation requirements being met if the carrier has been treated with an endectocide.