SOP No: ATT 071

SUBJECT: Freeze branding of cattle.

DATE ISSUED: 16.07.2014

POLICY: Two people are required for this procedure. 
Demonstrator: experience in this procedure. 
Students: competence in handling animals. Students should practice this technique on an inanimate model before using it on live animals. 
Legal requirements: a person shall not sell [in Queensland] any cattle of a live weight in excess of 100kg unless those cattle are branded. 
Animal welfare considerations: The Code requires that animals be protected from undue pain and distress, and, from a welfare perspective, branding is not the preferred method of identifying livestock; other methods, in particular National Livestock Identification (NLIS) devices such as an ear tag or rumen bolus, are preferred. However, when animals must be branded for legal or practical reasons, freeze branding is the method preferred by the Australian Veterinary Association. 
Commercial practice: there are some limitations inherent in freeze branding (see below), and managers may not have access to dry ice or liquid nitrogen. In such cases hot iron branding may be the only practical alternative when cattle must be branded.

PRECAUTIONS: Wear sturdy footwear and sun protection 
Animals should be handled quietly before, during and after the procedure 
Be aware that branding irons and the devices used to heat or cool them (liquid nitrogen or carbon dioxide (dry ice)) may cause burns; gloves and goggles are needed for protection against the cold irons and coolant mixture 
Branding causes pain to animals and they will attempt to escape during the procedure; this may lead to the operators being kicked or otherwise injured 
Wash hands and exposed parts of your body thoroughly with soap and water after handling animals.

EQUIPMENT: Veterinary crush (ideally a squeeze crush with side access and a strong head gate), branding equipment: 
- branding irons 
- a mixture of dry ice and denatured alcohol (e.g. methylated spirits)(50:50 w/v)) 
- clippers and stiff brush 
- denatured alcohol (e.g. methylated spirits) in a hand-spray or squeeze bottle 
- a timer (capable of measuring seconds).

PROCEDURE: Use only the brand registered for the property (it is illegal to use an unregistered brand; refer to the Brands Act 1915 for further information). 
Freeze branding should be done on weaners or older cattle as these are large enough to give a good surface for the brand.
Queensland legislation stipulates that brands can be applied to cattle only on the neck, rump, shoulder, thigh or twist (the upper rear portion of the animal's hind leg between the pin bone and the hock). Check branding is illegal.

Never brand wet, weak or emaciated cattle. Don't brand when it is rainy, windy or humid as in these conditions the irons lose their coolness rapidly, giving a poorer result. Good restraint is essential - preferably use a veterinary crush with moveable sides.

Use branding irons specifically made for freeze branding. These are made from copper or copper-alloy (i.e. brass or bronze) designed to uniformly hold the cold for a longer time period. They are usually thick and have rounded edges to avoid damaging the hide. They should be 75 to 100 mm tall, 10 to 12 mm thick and 25 mm deep. Non-conductive material (e.g. wood) is used for the handle grip. Do not use fire branding irons as these do not give a good uniform result if used for freeze branding.

Apply the brand as follows:

1. Secure the animal in the crush; move the sides so that they restrain the animal.
2. Place the branding irons to cool in the dry ice/ alcohol mixture (allow about 0.5 kg of dry ice and 0.5 L methylated spirits per animal). The heads of the irons should be covered by at least 25 mm. Allow 15 to 20 minutes for the irons to cool. When frost has built up on the base of the handle of the iron the brands are cold enough.
3. Identify the area to be branded. Queensland legislation stipulates that brands can be applied to cattle only on the neck, rump, shoulder, thigh or twist (the upper rear portion of the animal's hind leg between the pin bone and the hock). Check branding is illegal.
4. Use the clippers to remove hair from the brand location to ensure good contact between the iron and the hide. It's important to not take too much hair off because of the risk of burning the skin rather than just damaging the hair follicles. Clipping a neat square gives a border in which to place the irons, increasing the likelihood of a straight, more attractive brand. Brush loose hair off the intended brand location.
5. Double-check that the correct branding iron is to be used, and that it is held the correct way up. Ask the second operator to check that you have the brand in the correct orientation.
6. Saturate the brand area with room-temperature alcohol, using a spray or squeeze bottle.
7. Immediately apply the brand and set the timer. If dry ice is used approximately the irons must be held on to the skin for 40 to 45 seconds.
8. If the animal moves and you lose contact between brand and skin, you can usually see where the brand has been. Try to reapply the brand in the exact same position. If the animal is not well restrained this can be difficult. The most important thing to do if an animal moves is to look at the timer as you lose contact, so that you know how much longer the brand needs to be reapplied for. If you don't do this and the iron isn't on for long enough the brand may not come out. If applied for too long the hide may be damaged and a scar result and cause excessive pain. With freeze branding you can't see if there is a problem
until well after applying the brand. Usually you have to wait a full hair coat season to see if the brand worked. If it has to be reapplied the animal has usually grown, therefore the brand no longer fits into the same area.

9. When the brand has been applied make sure that the iron is free of debris and place back in the coolant.

10. Allow a minimum of two minutes for the irons to cool before using them again.

11. Release the animal from the crush

12. Return the branded animals to their mothers (if unweaned) or to good quality feed and water as soon as possible after the procedure. Check branded animals for pain and distress at least once daily for the next 7 days, and obtain veterinary advice if necessary.

13. At the end of the day, recycle unused coolant. If dry ice/alcohol has been used, let the alcohol stand overnight in a well-ventilated area before replacing in a container. Beware of splashes into the eyes or on exposed skin when handling the coolant.

RECOMMENDATIONS:

REVISED:

[Signature]

CHAIR OF AEC

REFERENCES


2. Brands Act (Qld) 1915 24A Prohibition on sale of unbranded cattle.