

countries. From experiments carried out at Christiania in the case of corn, oats, beans, peas and meadow grass, it has been demonstrated that seed brought from the far north furnished varieties of remarkable procoity, which only lost their advance after several generations, when they gradually became acclimatized. The fact is recognized by the Norwegian farmers, and the cereals of far northern latitudes are in great request throughout Norway for seed, as it is a matter of no little importance in a country where the summers are so short, to produce cereals at the earliest period possible. With barley for seed from Atten, having a very high latitude, barley can be got in earlier twenty or thirty days during the first year of its being sown. It is also of a greatly superior quality than that grown from seed from a more southern and temperate clime.

Protection of Young Trees.

The winter of 1876-7 was of extraordinary mildness, reminding us forcibly of the winters of Britain; but we cannot expect many returns of such seasons. We should not be lulled into a forgetfulness of what our Canadian winters really are. We should order our garden and farm operations as if expecting some months of intense cold. Only two years ago many of our fruit trees, and even comparatively hardy evergreens, were injured, and some wholly killed, by the severity of the winter.

How are we to protect our young trees from the severe American winter? Is there a possibility of guarding against a recurrence of similar losses? Let us first enquire what has been the immediate cause of the injury done. It is not so much the low temperature that was the main cause of the injury, as the want of moisture in the soil. This drought prevented the supply and the circulation of the sap that are at all times necessary to preserve life in every part of the tree, and consequently the tender branches, the hardier stem and the partially protected root died.

To guard against similar losses it is necessary in the first place to have our young orchards and plantations protected from cold strong winds, and we must preserve sufficient moisture in the soil. The country has been denuded to such a degree that it is now a difficult matter to save even winter crops from being winter killed.

But an evergreen screen, which forms the best protection from winter storms, cannot be grown in a few months, as a wall may be built to order. Our immediate remedy, then, must be the protection of young trees by mulching. Even if there be protection by shade, mulching will be very beneficial. Many materials may be used for mulching. Litter is very much used for this purpose, more so perhaps than any other material. Fresh cut grass, clover or weeds answer equally well. We have used leaves of trees as mulch more than any other substance; we prefer it as the most natural covering, and when they are decomposed, add greatly to the fertility of the soil. Sods with the grass underneath also serve for mulch. Mulch is applied during the fall and early winter to protect from winter killing. Early in December is a good time, if the season be sufficiently open. It is applied in spring at the commencement of vegetation. This application is more suitable to light dry soils. Mulch is also applied before midsummer as a protection against the extreme heat and too great evaporation. But our present writing has reference especially to winter killing.

Protection is beneficial for more than one purpose. It prevents the excessive drought of the ground, produced by evaporation; it also prevents the frequent freezing and thawing of the ground, that are often of so great injury. In spring mulch-

ing serves to preserve moisture in the ground, and retards a too early vegetation. Mulching is also a valuable agent in preventing the growth of weeds and in keeping up the fertility of the soil.

Agricultural Societies.

Our Government has wisely granted money for the encouragement of Agricultural Societies. These societies have the option of expending the money they receive for improvement of stock, procuring new seeds, agricultural publications, agricultural exhibitions and other useful purposes. The principal portion of the money is expended on exhibitions. In some parts of the country there is not sufficient interest taken to enable the inhabitants to obtain their due share of the public money. This lack of unity, or the lack of judicious management on the part of the directors, is sometimes the cause; but most localities now have a good working society, although as a general thing farmers take too little interest in the annual meetings. The business is too often left in the hands of a few. We should try and make the annual meetings of more interest. An hour or two spent in discussion before the election of officers takes place might lead to beneficial results. A good lively contest for the different offices is also beneficial. It is an honor for any young or old farmer to attend an agricultural meeting and show where any improvement in the management might be made. If his views are correct some one will nominate him as a director, and he may become President or Secretary of his society. If he manages that society well he should then be fit to act as one of the directors of the Provincial or Dominion Boards.

There is much room for improvement in every society. If we could awaken as much interest in the management of these societies as there is in our political affairs we might be devoting our time to the most profitable and perhaps the most honorable purposes. The person who complains that justice has not been done him and says that he will not attend the meetings or have anything to do with a society, is not as useful a member of any community as one who sees an error, comes boldly forward at the annual meeting and condemns it, and suggests improvements. Even our Provincial Directors would be improved by a good, strongly contested election for every one who has a voice in the Board. There are good men on the Board, but there are many men out of it that would fill the Directors' chairs better than some of them are filled now. The plan we have heard suggested of fixing the Provincial Exhibition permanently in one locality, we do not approve of; neither do we approve of the plan of having Directors permanent.

The expenditure of four thousand dollars per annum for the maintenance or benefit of the Short-horn class of cattle is far too much in proportion to the expenditures for horses, sheep, grain and all other farm stock, and the expenditure of four thousand dollars of the Exhibition money for a Veterinary College at Guelph and the meagre expenditure for the last Exhibition deserve the attention of every elector. The small encouragement that really valuable cereals receive and the special prizes awarded to Deihl and the Egyptian wheats, should be discussed. The responsibility of bad management or good management rests on every member, unless they let the public know in due time of their disapproval. If any consider they could manage better, they should give publicity to their plans or their objections to existing management. The annual elections for each county or electoral division are held on the third Wednesday in January. The annual township elections are held on the second Wednesday in January. Every farmer should make a note of this.

We hope that in every election a good, strong contest for the honors may take place. It will do old, tried and good servants no harm; it will tend to make dilatory drones awake; it will arouse an aspiring feeling in our young and energetic farmers. In many instances the greatest good that some members could do would be to retire for a season, and thus make a good, lively election, and awaken new energies in the farmers in a section, and after a year or two run again.

We have much pleasure in drawing our readers' attention to the first of a series of articles on veterinary subjects, by Prof. Law, of Ithaca, N. Y.

Prof. Law is well known throughout America as the author of "The Farmers' Veterinary Adviser," and his articles will well repay a most attentive perusal.

Callous Tumor on Shoulder.

BY PROF. JAMES LAW.

A subscriber at Waltonburgh asks "what to do with a callous tumor on the shoulder-blade, about ten inches in circumference and two in diameter, caused by one trace being six inches shorter than the other when plowing?"

From the description given and the alleged cause we infer that the swelling is not on the skin and projecting from it, but under the integument, and having the hide more or less movable upon its surface. In such a case it is the result of a bruise injuring the parts between the surface layer of muscles and the bone, and leading to a persistent hard swelling; and yet, though the swelling feels perfectly solid and firm throughout its whole substance, it may be safely assumed that there is a collection of watery fluid in the centre. The yielding and elastic sensation usually caused by the presence of liquid is done away with in this case by the enormous thickening and hardening of the walls of the sack in which it lies, a thickening caused by the repeated bruising and irritation of the injured part by the collar. The first step in treatment is to make an incision with a sharp knife through the thickened mass, and in a direction towards the very centre of the tumor, until the liquid is reached. There may be very little liquid found, but small as it is it must be allowed to escape, seeing its continued imprisonment by the thick, unyielding structures around proves an insuperable obstacle to recovery. The matter having been reached, the wound should be enlarged to an inch or more, to allow a continuous, uninterrupted escape, until the diseased cavity heals out from the bottom. If the sack is found to extend down for some inches below the first opening, it is always desirable to make a second orifice leading from the outside into the very lowest part of the sack, so that the matter may be allowed to drain away as soon as formed. To favor contraction and healing of the sack, the following lotion may be thrown into it with a syringe daily:—Sulphate of zinc, 2 drachms; carbolic acid, 1 drachm; water, 2 pints. Finally, when the wound has healed, any slight enlargement may be painted every other day with tincture of iodine, and the collar must be carefully padded so as to prevent any repetition of the injury. In some cases the thickening of the walls of the sack is so great that an unsightly and troublesome swelling is left after the sack has healed out completely, and in spite of the iodine. For this there is only one resort, namely, to cut out the diseased mass with the knife.

If we are mistaken as to the character of the tumor, and if it is in the substance of the skin, and standing out as a hard and partially raw warty mass, the best way to deal with it is to get a stout cord of India-rubber, say a tape $\frac{1}{2}$ inch wide, and