HORTICULTURE.

Australian Apple Packages.

It is interesting to note, from time to time, the view held in other countries with respect to various branches of Canadian Agriculture. The following extract from a recent issue of "The Australasian" a weekly, issued in Melbourne, Australia, shows the favorable light in which Canadian fruit reaching that market is held. The importance of the recent standardization of Canadian fruit packages is enhanced by such evidences pointing to the value of uniform packages. With reference to the desirability of establishing a recognized standard throughout the Commonwealth, we read:

"This is a step towards improving the prospects of Australian apples when shipped overseas, for owing to Canadian and American competition during the latter part of the season the Canadian apple-box has demonstrated its superiority over the Australian dump case. When Mr. Samson, the American expert packer, was in Australia, about five years ago, he indicated many advantages the Canadian case had over those in general use here. Apart from the greater ease with which fruit could be packed into the Canadian bushel case, as compared with our cases, he was able to show that when fruit is packed into the bulge package and allowed to settle down properly, it carried far better than when packed in the cases in general use by our growers. His statements have been corroborated many times. If one examines fruit from America when opened in the Melbourne market it is found that the fruit appears in perfect condition, there being no appreciable evidence of bruising, and consequently there is little if any wastage. This fruit travels approximately 1,000 miles by rail before being shipped, and later is opened for inspection. On the other hand, it is found that apples shipped to Melbourne from Tasmania in the dump case, or from Melbourne to Sydney, almost invariably open up showing case marks or bruises caused by the tight packing of the fruit and the subsequent knocks received by the package during transit. The hardwood Australian timbers are not suitable for the manufacture of cases as at present constructed, for they provide for no springiness or proper protection of the fruit. The thinner wood used and the bulge provided in the Canadian package has proved it to be the most suitable for apple carriage, and the additional fact that it is more easily packed are all advantages that are not possessed by the dump case, and a further recommendation is that by adopting it for the export trade we shall be competing under similar conditions as our American and Canadian rivals."

Injury From Mice and Rabbits.

Fruit growers by this time have become more or less accustomed to a certain amount of injury to the fruit, and often to the tree itself, from one or more of the numerous insect pests or diseases. Moreover, the efficacy of spraying as a remedy is sufficiently appreciated that when crops are ruined, or a certain percentage of the trees die from San Jose scale, coddling moth, or blight, it is usually put down to carelessness. Not so, however, in the case of injury from mice or rabbits. One of the most discouraging things in the fruit business is to discover during the winter or early spring that a number of fine young trees in the prime of health and bearing abundant promise of early fruit, have been partly or completely girdled by mice, or have suffered from rabbits to the extent that the bark of some of the main branches has been almost completely eaten off. Mice injure thousands of fruit trees in Canada every year, and in the newer districts where rabbits are not kept down, these also do considerable damage. In some seasons the loss is scarcely notable over the country as a whole, although if it were possible to determine the aggregate loss it would be considerable. In other seasons one hears on every hand of orchards that have suffered from the loss of one up to several hundred promising young trees. It is quite true that, as a rule, with the expenditure of considerable time and patience many of these trees can be saved by bridge grafting, but the unfortunate thing in this connection is that hundreds of fruit growers have never been successful in their attemps to bridge graft injured trees and, therefore, consider a girdled tree as one that will surely die.

Mice, as a rule, and rabbits also, rarely trouble trees that are more than six or seven years old, but this rule is by no means without exception. We have seen large apple trees, fully twenty years old, completely girlded for a distance of from four to six inches from the ground up. It would certainly pay in such cases to attempt bridge grafting in order to redeem, as far as possible, the loss which had occurred through the carelessness of the owner. It is carelessness in most cases when trees are girdled by mice, and certainly in the case of the older trees. Almost always this occurs where an orchard has been allowed to grow up high with weeds or grass, so that during the winter the mice have splendid covering from the snow and protection from the long grass, underneath which they can run their tunnels and carry on their destructive work. Cover crops also may be a harbor for mice, but it is always possible, with a little care and forethought in the fall, to give the trees an adequate amount of protection. Probably the best and most satisfactory means of protecting the trees from both mice and rabbits is to wrap the trunk of the young trees with stout, white building paper. Tar paper is sometimes used, but because of its black color it is considered to have a rather injurious effect upon the bark and trunk of the tree in the early spring months, when, because of the greater directness of the sun's rays, the attraction of black for heat may result in sunscald.

In the case of very young trees, located on sites which are favorable to the lodging of deep snow, this snow very often becomes solidly packed so that rabbits during their nightly runs may reach the branches and sometimes entirely strip them of bark. This is, of course, a very serious injury since it is seldom possible to head a tree in more than one way so as to provide for the greatest future strength and development of the branches. If, therefore, this head once formed is destroyed by injury fatal to the main branches of the tree, the tree must either be pulled out completely or cut off and allowed to form a new head as best it can, or any branches remaining uninjured must be trained to fill in the vacancy and make the best of a bad job. It is, therefore, desirable in such cases that not only should the trunk be wrapped with paper, but the main branches as well to a height sufficient to put the exposed parts out of reach of rabbits. After the paper has been wrapped around the tree and well tied with binder twine, a little earth should be put about the lower end to prevent the mice from getting under it. If they once get a start under the lower edge of the paper, the latter will not stand in their way.

The experience of the Experimental Farm, at Ottawa, however, goes to show that although two thousand young trees have been wrapped with paper for several years in the experimental orchard, there have been practically no instances where mice have gnawed through the paper to get at the tree. These papers, however, should not be left on the trees too long in the spring, else insects, such as aphids and borer beetles may take advantage of their shade and lay their eggs under them, or make it a breeding place. There is also danger of injury to the trunk if it is deprived, for too long a period, of sunlight. Many other devices have also been used, such as sheet iron about the trunk, laths nailed close together, and thin strips of wood the thickness of veneer. All of these devices, however, are exactly on the same principle as the building paper mentioned above. Wire screening has of late years become universally popular, screens of rather fine mesh and extending about eighteen inches up the trunk being considered sufficiently large for mice, but not extending high enough to prevent injury from rabbits. This wire may be wrapped around the base of the trunk, or bent first into a cylindrical form and then slipped quickly into place. These screens can also be obtained from certain firms in such form that they can be used year after year and thus provide a more economical means of protection when a long series of years is considered. The value of furnishing this protection each year cannot be overestimated, since it is very difficult to forecast the degree of danger which will be likely to occur each season. In some cases a fair degree of protection is given by merely throwing up a small mound of soil from eight to twelve inches in height about the base of the trees, and many men rely altogether upon a firm tramping of the snow about the trees, so that the mice cannot drive their tunnels near enough to the tree to do any njury.

There are a number of washes and poisons which have been recommended from time to time, but none have proven universally satisfactory. The Horticultural Department of the Dominion Experimental Farm, however, recommends the following poison as being fairly successful: "Make a mixture by weight of one part of arsenic with three parts of cornmeal; nail two pieces of board each 6 feet long and 6 inches wide together, so as to make a trough; invert this near the trees to be protected and place about a tablespoonful of the poison on a shingle and put it near the middle of the run, renewing the poison as often as necessary." The following formula is also recommended by the Department of Agriculture, Washington, D.C., as a protection from rabbits: 20 pounds of unslaked lime, 15 pounds flowers of sulphur, 40 Imperial gallons of water. Apply to the trunks of the trees with a brush. White lead paint has been used and recommended as a satisfactory treatment on account of its cheapness, permanency and ease of application, as well as for its power to prevent the entrance of borers into the trees. In case any kind of paint is used, the ground should be pulled back from the base of the tree and the bark allowed to dry before the paint is applied, after which the soil should be replaced about the trunk. Lime-sulphur has also been recommended and found very successful in various parts of Eastern Canada. The mixture should be put on very strong and made to cover thoroughly the trunk and main branches. Lime-sulphur, of course, might also be useful in destroying some pests, as well as preventing injury from mice and rabbits.

Commentators in the enemy press are pointing to the importance of agriculture after the war. Agricultural research is pointed out as an absolute essential, and a more intensive system of cultivation is said to be limited in its desirability only by the degree to which an extra outlay of labor and capital can be made profitable.

FARM BULLETIN.

Appointments to O. A. C. Staff.

An Order-in-Council has been approved by His Honor, the Lieutenant-Governor appointing to the staff of the Ontario Agricultural College, J. P. Sackville, B.S.A., as Associate Professor of Animal Husbandry, and R. L. Vining, B.S.A., as Lecturer in Animal Husbandry. Both these men are graduates of Guelph College, and since graduating both have had considerable experience which should qualify them for the positions they are about to fill. Mr. Sackville was on the staff of the Guelph College for some time after graduating, where he did satisfactory work. He later took up journalistic work in Western Canada, and his return to the Animal Husbandry Department at Guelph will, no doubt, be gratifying to the live-stock breeders in the Province, and also to the students at the Institution. Mr. Vining served in the capacity of Agricultural Representative for several years after graduating, then, answering the call of his country, he spent considerable time at the front as Lieutenant, where he received a wound at Passchendale which incapacitated him for further service in the army. Mr. Vining has the qualifications for the position to which he has been appointed. Both these men will undoubtedly give good service to the agriculture of Ontario.

Plowing Competition.

EDITOR "THE FARMER'S ADVOCATE":

In the October 24 issue of "The Farmer's Advocate" I noticed that the Provincial Plowing Match, to be held on the Experimental Farm, Ottawa, had been cancelled. Why could not the Plowing Match be held on something the same plan as the Field Crop Competition? At the present time it is almost impossible for farmers to go any distance to attend a plowing match. Could not five acres be plowed at home, and the Plowmen's Association send a judge to pass on the work? I believe that if this plan could be satisfactorily worked out there would be better plowing done on the average farm. Then, too, at a plowing match held under the present system there may be two competitors of almost equal merit, but one may draw a poor land and the other a choice one. Some men also do better work with their own team and plow than with a strange outfit. I believe that there are a number of young farmers who would compete if they could plow at home, but they think there is no use of entering into competition with professionals, when the work is judged on but a small bit of plowing. Competition in this way would not cause as much excitement as the big central plowing match, but I believe it would be better for the country at large. Could not the Association discuss ways and means of carrying out plowing competitions as above suggested?

Lambton Co., Ont. J. WELSH.

Not Required to Leave Farms.

A notice was recently issued by the Military Service Branch, Ottawa, to the effect that men who, as farmers, had been exempted under the Military Service Act, should apply to the registrars for permission to engage in "other useful occupations for the months during which farming operations cannot be carried on." "The Farmer's Advocate" considered this notice as likely to draw from the farms a considerable quantity of labor which has been secured at a great deal of trouble. The notice read as follows:

"Having in view the importance of leaving a sufficient number of men on those farms, which are actually contributing to the National Food Supply, notice is hereby given as follows:

"1. All members of Class 1 possessing exemption as farmers which is expiring and who wish to remain exempt should communicate with the Registrars under the M. S. A., of their respective districts, requesting an extension in time of such exemption. Questionaries will thereupon be issued to these men by the Registrar and they will receive further exemption upon furnishing satisfactory proof that they are contributing sufficiently to the National Food Supply.

"2. In order to facilitate productive employment during the winter months, men exempted as farmers should apply to the Registrars for permits to engage for the winter in some occupation of national interest such as lumbering, munition work, etc. Such permits will serve to enable exempted farmers to pursue other useful occupations for the months during which farming operations cannot be carried on."

Shortly after the appearance of the above notice, instances came to our notice of men who were needed on farms but felt that they were compelled to move to the cities and engage in munitions, or other work of national importance, aside from farming. Realizing that this idea might become widespread and that the wording of the notice might lead to a mistaken impression, "The Farmer's Advocate" took the matter up by letter with both the Military Service Branch of the Department of Justice and the Minister of Agriculture, Hon.T. A. Crerar.

A reply received from the Director of the Military Service Branch is quoted in part herewith, and will serve to allay the fears of many farmers who may have felt concerned at the prospect of having to face the winter work with insufficient help:

"The advertisement in question has only reference to surplus labor on farms and it is entirely discretionary