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The DEHORNING of CATTLE

By J. SHILKIN, B.V.Sc.,
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HORNS on domesticated cattle serve no useful purpose and are responsible for losses which, in the aggregate, amount to many thousands of pounds every year. Horn-caused bruises lead to reduced prices for beef carcasses, and many cases of mastitis in dairy herds have their origin in udder injuries resulting from horn-prods. In addition, the fear inspired by horned "boss cows" leads to lowered milk production from their more timid herd-mates, while the possession of horns adds to the risks of handling the herd bulls.

When the ancestors of our domesticated cattle existed in a wild state, their horns were a means of defence against predatory animals. They were also the means by which the bulls established their superiority over rival contenders for herd leadership.

Now that they are no longer needed for offensive or defensive action, horns are superfluous and their removal has so many advantages that dehorning should be adopted as a routine practice.

Dehorning brings a marked change in herd behaviour as many dairy-farmers can testify. The cattle are easier to handle and may be closely concentrated in holding yards, or when strip-grazing with the aid of an electric fence. Even the most aggressive members of the herd tend to become placid, and there are corresponding benefits in increased production and reduced losses from mastitis.

OPPOSITION

Among stud-breeders, there is some understandable opposition to dehorning. Some studmen maintain that the appearance of show cattle is marred by the removal of the horns—that a dehorned animal might suffer when being judged beside horned members of the breed. Despite this fear, there are many well-known studs which dehorn all animals in calf-hood as a routine practice.
In reality, an increasing number of show judges are taking the sensible view of dehorning and in any case the points score allowed for the horns is usually small. As for appearance—after all, we have been breeding polled cattle for many years and the absence of horns does not make an Aberdeen-Angus or a Red Poll any less pleasing to the eye.

Other objections to dehorning are based on humanitarian grounds. Some pain is undoubtedly caused, whatever method is used to remove or prevent the growth of the horns, but this can be reduced to a minimum by efficient operations.

In any case the transient pain of dehorning cannot be compared with the lasting pain of serious injuries caused by horned animals in aggressive mood.

Undoubtedly, the most humane and most effective method of dehorning is to treat the animals at an early age to prevent the growth of the horns.

**DEHORNING OF CALVES**

Calves should preferably be treated during their first ten days of life but in beef herds where mustering is infrequent, more horn growth will occur and surgical treatment may be carried out up to the age of three months.

**Chemical Treatment.**

The destruction of the horn-producing cells by chemical means has many advantages but should be applied when the calves are not more than 10 to 14 days old. The best preparation is:

<table>
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<th>Per Cent.</th>
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<tr>
<td>Antimony trichloride 28</td>
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<tr>
<td>Salicylic Acid 7</td>
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<tr>
<td>Flexible Collodion 65</td>
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Have the mixture prepared by a chemist and keep it in a glass-stoppered bottle as it solidifies on exposure to the air.

The hair should be clipped from an area about two inches in diameter surrounding each horn bud and the area should then be cleaned thoroughly with methylated spirit and lightly rubbed with steel wool to produce an abrasion of the skin.

The chemical mixture is then applied with a brush and worked well in to ensure contact with the skin. The collodion soon forms a closely-adhering film.

Caustic soda or caustic potash sticks are often used for dehorning calves, but have some disadvantages when compared with the collodion mixture.

Clipping of the hair surrounding the bud is carried out as previously described and then a ring of vaseline is smeared round the horn bud—but not on it. The vaseline helps to restrict the spread of the chemical to the horn bud and a narrow strip of skin surrounding it.

One end of the caustic stick should be in a holder, wrapped in paper, or held in a rubber glove to protect the fingers. The
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Fig. 4.—Correct and incorrect angles for operating the guillotine-type dehorner

other end is moistened and rubbed over the horn bud until blood commences to ooze from the treated area.

After both horn buds have been treated, the calf should be tied up short for five or six hours, preferably under a roof, so that the caustic cannot be smeared or rubbed on to other calves.

A scab will form over the horn bud and this will come away in due course leaving the animal hornless.

Avoid wet weather which causes the caustic to run. Make sure that the caustic makes contact only with the horn bud and an encircling strip of skin one-eighth to one-quarter of an inch wide. The horn-producing tissues are in this skin and if they are not destroyed an uneven growth of horn "scurs" may occur.

Cauterising Treatment.
A rapid and effective method of preventing horn growth is to destroy the horn-secreting cells with a hot iron, when the calves are a few days old.

Special instruments are available for this work, but suitable dehorning or disbudding irons can be made by any handyman. An ordinary soldering-iron can be made into a disbudding iron by cutting off the tip with a hacksaw to leave a $\frac{3}{8}$in. square. This is filed to a circular shape and a $\frac{1}{4}$in. hole is drilled in the centre to a depth of about 5/16in. (See Fig. 1.)

A short length of copper or steel tubing welded on to a handle (see Fig. 2) is equally effective.

Where large numbers of calves are to be treated, electrically-heated disbudding irons are often used.

To treat the horn-bud, the iron is heated to a cherry red and applied firmly over the bud. It is rotated with a light firm pressure until a copper-coloured groove is burnt round the horn bud. No further treatment is necessary.

Surgical Treatment.
Up to the age of about three months, the horn is attached only to the skin. Using special disbudding scissors or a sharp knife, the horn and a ring of tissue surrounding it may be removed without difficulty.

DEHORNING ADULT CATTLE
Although disbudding of the animals in calfhood is recommended as the routine treatment, it is often necessary to dehorn herds of adult cattle or adult animals purchased as replacements.

Although dehorning in such cases appears to be a major operation that is attended by considerable bleeding, it is surprising to find that even herds in full production show very little reduction in milk yield and general condition after dehorning.
Healing is usually rapid, and a few years ago when the Muresk College Guernsey herd was dishorned, several of the cows were shown successfully (completely healed) at the Perth Royal Show just four weeks after the operation.

**Equipment Needed.**

A strongly-constructed crush and bail, a pair of nose-grips, and a massive guillotine dehorner are needed.

Do not use the milking bails for dehorning. Cows cannot let down their milk if they continue to associate the milking-shed with a painful experience.

Use a stoutly-constructed bail of the swordstick type, preferably on the end of a race where the operators have plenty of room to work. Have a stout rope to serve as a breeching to prevent the animal from backing away when the dehorners are applied.

A study of the section of the skull (Fig. 3) shows the sinuses or hollows in the bony structure, and (Fig. 4) shows the correct and incorrect angles at which the dehorner should be operated.

The guillotine-type instrument shown in (Fig. 5) is cog-operated to give added leverage. The instrument should be soaked overnight in 10 per cent. lysol solution and should be placed in a bucket of 2 per cent. solution after each operation.

An assistant applies the nose-grips and turns the head to one side so that the dehorner can be placed over the upper-
most horn with the flat side of the blade downward. The handles are opened wide so that the blade can take a ring of skin and hair 1/4 in. to 1/2 in. wide surrounding the base of the horn.

A convenient method is that shown in photographs (Figs. 6 and 7) with one handle resting on the operator's thighs so that both hands are used to apply leverage to the other handle, severing the horn with a single clean cut.

The head is reversed bringing the other horn uppermost and the operation is repeated.

In obstinate cases where the horns are very hard, they should be circled with the blades partly closed so that a ring is cut round the horn, after which they will usually come away freely on application of the normal pressure.

In the case of bulls with massive horns it is preferable to have the operation carried out under a local anaesthetic by a veterinarian.

**AFTER-CARE**

If the dehorning is carried out in dry weather and flies are not plentiful, very little after-care is needed.

Blood flows freely after dehorning, often spurting in streams from severed arteries, but this usually ceases as blood-clots are formed.

After the operation, the cattle should be kept under observation in a yard or small paddock for half an hour. If bleeding is still severe at the end of this period it may be checked by applying a ligature as shown in Fig. 8.

A cord is passed round the poll and tied tightly. Two short lengths of cord are then tied across the top of the poll. Remove the ligature after it has been in position for about half and hour.

Do not apply dressings to the wound as these may get into the sinus and cause inflammation.

Where flies are prevalent it is a wise precaution to apply a suitable repellant to the areas around the wounds—not on the wounds.

The fly repellants used as sheep dressings would be suitable for this purpose. Another very effective repellant is 1 part iodoform mixed with 16 parts boric acid. This powder may be dusted freely round the wounds.

Fig. 8.—Ligature in position
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