

Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

R. T. S. Oxford Co., Ont.—Please advise me how to treat calves to prevent horns growing.

Answer—The growth of horns on the calves can be prevented by treating the button-like spots where the horns would come, before the calves are ten days old. The treatment consists in the application of caustic potash in stick form. Clip the hair away from the buttons, wash with soap and water and dry. Apply vaseline or crude petrolatum so that it covers the head for an inch or so about the margin of the button, being careful to see that no vaseline covers the button itself. The vaseline prevents injury to the skin surrounding the button. Take a stick of caustic potash, wrap it in paper as a protection to the hands, moisten the tip of the stick and rub it on the buttons. Two methods are recommended: (1) rub the buttons gently for three to five minutes until they become red; (2) rub on three or four times, at intervals, allowing the potash to dry on the horn button each time. The latter method will generally give better results. Precautions: (1) Protect the hands; (2) do not let the dissolved potash run over other parts of the head; (3) tie calves up or separate them so that they cannot lick one another; (4) do not let water or rain fall on their heads for a few days.

V. C. T. Prince Edward Co., Ont.—I note that sunflowers have come into favor as silage. Hitherto some have been growing in a corner of my land, but I have ignored them, that is to say they have gone as refuse, except that the chickens appear to enjoy the seed.

Answer—In some sections of the West sunflowers have come to be preferred to corn as silage, but that is in places where corn is not so productive. In Eastern Canada experiments on the Dominion Experimental Farms and Stations have all tended to show that corn is to be preferred. For instance, Messrs. G. W. Muir and S. J. Chalmers, of the Division of Animal Husbandry, in their recently issued pamphlet on "The Winter Feeding of Beef Cattle in Ontario," say definitely that in all localities where corn can be grown at all successfully corn silage is undoubtedly the most satisfactory succulent roughage for the winter feeding of cattle. They add that in Eastern Canada where corn cannot be successfully grown, that is not as a dependable crop, chief of the other crops that can be used economically is probably the sunflower. It will grow where corn will not and yields a heavy tonnage of fairly palatable silage, although at that it does not equal corn silage or even good pea and oat silage. It takes the same place as corn in the rotation and is planted, cultivated, and harvested in the same way, the cutting being done when the sunflowers are about twenty to thirty per cent. bloom. At the Central Experimental Farm in Ottawa last year they gave the same tonnage and cost practically the same per ton in the other silage as did corn. In a feeding test with dairy cows they gave almost equal results. They should be equally well

suited to feeding beef cattle. One disadvantage is that they are not easily cut.

Constant Reader, Welland Co., Ont.—Some of my fowl appear to be affected with roup. What is the remedy?

Answer—You do not say what part of the throat or head is affected. The Dominion Poultry Husbandman states that it has been found at the experimental farms that if the complaint affects the eye before definite swellings appear the administration of a teaspoonful of Epsom salts to each fowl and repeated bathing of the eyes with a solution of boracic acid—one-half teaspoonful dissolved in a teaspoonful of warm water—will usually effect a cure. If the birds have developed a peculiar rattle in the throat, they should be removed to warm quarters with artificial heat and given a dose of Epsom salts. If white patches have developed within the mouth cavity, and cankerous growths have formed at the entrance to the windpipe, remove the matter daily and cauterize by using a caustic pencil or by the application of tincture of iodine. If the canker extends downwards to the windpipe anticipate death from suffocation by killing the bird.

Enquirer, Norfolk Co.—What do experiments show to be suitable grain mixtures for fattening cattle?

Answer—In making a grain mixture, feed on hand and possible to purchase must be kept in mind as also the economy of the latter figured on nutritive and material value. The following mixtures worked out from experiments conducted by the Dominion Experimental Farm and are recommended in Pamphlet No. 21 of the Department of Agriculture at Ottawa on the "Winter Fattening of Beef Cattle in Ontario," allow for selection according to circumstances:—

No. 1—Bran, 1 part; oats, 1 part; barley or corn, 2 parts; oilcake or cottonseed meal, 1 part. Increase corn or barley to finish.

No. 2—Bran, 1 part; barley or peas, 1 part; or oats, 2 parts; corn, 2 parts; oilcake or cottonseed meal, 2 parts.

No. 3—Bran, 1 part; oats, 2 parts; barley, 1 part; corn, 1 part; oilcake meal, 2 parts.

Replacements of grain, other than those indicated, might be, gluten meal in place of oilcake or cottonseed meal; a good quality of re-cleaned elevator screenings in place of oats or barley; extra oats or screenings in place of bran; and gluten feed in place of corn. Of the two highly protein feeds, oilcake and cottonseed meal, the former is to be preferred when there is a limited succulence in the ration.

In recommending feeding the grain mixture at from 1 to 8 pounds or more per day, according to the ration used, it is to be understood that the steers receive one pound per day, at the start, and up to eight pounds at, or near, the finish. The usual rate of increase is one pound per week. The grain ration may be started at once, or delayed a few weeks, according to the condition of the steers.

Poultry

This is the gist of a talk on poultry feeding given by Prof. L. E. Card, an authority on the subject:

He recommends a mash, consisting of equal parts of bran, flour middlings, cornmeal, ground heavy oats and beef scraps. Heavy ground oats was specifically mentioned for this mash, as the hens cannot stand very much food fibre such as may be found in light oats. For a grain feed, he recommends equal parts of corn and wheat, the measured part of which should be kept about even. For instance, for Leghorns, he recommends the feeding of two pounds per hundred hens of scratch feed in the morning and six pounds in the evening. For the heavier breeds he recommends about three pounds in the morning and seven in the evening.

His purpose in feeding light in the morning is to encourage the hens to eat the mash, so as to get their required proportions of meat scraps. Hens naturally like scratch feed the best, but if fed light early in the day, they will fill up on mash and then in the evening will finish up on scratch feed. By this system of feeding they will eat more than they would ordinarily.

In order to keep the hens in good laying condition he recommends that the scratch should gradually be cut down, starting about the first of March, until about the first of November they will get about half as much as recommended above. In other words, Leghorns will receive approximately one pound of scratch feed in the morning and three in the evening. This is to encourage the hens to eat more mash in order that they be prepared to do their active laying during the fall months when egg prices are high. Starting November 1, the scratch feed should be increased gradually until the full amount is given.

He says many poultry feeders make inquiry about the use of tankage, in-

stead of beef scraps. From his experience he finds that tankage will not produce the number of eggs that beef scraps do. But if it can be bought at \$10 per ton less than meat scraps, it would be worth using as a substitute, as the meat scraps will not produce enough more eggs to make up the difference in cost.

Making a Rooster Crow.

I want to tell the movie folks that a rooster can be taught to crow at any time and as often as desired. When I was a boy, a friend gave me a Cochon-Chine rooster. I took good care of him, and he grew to be a whopper.

Corn in those days was the main grain feed for stock, and every day I had to chop corn in the crib for eight or ten cows. The rooster, with a lot of hens, was always present to pick up the stray grains. When the supply of grains would become slack, Cochon, by way of passing the time of waiting, would stretch up his neck and pour forth one of his calls that fairly made the woods ring.

One day I threw him a grain of corn while he was in the act of crowing. His ludicrous efforts to beat the hens to the corn while crowing out his song, which he seemed unable to stop till he had run the full gamut, but ended in a mixed staccato and screech, as he bent his neck to pick up the morsel, was too comical not to have it repeated.

Every day thereafter I put him through his repertoire. He soon learned that he could earn corn with his music and he grew lavish with encores.

As soon as he got the grain down, or if the hens had beaten him to it, he would immediately straighten up and crow again. This he would continue until he could get no more corn down.

I could set him to crowing any time he was not too full. I am sure I can prove the possibility of it by training another rooster to do the same thing in a very short time.—J. S. Sargent.



A NEW DIGNITY FOR JAPANESE WOMANHOOD

The slavery of the picturesque Geisha Girls, which has existed as long as the history of Japan, has been abolished by a court decision. The Geishas were girls sold in early childhood by parents who could not afford their support, and were trained as entertainers.

Free Distribution of Grain.

A free distribution of superior sorts of grain will be made during the coming winter to Canadian farmers by the Cereal Division of the Experimental Farms Branch, Ottawa.

The samples will consist of spring wheat (about 5 lbs.), white oats (about 4 lbs.), barley (about 5 lbs.), field peas (not garden peas—about 5 lbs.), field beans (about 2 lbs.), flax for seed and flax for fibre (about 2 lbs.).

The Cereal Division of the Experimental Farms Branch has improved many of the old varieties of grain and introduced many new varieties. The best of them have been multiplied and propagated under direct supervision of responsible officers on the Experimental Farms both east and west. This seed will form the bulk stock from which the various samples will be taken. The seed is therefore the purest and best that is obtainable. Of some of the more recent introductions, there is only a limited supply, so it would be advisable to apply as soon as possible for these.

Among the grains for distribution will be found the Liberty hullless oat, an oat that is excellent for human use, and to a limited extent for young livestock. Among the wheats, the most outstanding for distribution will be the Ruby wheat, a wheat that ripens from eight to ten days earlier than Marquis and is suitable for districts where Marquis is not early enough.

This year among the barleys will be found Charlotteville No. 80. This is a two-rowed barley that has a tendency to drop its awns. The supply of this variety is very limited. We hope also to distribute Himalayan barley, a hullless variety which is a good yielder and suitable for young live-

The Ontario Veterinary College, which has moved from Toronto to Guelph, is starting with an enrolment of 86 students.

The estimated value of crops grown annually in greenhouses in Canada is upwards of three millions of dollars, and the area under glass is stated to cover about six million square feet of space.

Caring for the Herd Sire

It has been said that "the bull is half the herd," but the truth of the matter is that, weighed in the milk scales and in the annual balance sheet, he is far more than half the herd. In truth, the whole success and future of the dairy industry depends upon the bulls used by dairymen. The purebred sire undeniably stamps his progeny with the "trade-mark" of his own breed, and his owner soon feels the direct benefits resulting therefrom.

For the farmer of average means the best plan is to buy a young bull whose maternal ancestors during several generations showed great yearly milk and butterfat production records. Only bulls which have the backing of closely-related, high-producing ancestors can improve a herd. Keep this in mind: Most good bulls are registered, but not all registered bulls are good. The prepotent bull stamps his calves with his own desirable qualities. Therefore he must have desirable qualities, and he must be strong and energetic in order to unfailingly pass them on. Look for the wide muzzle, the broad forehead, prominent eye, deep chest, big barrel, open-jointed frame, long, straight rump and loose skin, all combined in the good-sized animal. In addition to outstanding masculinity, strive for vigor and vitality in the new herd sire. Beware of the undersized, lazy, dull-eyed bull; he is never a money maker for his owner.

See that the bull gets plenty of exercise. It will improve both his physical condition and his temper. Do not keep him "jailed" day after day in a small box-stall. Give him a strongly-fenced exercise lot, provided with some sort of shelter against sun and rain and flies; here he may exercise at will. Feed him for masculinity rather than for fat. See that his winter quarters are light, well ventilated and sanitary. Handle him frequently and gently while he is still young; it will then be easier to manage him when he grows older. Use a bull-staff at all times, and insist that the hired men do likewise. Remember that the docile bull—so-called—that does the damage and gives us the facts for items such as this, so commonly seen in daily and weekly newspapers: "Farmer Gored to Death by Bull." How often the report goes on to state that the offending animal was the "pet of the family." The safe bull is the one that is never given an opportunity to be otherwise, and that not permitted to run at large in the pasture with the cows.

Many young growing bulls are underfed, whereas the aim should be to get early, steady and rapid growth that guarantees size, stamina and vitality for the mature animal. A good growing ration for the young bull is: Skim-milk, clover or alfalfa hay, silage or roots, one to five pounds, depending upon his age, and one-half to one pound of the following grain mixture: Oats, three parts; wheat bran, one part; corn, one part; and oilmeal, one-tenth part. The mature bull requires feed that gives strength and vitality, but not fat. He should receive from eight to fifteen pounds of silage daily, but no more. A good ration for him is: Silage, eight to fifteen pounds; hay, eight to twelve pounds; and grain mixture, two to four pounds, consisting of three parts of oats and one part of wheat bran.



HOW CANADA AIDS HER FARMERS.

The map shows the Experimental Farms and Stations established from one coast to the other, and up into the Yukon, by the Government, in an effort to work out the agricultural problems of Canadian farmers.

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Parents as Educators

Don't Be Without a Library in Your Town

BY MARY COLLINS TERRY.

"It can't be done." "How would you simply and get them ready for cir-

do it?" Nobody reads around this place." These were some of the discouraging responses met with when the Interested Mother suggested starting a public library in the tiny western town in which she lived. But there were others who were eager to have it.

"Well, it won't hurt to try," was the determined and cheery response which answered the objections.

There were several things to be considered. Granted she could gain the general co-operation of the town, there were books to be secured, a suitable library station found, and librarians located to take charge. It was decided to divide the town up into districts, and to have these districts canvassed by some of the town people. A meeting was called of all of those who were willing to help, and the enthusiastic response was gratifying.

Prior to the actual canvass for donations of books and magazines, several attractive posters announcing the project were displayed in the churches and village postoffice. One of these read:

"Lend the book you like to your neighbor.

Help start a library for Woodville." One hundred and eighty-seven books rewarded the solicitors. And these were collected by generous automobile owners, and taken to the home of the interested Mother who through previous knowledge of library work was able to catalogue them.

The Parent's Chance.

Farmer Smith greeted us. We found him in the yard by the old windmill which stood midway between the substantial house and the well-painted barn. Nearby three bright, active children were playing.

Ever interested in the boys and girls, we inquired as to the progress they were making in school. To our surprise the father did not know the grades the children were in, the studies they were then pursuing, nor the name of the teacher. He called the oldest child and she answered our questions.

In the barn we were led to an enclosure where the purebred herd sire was imprisoned. Mr. Smith pointed out the merits of this sire and gave us off-hand the pedigree of the animal back four generations on both sides. He further demonstrated his familiarity with Holstein lore by giving similar information about several of his best cows.

Now, Brother Smith should be commended for acquainting himself so fully with the good animals of the breed he is keeping, but we believe that he should be at least equally as familiar with facts concerning the schooling of his children.

Parents everywhere, may it be said in this connection, should keep in mind that these early years in school are all important to the children. It is

then that the first real influences of the outside world are being woven into the tender lives. So every effort should be made to bridge these years without endangering the close companionship already developed in the home under the constant care of the parents. One way of doing this is to maintain an active interest in the children's school life.

Use Potatoes for Silage.

The large crop of small potatoes, left after grading, can be converted into silage by using ordinary barrels for silos or, better still, the larger type such as salmon casks, if available. If some kind of a straw or root cutter is available, it should be used to break up the potatoes, for exposure of the white starchy portion hastens fermentation. Place a layer, six inches thick, at the bottom of the barrel and cover with a light layer of cornmeal. Then another layer of potatoes covered with cornmeal. Continue to alternate these layers until the barrel is full. Use about two per cent. of cornmeal, the purpose being to stimulate fermentation. Cover and weight down. Open in a few weeks and begin feeding about one gallon per head, spread on the grain or silage. When the barrel, or little silo, has been emptied, it can be filled again and again with other lots from the root-house.

Protection of Plants for Winter

A little protection from exposure to the full force of the winter's cold and changes of temperature, and from the depredations of mice will often make the difference between success and failure, hence plants should be annually insured in this way.

If trees are wrapped with paper or protected with wire protectors before winter sets in they will not be girdled by mice which, in the past, have ruined so many trees in Canada. Even the tramping of snow about the trees, when there is snow, will afford much protection, as the mice, working close to the ground, cannot readily get to the tree when the snow is tramped. There have been many discouragements where trees which have been planted for a number of years are girdled by mice just when they should be coming into bearing, but this can be avoided by protecting the trees as described.

Strawberries may come through the winter without much injury for two or three winters without any protection, but a winter comes which is particularly trying on strawberry plants and one may find the plants nearly all dead in the spring, whereas if protected they would come through well. Thus an annual application of clean straw or marsh hay, as a mulch, is recommended. This should be spread over the plants when the ground becomes frozen enough to bear a wagon or just as winter is setting in. Only a light coat is required, just sufficient to prevent sudden changes of temperature by shading the ground.

Where raspberries are injured by winter they will come through better if the canes are bent over shortly before winter sets in and the tips held down with soil. In this way they will be protected sooner by snow. In cold parts of Canada where the snowfall is light it is desirable to lay the canes down as flat as possible and cover entirely with soil.

Many roses need protection to bring them through the winter without being killed. One of the surest methods of having at least the roots and the lower part of the canes remain alive is to earth the plant up, 15 to 18 inches high, making a broad base of soil so that the roots will be well protected with soil, bending over the rest of the cane and holding the tips down with soil. If the upper part is killed there is nearly always uninjured wood where the soil protects it. The canes are then cut back in the spring to the part which has been under the soil and usually there is strong growth. A fine bloom. One of the best ways of protecting climbing roses is to lay them down and put a box over them, filling it with dry leaves and putting a good cover on so the leaves will remain dry. This is a good way of protecting other roses as well. Roses unprotected with soil will often be killed outright, whereas with a good soil protection they will come through in fair to good condition.

It is wise to protect bulbs such as narcissi, hyacinths and tulips. Although they may not be injured in most years, there comes a time when the ground freezes deeply before there is any snow, and then these are likely to suffer, especially the narcissi and hyacinths. It is well, therefore, to have a mulch of manure applied, before the ground freezes, and remove early in the spring. This will also apply to herbaceous plants. Many of these need no protection, but others are benefited by it.

Much valuable and expensive material is lost every year because the owners of it will not trouble to give it the protection which is desirable, and these seasonable hints are written in the hope that they will lead many to take the precaution this year to protect plants which need it.—W. T. Macoun, Dominion Horticulturist.

To Save Value of Manure.

At Geneva, New York bacteriologists have isolated an organism which seems to be especially active in breaking down the nitrogen compounds in manure. While additional work must be done by the scientists, it is possible that this discovery may open the door toward practices which may help the farmer to reserve for agricultural use much of the nitrogen now lost before the manure is placed where the plants can make use of the nitrogenous constituents.

To check the loss of nitrogen from fertilizer, these specialists recommend scattering acid phosphate on manure as soon as possible after it is voided. This practice preserves the nitrogen in the manure, is inexpensive and easily carried out. Not only this, but the acid phosphate increases the fertilizing value of the manure.

An automobile but 7 feet long and capable of doing 100 miles an hour is said to be the smallest practicable one known.

Warm hens are the best layers. Exercise helps to keep them warm. For that reason we need to keep our hens busy. The more they dig and scratch and move about, the warmer they are and the better they will lay. It is a big job for cold hens to lay many eggs.

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