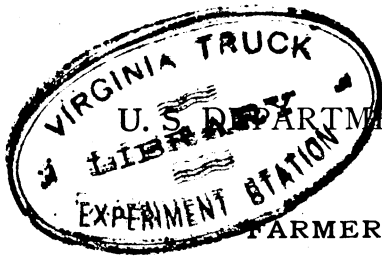


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Issued February 6, 1909.

U. S. DEPARTMENT OF AGRICULTURE.

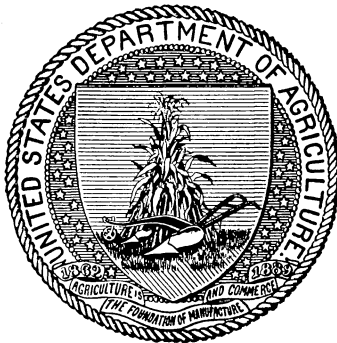
FARMERS' BULLETIN 350.

THE DEHORNING OF CATTLE.

BY

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LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY,
Washington, D. C., December 9, 1908.

SIR: I have the honor to transmit herewith a paper on "The Dehorning of Cattle," by Dr. Richard W. Hickman, chief of the Quarantine Division of this Bureau. This article was included in the Twenty-fourth Annual Report of the Bureau, but in order to make it available for distribution in pamphlet form, in response to requests for information on this subject, its publication as a Farmers' Bulletin is recommended.

Respectfully,

A. D. MELVIN,
Chief of Bureau.

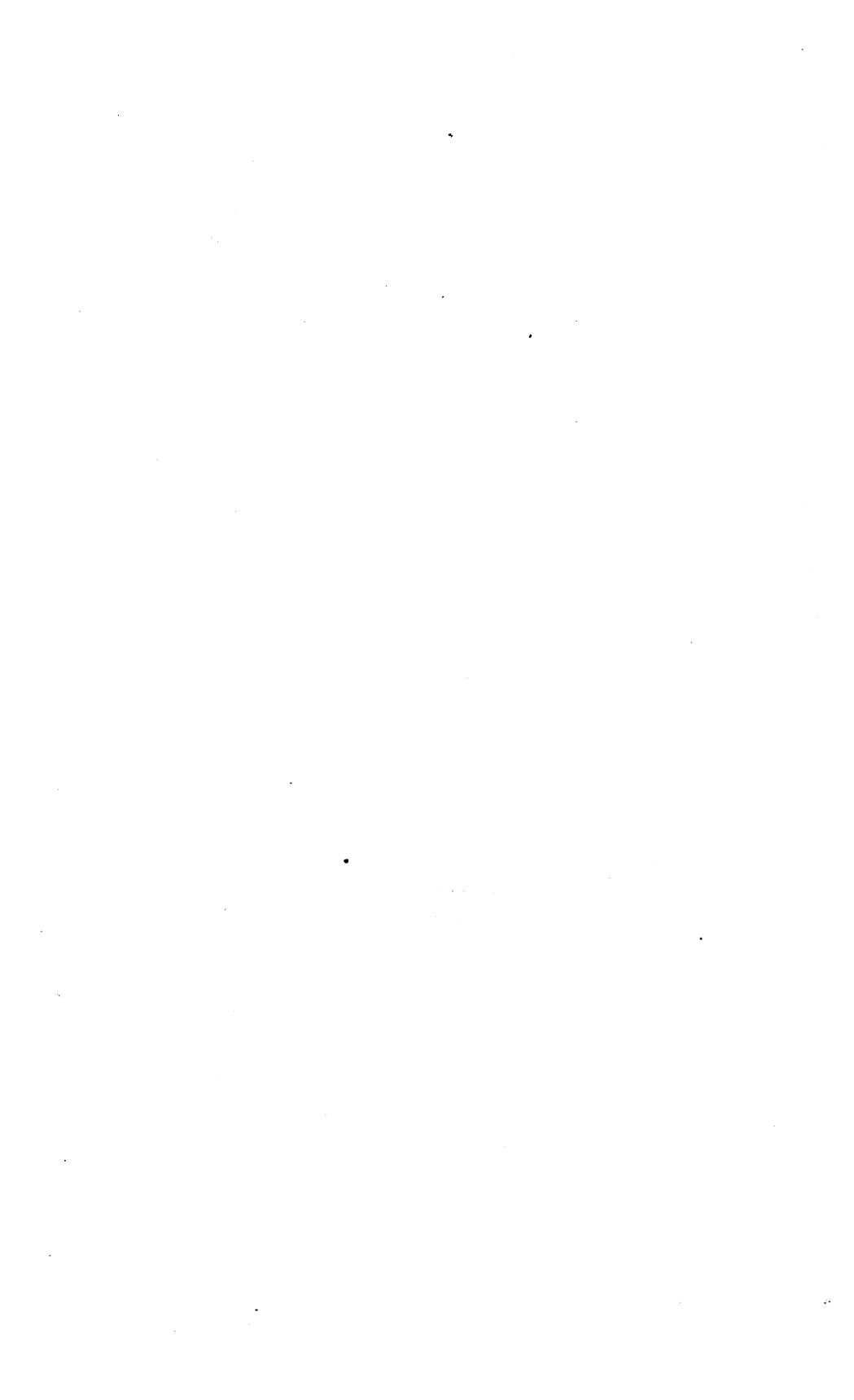
Hon. JAMES WILSON,
Secretary of Agriculture.

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THE DEHORNING OF CATTLE.

SIMPLE METHOD OF RESTRAINING THE ANIMALS.

The dehorning of cattle can be very satisfactorily performed without other apparatus or instruments than a good strong clothesline and a clean sharp meat saw, or a miter saw with a rigid back. The same simple means for controlling the animal is just as applicable when dehorning clippers are to be used as when the horns are to be removed with the saw. The head of the animal is secured to the horizontal rail or stringer which holds the upper ends of the stanchion boards. The animal is put in the stanchion in the usual manner; then one end of a heavy clothesline is passed around the upper part of the neck and tied in a knot that will not slip, otherwise it will choke the animal. The free end of the rope is now carried between the horns, through the stanchion to the front, up and over the horizontal stanchion rail, then down underneath the neck and up and over the top of the stanchion rail to an assistant, who should hold it firmly. Now open the stanchion, allowing the animal to withdraw its head; then, keeping the rope tight, pass it once around the muzzle, up and over the stanchion rail, and through to the front again to the hands of the assistant, who should stand 3 or 4 feet in front of the animal and hold the rope firmly, but prepared to release it when told to do so by the operator. The animal is now ready for the dehorning operation.

It is necessary that the rope be held by an assistant, as in the event of the animal struggling during the operation so as to throw itself off its feet, or if there appears to be danger of its choking, the rope may be slackened promptly at the word of the operator and the animal partly released. This, however, is rarely necessary, for as soon as the head is secured the operator should be ready, standing at the right shoulder of the animal with his saw, and proceed to saw off first the right and then the left horn. Figure 1 shows the animal and the operator in position for the dehorning operation by this method. It is a good plan before commencing the real work to experiment upon an animal in the matter of control by tying the head to the stanchion rail as described.

If the stanchion rail is too wide to permit of properly securing the lower part as well as the upper part of the animal's head, the turn of the rope around the muzzle may be omitted and the last lap of the

rope carried around the stanchion rail to the front and to the hands of the assistant. Care should be taken that the rope pass each time over the neck of the animal to the stanchion rail between the horns in such a way that it will not interfere with the work of the saw.

WHERE TO CUT THE HORNS.

The horns should be severed from a quarter to a half inch below where the skin joins the base of the horn, cutting from the back toward the front.

If the cut is made too high an irregular, gnarly growth of horn is very apt to follow. It will be seen that the point of union of the skin



FIG. 1.—Method of tying cow to stanchion rail.

and horn varies in different cattle; hence there can be no rule of measurement, except as the eye becomes trained to see the point or line at which the cut should be made. In the beef breeds fully one-half inch of skin, all around, is usually taken off with the horn.

Figure 2 illustrates the difference between a proper and an improper cutting, and figures 3 and 4 show the appearance of animals' heads after proper and improper dehorning.

INSTRUMENTS FOR DEHORNING.

In recent years, since dehorning shears or clippers have come into use, this means of dehorning is considered by some cattle owners to be preferable, especially where large numbers of cattle are to be dehorned. One type of dehorner has a stationary knife blade, with

its cutting edge shaped like a very wide V, and opposing this another knife of similar shape, moving in a slide, so that the cutting edges cut the horn from all four sides at once, all the edges passing the center at the same time. Another type has a movable knife with one oblique or one curved edge, and the cutting is done in one direction only. The power for cutting with these instruments is supplied by pulling together two long handles, which, in order to transmit a greater force, are generally so constructed that they act through the medium of a series of cogs.

In dehorning with these instruments the opening between the cutting edges should be slipped down over the horn and the knives closed so that their edges set firmly against the horn in such a position that the cut will be made in the right place and in the right direction. The blades should be kept covered with a thick oil or grease. The handles should be drawn together with a quick, firm, strong pull, so that the horn will be completely severed by the first act and without twisting. Care should be taken to keep the blades sharpened on their original bevel.

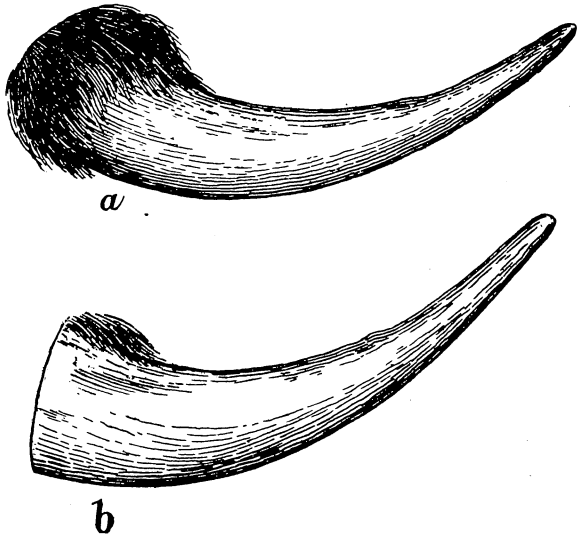


FIG. 2.—Horns showing (a) proper and (b) improper cutting.

Dehorning instruments can be procured of the manufacturers and of dealers in veterinary instruments.

In dairy districts adjacent to large cities there are men who go about from farm to farm dehorning animals, charging for their services in some instances as little as 5 cents per horn or 10 cents per animal.

There was published in the report of the New Zealand department of agriculture for 1904 a description of the operation of dehorning cattle by the government veterinarian at New Plymouth, in which it was shown that a cage had been used for the restraint of the animals during the operation, closely resembling the box used for hoisting horses out of ships, this cage being hauled on a wagon from farm to farm as needed. In discussing the various means for the removal of the horns the report was very favorable to the use of the saw in dehorning

full-grown cattle. It was stated that in the dehorning of over 10,000 cows with the saw there were no deaths due to the operation, while in cows dehorned by shears there was trouble afterwards in healing of the wounds, due, no doubt, to the crushing, fracturing action which this instrument has upon old horns, where ossification of the cores is advanced. Because of this condition it was recommended that for mature animals a bone saw be used.



FIG. 3.—Head of steer showing result of proper dehorning.

bones of the skull, and are hollow. They communicate with the frontal sinuses, or air spaces, of the head; therefore foreign substances or fragments of horn which act as an irritant in these cavities are apt to set up an inflammation, resulting in the formation of pus or an abscess, which may prove quite serious. This trouble is of infrequent occurrence, but would appear more liable to happen when the dehorning instruments are used, on account of their tendency to crush, especially in the case of old animals, whereas the saw cuts clean. If proper care is taken, however, such an occurrence following dehorning may in almost every instance be avoided.

Occasionally animals after being dehorned and turned out of the stable will rub their heads against a dirt or gravel bank or the rough bark of a tree, and foreign material may thus get into the cavities, though usually the soreness of the parts is sufficient to prevent this.

TREATMENT AFTER DEHORNING.

It is not usual to apply any preparation after the operation of dehorning to prevent bleeding, as the loss of blood is not sufficient, as a rule, to be of consequence. Care should be taken, however, to prevent substances from getting into the openings left after the horns are removed. The horn cores are elongations of the frontal

bones of the skull, and are hollow. They communicate with the frontal sinuses, or air spaces, of the head; therefore foreign substances or fragments of horn which act as an irritant in these cavities are apt to

set up an inflammation, resulting in the formation of pus or an abscess, which may prove quite serious.

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FIG. 4.—Head of steer showing results of improper dehorning.

If the animals are dehorned in warm weather, it is well to apply some pine tar with a view to keeping flies from the wounds. Some operators do this in nearly all cases, thinking that it facilitates healing. The dehorning operation should always, when possible, be performed in cool weather, and upon animals which have at least attained the age of two years.

IS DEHORNING CRUEL?

Inquiries are frequently received as to whether the operation of dehorning is very painful, and whether it may not be classed as cruelty to animals. Those who have had an extensive experience in dehorning appear to agree that the pain induced by the operation has been greatly overestimated, as careful observation has shown that shrinkage in the yield of milk as well as of butterfat following the dehorning of cows is very temporary and insignificant. On the other hand, the worry, pain, and cruelty often inflicted by cattle upon their mates before being deprived of their horns is much more to be considered, and not infrequently results in the death of a valuable animal. A neighbor on an adjoining farm to that owned by the writer a few years ago lost two good milch cows in one winter through their being disemboweled by the horns of barnyard mates while out for exercise. He dehorned his entire herd almost immediately afterwards. The increased safety of the animals much more than compensates for any loss of beauty resulting from the removal of horns.

DEHORNING ON THE RANGE.

While the cattle ranchman of the West seems to be equal to every requirement and emergency of his vocation, and is probably informed with regard to the dehorning of his stock, this article would be incomplete without a description of the dehorning operation as practiced in that part of the country.

In the range country of the West dehorning has been extensively practiced for a number of years, and various methods have been used in restraining the animals, as well as in removing their horns. In some instances the methods used are extremely crude, consisting in simply roping and throwing the animal and cutting off the horns with an ax. Most frequently, however, no matter what may be the means of control, either the saw or the dehorning shears are used. As a general thing the corral and chute which form a part of the equipment of every well-appointed cattle ranch are used for this purpose. Dehorning with an ax should never be attempted, as, no matter how keen the edge of the ax or how true the aim of the axman, he is working on a living animal, and only a slight movement of the head would result in a deviation of the stroke, and would thus be liable to cause,

if nothing more serious, the infliction of unnecessary pain and suffering to the animal.

It is the usual custom in the West to gather the cattle to be dehorned in a corral, either during the early spring, before the fly season begins, or in the fall, after the fly season has passed. At one side of this corral is a gate opening into another smaller inclosure, which is known as the chute pen. The sides of this converge to form an entrance into a narrow chute, which is usually made long enough for about three cattle, though but one is permitted to enter the working end of the chute at a time, the others being kept back by cross-bars. At the front end of this chute is what is known as a squeezer,



FIG. 5.—Dehorning a steer held in a "squeezer" connected with corral.

the formation of which is best understood by a reference to the illustration (fig. 5). After the animal enters the squeezer the squeeze gate is pressed close against its side to prevent lateral movement, the stanchion is closed on the neck, and the head is turned and secured to the post by means of a nose clamp and lead rope, first at one side of the chute and then the other, as required for the removal of the horns.

In the construction of these chutes it is usual to have on the side opposite the squeeze gate a movable plank which can be taken out to expose the side of the animal for branding. In the entire construction of such a corral and chute it is best not to economize in lumber or bolts, as it should be strong and durable, so that the animal may be controlled without danger to itself or to the operator.

Another method of restraint is to throw the animal and hold it stretched flat on the ground by means of a rope around its neck held by a man on horseback with a turn around the saddle pommel, a second rope being around the hind feet, similarly held by another man on horseback. In the absence of horses these ropes can be secured by taking a turn around a post. After the animal is thus secured an assistant grasps the nose and upper horn, turning the head so that the lower horn can be removed first. This obviates the danger of fracturing the lower horn, and allows the blood to flow directly on the ground and the head to be held flat for the removal of the upper horn. As shown in the illustration (fig. 6) the dehorning shears are frequently used, but there seems to be a tendency in some localities toward giving preference to the saw.

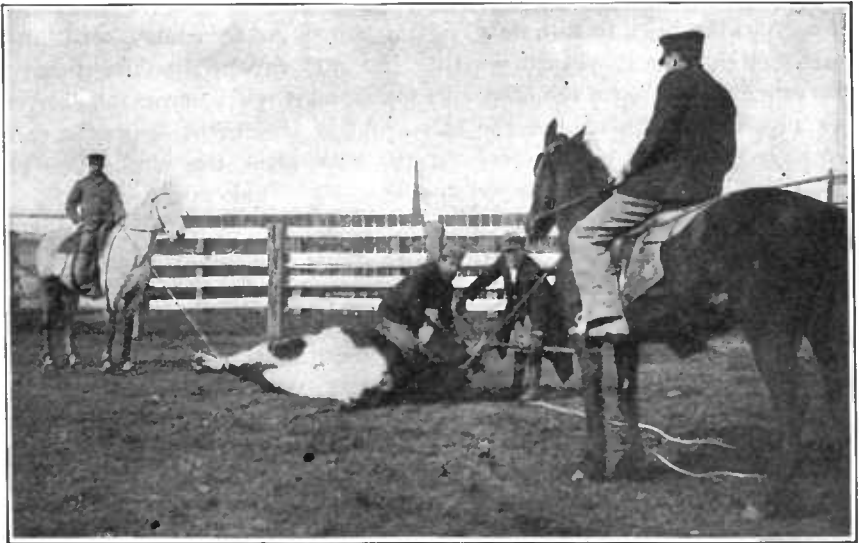


FIG. 6.—Dehorning an animal on the range.

Many ranchmen apply preparations of pine tar and alcohol, or pine tar and turpentine, after dehorning, to lessen the bleeding and keep the flies away.

TO PREVENT HORNS GROWING ON YOUNG CALVES.

When circumstances are favorable, as in the case of farmers who build up their herds by raising the progeny, the horns may be prevented from growing by a simple and practically painless method, and the custom of preventing the growth of the horns is becoming more popular and more generally practiced under all conditions except in the case of calves dropped on the open range. The calf should be treated not later than one week after its birth, preferably when it is

from three to five days old. The agent to be used may be either caustic soda or caustic potash, both of which may be procured in the drug stores in the form of sticks about the thickness of an ordinary lead pencil and 5 inches long. These caustics must be handled with care, as they dissolve the cuticle and may make the hands or fingers sore. The preparation of the calf consists in first clipping the hair from the parts, washing clean with soap and warm water, and thoroughly drying with a cloth or towel. The stick of caustic should be wrapped in a piece of paper to protect the hands and fingers, leaving one end of the stick uncovered.

Moisten the uncovered end slightly and rub it on the horn buttons or little points which may be felt on the calf's head, first on one and then the other, alternately, two or three times on each, allowing the caustic to dry after each application. Be very careful to apply the caustic to the horn button only. If it is brought in contact with the surrounding skin it will cause pain. Be very careful also not to have too much moisture on the stick of caustic, as it will remove the skin if allowed to run down over the face. After treatment, keep the calf protected from rain, as water on the head after the application of caustic will cause it to run down over the face. This must be carefully avoided.

Either caustic soda or caustic potash alone, without the admixture of other substances, answers the purpose satisfactorily. Some years ago, however, certain preparations or "dehorning compounds," composed largely of one or the other of these caustics, were generally used, and as inquiries are still occasionally received concerning such preparations, the following formula is given: Combine in an emulsion 50 per cent of caustic soda, 25 per cent of kerosene, and 25 per cent of water. The caustic soda is dissolved in the water and heated to the boiling point, then removed from the fire, and the kerosene added gradually, while the mixture is vigorously stirred. This emulsion is applied in very much the same manner as the stick caustic, except that it is necessary to employ a short, stiff brush. Sometimes a meat skewer is used, the large end being mashed to form a stubby brush. Two or three applications should be made to each horn button, as in the case of the stick caustic, with intervals to allow it to dry.

In the very young calf the horn button, or point that will ultimately develop into a horn, has scarcely any attachment to the skull, and may be felt as a small button embedded in the skin. In this early stage it may be easily removed with a sharp knife or a pair of curved scissors, but even then caustics should be applied to kill any remaining cell life belonging to this germ point; otherwise there may be some subsequent irregular horn growth, which is more or less of a disfigurement.

FARMERS' BULLETINS.

The following is a list, by number, of the Farmers' Bulletins available for distribution. The bulletins entitled "Experiment Station Work" give in brief the results of experiments performed by the State experiment stations. Titles of other bulletins are self-explanatory. Bulletins in this list will be sent free to any address in the United States on application to your Senator, Representative, or Delegate in Congress, or to the Secretary of Agriculture, Washington, D. C. Numbers omitted have been discontinued, being superseded by later bulletins.

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