

Unit 21: Disbudding Factsheet

Introduction

This session will deal with disbudding. This is the removal of the bud or growing point of the horn. It is carried out on calves to prevent them having horns as cows. Some breeds are naturally polled. This means that they genetically will not have horns as adults.

Disbudding

A cow's horn consists of two parts

- Outer casing called the horn
- Centre of bone.

In the young calf the skin around the horn secretes a material called keratin, which is extremely hard. This grows up and over the horn to form the outer casing. The skull bone then extends into the cavity of the horn.

Disbudding removes the area of horn forming cells in the skin, and stops the horn from growing. This can be carried out in 2 ways:

1. **With a hot iron**
2. **Chemical cauterization**

1. Disbudding with a hot iron

- best carried when the calf is between 3 and 6 weeks old
- horn bud must be clearly felt but it should be done before the bud gets so big that it can't fit into the disbudding iron
- the nerve to the horn runs out from behind the eye and underneath a small overhanging ledge of bone which is part of the skull (occipital groove)
- a vein and artery runs alongside the nerve
- the aim is to anaesthetise the horn bud so that the calf cannot feel it being burned off.

The legislation

Currently the law states that:

- 1) Disbudding of calves may be carried out in the first seven days of life by chemical cauterisation without an anaesthetic by an unqualified person.
- 2) Disbudding and dehorning may be carried out on an animal at any age by an unqualified person after the administration of an anaesthetic.

How is disbudding with a hot iron carried out?

1. The calf must be restrained and head locked when it is being injected.
2. A short needle 25mm is used to inject 2.5 - 3ml of local anaesthetic into the nerve. The nerve is located under a bone ridge in the occipital groove.
3. After inserting the needle you can withdraw the syringe slightly to check that there is no blood backfill into the syringe. This makes sure that you don't inject anaesthetic into the blood stream as a vein and artery run parallel to the nerve (Injecting into the blood vessels could cause the calf to collapse).
4. Leave the calf for at least 5 minutes after injecting.
5. Whilst the anaesthetic is working, trim the hair around the horn bud to expose the area to be burned.
6. Before using the iron, check that the horn bud is numb. A needle can be inserted into the bud base. There should be no reaction from the calf. If there is a reaction, a new anaesthetic injection is needed.
7. With the calf's head firmly in place, place the hot iron over the bud so that the whole horn fits into the groove at the bottom of the iron.
8. With moderate pressure allow the iron to burn for 10 seconds, rotating the iron in your hand, and then angle the iron so that it can scoop out the horn bud. A burnt brown ring appears
9. The skin around the outside of the horn has to be destroyed as this is where the new horn cells are located. Once this horn forming tissue has been removed there is no chance of re-growth.
10. The bud can now be sprayed with an antibacterial spray to stop infection.

2. Disbudding with chemical cauterization

1. A paste can be applied to the bud when the calf is under 1 week old.
2. This paste contains very strong chemicals that burn and kill the horn forming cells.
3. There is no bud growth.