

DEHORNING AND PREVENTING HORN GROWTH IN CATTLE

It is generally realized that horns on cattle are a disadvantage and that both feeding and dairy cattle are improved by dehorning, in that they are prevented to a great extent thereafter from causing each other injury. Dehorned cattle also mingle together more quietly and annoy and disturb each other less while feeding and drinking, and as a result make better gains. Another advantage of dehorning is that in shipping fat cattle to market the danger of injuring and bruising each other is lessened and consequently reduces the waste incidental to the removal of bruised parts from the carcasses after slaughter. The economic waste and loss through bruises inflicted by horn thrusts before slaughter is much greater than is generally realized. Bruises from this cause are known to incur a waste in some shipments of about one per cent. of the dressed carcasses, incidental to the trimming and removal of the bruised parts.

The dehorning of bulls renders them more tractable and easily managed, and removes the menace of goring and seriously injuring attendants and others.

The practice of preventing horn growth in young cattle overcomes the objections of those having sentiments against the operation of dehorning adult cattle. This procedure is becoming generally popular and is being practiced to an increasing extent in calves.

Methods of Dehorning and Preventing Horn Growth.

The development of horn growth can be effectively prevented in calves by the use of caustics applied to the "horn buttons or rubbings" soon after birth. To be successful the operation should be done when the calf is two or three days old and, at least, before it is a week old. Before applying the caustic it is best to clip the hair from around the little "horn buttons" on the head. The little "horn buttons" are then moistened slightly and rubbed thoroughly for a few seconds with either caustic potash or caustic soda. After a short time has been allowed for the caustic to dry, a second application is given as before. The caustic can be obtained in small white sticks, about the size of a pencil, and one end should be wrapped in paper or cloth to protect the fingers while applying it. Two or three applications of the caustic, properly done, are sufficient to destroy and prevent the horns from ever developing. The skin around the treated spots should be smeared with a little vaseline and the calf should be protected from rain for a day or more after treatment. This is to prevent the caustic being washed

off the treated spots and spreading to the surrounding skin and into the eyes.

Where calves are allowed to go without treatment until they are several weeks old, and the "horn buttons" have developed into projecting knobs, the caustic treatment is not sufficient to entirely destroy growth and may permit an irregular growth of horn to develop. At this age, the best method is to remove the projecting horn knobs by cutting them off at their base, close up to the head, with a sharp knife or with a pair of calf dehorners. In the case of male calves intended to be kept as bulls, many prefer to defer the dehorning operation until about the age of two or three years, or at a time when the horns are almost fully developed. The deferring of the operation to this time in the case of bulls generally makes them still more tractable than if deprived of their horns while young. In the case of steers and heifers not deprived of their horns while calves, they should be dehorned before they reach the age of three years. In dehorning grown animals, it is essential that they are properly secured and restrained for the operation. For this purpose the animal to be dehorned should be securely fastened in a rack or chute or a solid stanchion. Once the animal is securely fastened, the horns should be removed with as little bungling as possible. For removing the horns, either a sharp meat saw or a pair of Keystones dehorning shears may be used. The dehorning shears are most commonly used, nevertheless the saw is quite satisfactory and serviceable for small numbers. The main feature is to do the operation as quickly as possible and to remove the horn close up to the head, about half an inch below the hair line, thus removing that much of the skin with the horn. If this is not done, there is a likelihood of a secondary growth of irregular horn taking place, forming projecting horn stubs which are undesirable and spoil the animal's appearance. After the horns are removed, no further treatment is, as a rule, required, unless there is severe bleeding. In cases of severe bleeding, the core can be smeared with tar and the opening packed with a piece of absorbent cotton, or with a piece of clean cheese cloth. This dressing can be allowed to remain for a day and then removed and the parts washed off with antiseptic solution, such as a two per cent. solution of Creolin or Lysol. With regard to the best time of the year for dehorning adult cattle, it may be done at any time other than during fly time in summer and during severe weather in the case of cattle wintering outside.

Varieties of Field Roots.

While the adoption of the silo has lessened the use of roots in the feeding of livestock, ensilage has by no means entirely filled their place. Indeed, there are many farms where roots are of great advantage, more particularly where young stock is being raised. Roots, whether they be mangels, turnips, or carrots, are of many varieties and it is well when sowing to know that one is growing the best kinds. The Experimental Farms have made the question of variety a close study, and from their long experience they are able to decide fairly accurately which varieties are best for average conditions. In mangels five varieties are recommended as having shown superiority over other sorts. These are Giant Yellow Intermediate, Danish Sludstrup, Mammoth Long Red, Giant Half Sugar White, and Giant Yellow Globe. The first, third and fourth are recommended for the whole of Canada, the second is recommended for British Columbia and Eastern Canada, and the fifth is especially adapted to the Prairie Provinces. Varieties are sweeter turnips recommended; Good Luck, Perfection and Hall's Westbury are suitable for any part of Canada; Canadian Gem and Hartley's Bronze Top do well in Eastern Canada, and Kangaroo and Baughelm are very popular varieties in the Maritime Provinces. In field carrots five varieties are set down as dependable: Improved Short White is recommended for any part of the Dominion; Mammoth White Intermediate is especially suitable for the Maritime Provinces for Southern Alberta, where grown under irrigation, and for British Columbia. White Belgian has shown itself particularly good in the Prairie Provinces. Ontario Champion is a heavy yielding variety both in Ontario and Quebec. Danish Champion is considered a favorite sort for the Eastern Provinces. This information is taken from Special Circular No. 9, obtainable from the Publications Branch of the Department of Agriculture at Ottawa. It also gives the quantities of seed to sow per acre, the time and method of seeding.

Horse Sense

Let me give you my experience in treating lame horses. I have been smiting for thirty-two years and have made it a study. Have treated a great many horses for contraction and my best results came from treating the foot thus:

First, pare foot on the toe till the blood runs freely. This is to make the sole thin so the foot will spread. In paring the heel leave a brace in, that runs from the back part of heel to front of frog. Then concave the shoe from back nail to the end of shoe and set it flush with the outside of the hoof on both sides, which will tend to spread the hoof. If you study the anatomy of a horse's foot, you will find a small bone laying crossways in the heel just over the frog and in case of contraction it passes against the horn of the foot near the heel, which is the cause of lameness.

I have tried this treatment many times, and it never failed to cure. I have spread a horse's foot one inch in six months. As soon as the hoof spreads over shoe, remove shoe and widen the rest.

Record Keeping of Dairy Cows.

Nine farmers around Brantford, Ont., reports the Dominion Dairy and Cold Storage "News Letter," besides keeping a record of the milk production for the year 1922, kept account of the feed consumed by each cow, so that at the end of the twelve months it was possible to figure up the net profit from each cow and the average of the different herds. Out of 124 cows, 48 produced over 300 lbs. of fat during the year, and the average profit per cow above feed costs was \$89.29. It is hardly necessary to point out that with a record of the milk production and of the feed consumed by each cow, it is possible to pick out the cows worth retaining. Forms for keeping such records can be obtained by writing the Dairy and Cold Storage Branch, at Ottawa.

The Sunday School Lesson

APRIL 8.

Abraham, the Hero of Faith, Gen. 12: 1-5; Heb. 11: 8-19. Golden Text—Abraham believed God, and it was reckoned unto him for righteousness, Rom. 4: 3.

LESSON FOREWORD.—To-day's lesson gives an epitome of the chief incidents in Abraham's life. To the Old Testament saints Abraham was the ideal Israelite. To the New Testament writers he was the father of all true believers. His is a figure which has fascinated all ages. It is doubtful if there is a grander figure in all literature. In him there appears a certain majesty of person, dignity, courtesy and kindness. Above all there is piety and it is the piety which is rooted in an unshakable trust in God which is only strengthened by the severe trials of his life.

I. The Call of Faith, Gen. 12: 1-5.
V. 1. *Get thee out of thy country, etc.* In the ancient world the individual seldom left his tribe and native place. For among his own people he enjoyed the protection of the tribe and all its alliances. In a foreign land he had no rights.

V. 2. *A great nation.* To the ancient Hebrew, probably the greatest blessing was a numerous offspring. Hence God's assertion that Abraham's offspring would develop into a great nation would appear as a goodly promise. The later Israelite believed that his nation could be traced back directly to Abraham. (See Isa. 51: 2.)

V. 3. *And I will bless thee, etc.* All who prove friendly to Abraham will share in his prosperity and all who are hostile will be afflicted with misfortune. In these shall all families. The Hebrew text may read, "By these shall all the families of the earth bless themselves." Every one who wishes to invoke God's blessing will say, "God make me blessed like Abraham."

V. 4. *Out of Haran;* "an important centre of the caravan trade in north-west Mesopotamia." "It was a city of great antiquity and retained its commercial importance in classical and medieval times" (Skinner). Ch. 11: 81 asserts that Abraham's home was in Ur, of the Chaldees—probably Ur in southern Babylonia where was the seat of the moon-worship. Haran would thus be the first stage of the journey to Canaan.

V. 5. *And the souls;* all the servants and slaves he had acquired there.
II. The Wanderings of Faith, Heb. 11: 8-10.

V. 8. To the New Testament writers Abraham was not only the father of the nation, Israel, but the father of the spiritual Israel—the succession of true believers. When he was called to obey. With no external proofs to substantiate it, he believed that the voice that called was God's and he obeyed. His obedience was an act of faith. Not knowing whether he went. On venturing forth he was guided not by sight but by faith, thus showing how absolute was his faith.

V. 9. *He sojourned.* "The sojourner" is a technical name in the Old Testament for a resident alien. The alien might put himself under the protection of the people with whom he sojourned, or he might remain among them without rights. As a sojourner Abraham would feel that, properly speaking, he did not belong to Canaan. *In tabernacles;* in tents like a nomad. In Palestine to this day there are three classes of residents—city dwellers, peasants and nomads. Both the

city dwellers and the peasants live in cities and towns. The nomad, however, has no permanent residence. He is here to-day and away to-morrow.

V. 10. Abraham is represented as living in tents like a nomad because he looked for a better possession than Canaan could afford. "It will be admitted that Abraham's life in Canaan, dwelling in tents and shifting from spot to spot, did not satisfy his ideal" (Davidson). *A city whose builder and maker is God.* Abraham was really looking for a city whose whole life and appointments would be rooted in fellowship with God. The city which he sought could not be found on this earth. It was the New Jerusalem.

V. 11. *The sacrifice of Faith, Heb. 11: 17-19.*
V. 17. *Offered up Isaac.* See Gen. ch. 22. The supreme proof of Abraham's faith was his readiness to offer up Isaac as a sacrificial victim. There was an outburst of child sacrifice to Molech, the god of the underworld, during the reign of Manasseh. *His only begotten son.* Isaac was Abraham's sole hope for the fulfilment of the promise that his seed would become a great nation.

V. 18. *In Isaac, etc.* Abraham has his son, Ishmael, also; but Gen. 21: 12 shows that the line of succession will be through Isaac and not Ishmael.

V. 19. *God was able, etc.* Abraham is represented as ready to sacrifice Isaac because he believed that God could bring him back from the dead to fulfill the promise. *He received him in a figure.* "The wonderful escape of Isaac was a kind of parable, illustrating the fact of the resurrection" (Scott).

Application.
Genesis has been called a "folk-book" and the story of Abraham and his great adventure is rich in religious stimulus for us still. We may learn such lessons as the following:

1. *All true religion is a growing experience.* Abraham is commanded to leave the old customs and the traditional beliefs of Mesopotamia behind him, and strike out in search of a new and larger faith. So we must make new discoveries in the realm of Christian faith. We must see more clearly that Christ's spirit is to reach everywhere and control every bit of our civilization.

2. Abraham illustrates the fact that life rests on faith, rather than on knowledge. The old hero was to find God in the days ahead, rather than in the past.

3. God is always summoning us as individuals to new regions of faith, new experiences of his grace. The voice is an inner voice, as it was with Abraham. We have no alternative—we must obey as the typical pioneer did.

4. We may "push off" to new faith, and larger endeavor, because God is with us. The future is unknown to us but if he lights up the dark places, what does it matter? He takes care of those who are called to break new ground in any way, in obedience to his voice. Whittier's faith may well be ours:

I know not where his islands lift
Their fringed palms in air;
I know I cannot drift
Without his love and care.

For Home and Country

Bringing Libraries to the Country.

BY G. A. PUTNAM SUPERINTENDENT.

The improving or establishing of libraries is a favorite line of work with the Institutes. One Institute last year gave \$800 toward renovating an old house into an attractive library building with an assembly room for meetings and two reading rooms. On Saturday afternoons they hold a story hour in the library for the children of the neighborhood. They have given a generous grant towards buying new books, and have brought in two travelling libraries. One Institute established one of the best libraries in the province, as a memorial to their fallen soldiers. Others have taken over neglected libraries, or given donations of money to the library board, to buy new books.

Travelling libraries, brought in by the Institutes, are becoming a blessing to many communities, especially in the Northern and more isolated sections of the province. As the express charges on these libraries become rather heavy as they go farther north to the newer sections of the province where they are most needed, a plan is under way to have the express charge made equitable throughout the province.

Caring For Cemeteries.

In many rural sections of Ontario the Institute is responsible for changing neglected cemeteries into places of beauty and order. Sometimes they have made a community bee to do the first work of levelling and clearing the ground, after which they have hired a caretaker, either raising the funds themselves or appointing a committee to get annual subscriptions from the plot-owners. It is rather interesting, that one neighborhood in Algoma has appointed as its permanent Cemetery Board, the reeve of the township, whoever he may be, the Anglican minister, because the rectory is close to the cemetery, and the president of the Women's Institute.

The Institute and Relief Work.

The Institutes are doing much to create a neighborly community spirit, by their quick response to local need or trouble. One Institute in Northern Ontario keeps in readiness a complete infant's layette and an outfit of bed linen in case of need in a poor family. Other Institutes have done the sewing for families of motherless children, paid the hospital expenses of a needy patient in the community, re-equipped homes when a family had been burned out, made quilts for a poor family in the section, given donations of eggs, butter, home canned fruit, etc., to children's shelters and old people's homes, while their response to the call of Northern Fire Relief has been generous almost beyond belief.

Number and Character of Courses.

	No. of Courses	No. in Classes
Food values and cooking	42	1845
Home nursing & first aid	66	2918
Sewing	72	1075
Labor saving devices, etc.	9	831
	189	6169

Plans were made for the holding of seventy courses during January and February, 1923. In addition to the regular demonstration-lecture courses, the Institutes Branch furnished instructors for four months' courses held under the supervision of the Agricultural Representatives. The length of instruction in each line was one month instead of two weeks. This feature of the Three Months' Short Course activities proved very effective, and plans have been completed for furnishing instructors in Home Nursing and First Aid, and Sewing, at eight centres during the months of December, January and February. This Branch is providing resident instructors in Food Values and Cooking, who will be in charge of the girls' work at the centres for the three months. The appreciation of the longer course will, we hope, result in

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the establishment of regular schools in a number of centres.

While instruction of real value is confined largely to the demonstration-lecture courses, nearly every Branch is furnished with a speaker, usually during the Summer Series, to discover ways and means of making the work of the Institutes most effective. 676 such meetings were held during the past year.

Conventions were held as follows: Fort Frances, October 11 and 12. North Bay, October 18, 19. Ottawa, October 24, 25, and 26. London, November 7, 8, and 9. Toronto, November 21, 22 and 23.

At these conventions the delegates from the territory covered had an opportunity of discussing the problems peculiar to their own districts, exchanging information and views as to effective methods of carrying on the work and formulating plans for future activities.

Girls' Work.

There are now about sixty girls' Institutes in the province, specializing in the study of various lines of home craft and in arranging wholesome forms of community recreation and education. The girls' Institutes usually co-operate closely with the Women's Institutes in their regular work, and with the Junior Farmers' Association in their social activities to the benefit of the whole community.

St. Paul's Cathedral covers an area of two and a quarter acres.

"Know thy work," said the sage, "and work at it like a Hercules. One monster there is in the world: an idle man."

The supreme prayer of my heart is not to be learned or "good," but to be radiant. I desire to radiate health, cheerfulness, sincerity, calm courage and good-will.—Elbert Hubbard.

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Bedtime Stories

Waking Grandma.

Mamma said, "Little one, go and see if grandmother's ready to come to tea."

I knew I mustn't disturb her, so I stepped as gently along tiptoe, And stood a moment to take a peep— And there was grandmother, fast asleep.

I knew it was time for her to wake, I thought I'd give her a little shake, Or tap at her door, or softly call; But I hadn't the heart for that at all— She looked so sweet and so quiet there, Lying back in her high armchair, With her dear white hair and a little smile.

That means she's loving you all the while.

I didn't make a speck of noise; I knew she was dreaming of little boys And girls who lived with her long ago, And then went to Heaven—she had told me so.

I went up close and didn't speak One word, but I gave her on the cheek The softest bit of a little kiss, Just in a whisper, and then said this:

"Grandma, dear, it's time for tea." She opened her eyes and looked at me, And said, "Why, pet, I have just now dreamed Of a little angel who came and seemed To kiss me lovingly on my face"— She pointed right at the very place. I never told her 'twas only me. I took her hand and went to tea.

Better Rhubarb, Higher Prices.

Better rhubarb and higher prices can be secured by placing empty barrels (with air holes in top, say six inches each way) over the stalks. Put the barrels in place when the plants are from nine to twelve inches high. The stalks draw near the top of the barrels in about two weeks and have a light pink color, crisp and tender. After the forced stalks are cut off, let the plants grow on for the remaining part of the season without repeating. When it is convenient have two separate lots. When those on one lot have been barreled, let the plants grow next season and use the barrels on the other lot. In this way the plants will always be strong and ready for forcing the next season.

Poultry

A Hen that consumes 80 pounds of feed in a year must lay 70 eggs to break even with her owner.

This statement is the result of a recent test. The grain consumed to produce a dozen eggs will vary greatly, depending upon the skill of the poultryman, but it is assumed that he knows how to feed economically. The general purpose fowls and Leghorns used in this feeding work were kept on the test while yet pullets and yearlings.

The general purpose pullets ate in a year an average of 6.7 pounds of feed per dozen eggs produced and the yearlings at 9.6 pounds. The Leghorn pullets ate 4.8 pounds and the yearlings 5.5 pounds. The general purpose pullets ate 1.9 pounds more feed in producing a dozen eggs than the Leghorn pullets and the difference increases very rapidly with the age of the stock, the general purpose yearlings consuming 4.1 pounds more feed per dozen eggs than the Leghorn yearlings, therefore the latter produced eggs upon much less feed than the general purpose breeds.

Meat scrap or some other animal feed high in protein is the one essential constituent of the mash which can not well be omitted. A pen of pullets on free range which did not get meat scraps, or any other animal protein feed, laid only 90 eggs each in a year, compared with yields of 125 to 150 eggs from hens fed rations containing meat scrap. The eggs from the pen where no meat scrap was fed cost 2.2 cents more per dozen for feed than when the meat scrap was included in the ration.

I Test Seed Corn Early.

I like to get my seed corn tested early in the spring, before other work gets too pressing. For as long as I can remember, my father before me tested every ear before it was planted. Last year we used the rag-doll method, so we could spot the ears that had root rot. The field that had the most poor and down corn was the one where we had to use some seed that showed evidence of root rot. The diseased grains show bright red, green, or sometimes purple stains on the cloth. It only cost a few cents an acre to test every ear, and I am sure it is as well worth while as any work I ever did. I estimate testing means 10 to 25 per cent. better stand. Your county representative or experiment station will supply full details about how to test if you haven't the information.—J. M. H.