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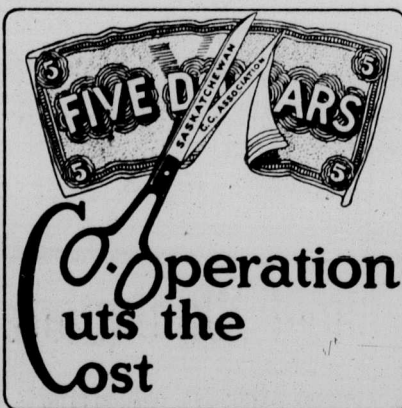
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Field Crops

AN INCESSANT WAR

By C. Gordon Hewitt, Dominion Entomologist, Department of Agriculture, Ottawa, in the Agricultural Gazette.

In times of peace agriculture is the most important industry of Canada; at such times as the present, when the chief agricultural nations of Europe are engaged in the most terrible of wars, it becomes a supreme necessity to the Empire as a whole. The national food supply and the imperial food supply must be secured and maintained. A Swiss motto, "To cultivate the soil is to serve one's country," is more than ever applicable to every man engaged in Canadian agriculture today. The most important fact to realize, however, is that we must not be content with maintaining our present rate of production, but that every effort must be made to increase our production to the highest point attainable. In time of peace such an effort is wisdom, in time of war it is a vital necessity.

Crop Destruction by Insects

One of the chief factors affecting production in Canada today is the destruction caused by insect pests. All crops are affected, field, orchard and forest. It is the wrong policy to take all the necessary steps to increase production directly if at the same time every effort is not made to reduce the causes which decrease production, the chief of these causes being insect pests. The average loss due to insect pests varies from ten to twenty-five per cent. A large proportion of this loss could be prevented even with our present knowledge of methods of insect control, which is by no means perfect. We cannot at the present time afford to allow losses that are preventable to occur. Therefore, it behoves every farmer, every fruit grower and every forester to take steps or to redouble his efforts to prevent losses due to insect pests, and thus increase production. The fight against insect pests is an incessant war; it demands, above all things, watchfulness. Insect pests are insidious foes and in many cases their presence is not known until they increase in so great numbers that their depredations assume serious proportions. This fact has been illustrated during the last two years by the outbreaks of such insects as the army worm, tent caterpillars, pea aphids, locusts, cutworms in Alberta and others that might be mentioned. These outbreaks have occasioned very serious losses which could have been prevented in most cases, and far greater losses were prevented where the necessary steps were taken.

Most farmers appreciate the significance of the constant outbreaks and invasions of insect pests, but the majority do not realize the continued destruction which goes on year in and year out, often unnoticed, and which reaches its climax in a general outbreak. It is this continued destruction year by year that we must exert ourselves to prevent, especially at the present time when we cannot afford to permit any loss that can be avoided. Therefore, in addition to calling special attention to these facts, inasmuch as they now have a special significance, it is considered desirable to indicate as briefly as possible some of the more general measures that may be adopted with a view to decreasing the annual loss due to insect pests.

Control of Insect Pests

The first essential is clean farming. This involves the destruction of weeds; not only because these enemies of the farm take the food and the place of the crop, but because they also afford permanent breeding places for many insect pests. Fences and hedgerows should be cleaned up. Rubbish and litter, under which numerous noxious insects hibernate, should be collected and burnt. Where grain is sown, the volunteer crop which comes up and which nourishes certain cereal pests such as the Wheat Midge and Wheat Stem Maggots, should be destroyed. After a crop such as cabbages or roots has been harvested, clean up the field and burn the rubbish which would otherwise serve as food and shelter for

insects. A clean field and a clean orchard will mean larger crops.

Special attention should be paid to cultivation. If the ground is properly prepared in the spring with a view to the production of a strong growth, the plants will be in the best state to resist any insect attacks which may occur. A poor growth cannot withstand insect injury. If the crop has been attacked during the year by insect pests such as certain insects affecting the stems of cereals or root-destroying grubs such as white grubs and wireworms, deep plowing in the fall should be adopted. In the case of grain the stubble is buried deep enough to prevent the emergence of insects which attacked the plants and are passing the winter in the soil. In the case of white grubs and wireworms which pass the winter at some distance below the surface of the soil, their shelters are broken up and the unprotected tender grubs are in a large measure exposed to adverse climatic conditions. Summer-fallowing aids insect control.

The rotation of crops is an excellent means of preventing or controlling certain insect pests. The repeated sowing of the same crop provides a rapid means of increase for insects affecting that crop. In certain cases the best method of controlling an insect is to change the crop. There are certain facts which should always be remembered: if land is infested with white grubs or wireworms do not plant corn or potatoes in the following year, but sow an immune crop, such as buckwheat or clover. Also, grass land when put into cultivation is apt to be infested with root-eating insects such as wireworms and steps should be taken accordingly.

Protect the Birds

Too much stress cannot be laid upon the urgent necessity of protecting our native birds, the majority of which constitute our most valuable allies in our war against insect pests. Very few of our birds are really harmful, most of them destroy enormous quantities of insects annually. The policy of the agriculturalist in regard to the birds should be not only non-destructive but also one of active encouragement. The encouragement of birds about the farm involves little expense or labor. Nesting boxes can be made out of rough slabs of lumber or old shingles; these should be distributed about the farm or in the woodlot. Here and there on the farm a few bushes and thickets should be permitted to grow to serve as shelters and nesting sites. The shooting of wild birds should not be permitted on the farm. In a future article it is intended to discuss more fully this important matter of protecting and encouraging the birds on the farm.

In conclusion constant watchfulness should be practised. The first signs of anything suspicious should be immediately investigated, and if there is any doubt as to the cause of the trouble or its cure the Dominion or Provincial Department of Agriculture should be consulted without delay. Neglect to take action or delay may mean the loss of a whole crop. Such a loss at any time would be unfortunate, but during the period that is before us we cannot afford to permit it.

CORN GROWN SUCCESSFULLY

The Saskatchewan Department of Agricultural Extension has received from Charles A. Johnson, manager of the Weyburn Security Bank, Weyburn, a cob of corn of the variety which was circulated thruout the West a few years ago by the Manitoba Free Press, known as the Patterson corn. This corn has a very excellent cob, ten rows of mature kernels, and Mr. Johnson says that the grower of the corn, George Larkey, Weyburn, raised over five hundred bushels of this variety. The excellence of the corn as a table variety and also of the fact that it is early maturing would make it a very valuable addition to the growing crops of many of the farmers of Saskatchewan, especially of the south west portion of the province.

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all. Something new and different, something delightful and healthful, something instantly successful. You do not have to wait, and linger and pay out a lot of money. You can stop it overnight—and I will gladly tell you how—FREE. I am not a doctor and this is not a so-called doctor's prescription—but I am cured and my friends are cured, and you can be cured. Your suffering will stop at once like magic.

I Am Free—You Can Be Free

My catarrh was filthy and loathsome. It made me ill. It dulled my mind. It undermined my health and was weakening my will. The hacking, coughing, spitting made me obnoxious to all, and my foul breath and disgusting habits made even my loved ones avoid me secretly. My delight in life was dulled and my faculties impaired. I knew that in time it would bring me to an untimely grave, because every moment of the day and night it was slowly yet surely sapping my vitality. But I found a cure, and I am ready to tell you about it FREE. Write me promptly.

RISK JUST ONE CENT

Send no money. Just your name & 1 address on a postal card. Say: "Dear Sam Katz: Please tell me how you cured your catarrh and how I can cure mine." That's all you need to say, I will understand, and I will write to you with complete information, FREE at once. Do not delay. Send postal card or write me a letter today. Don't think of turning this page until you have asked for this wonderful treatment that can do for you what it has done for me.

SAM KATZ, Room B2777,
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