

GARDEN AND ORCHARD.

The Codling Worm of the Apple.

By Prof. Lochhead.

The Codling worm is the cause of greater loss to the apple industry than any other insect. The extent of the loss to Ontario alone runs up every year into the hundreds of thousands of dollars, and into the millions in the United States—all because the remedies which have been discovered by the entomologists have not been applied by the apple-growers.

While there is but one brood of the Codling moth east and north of Toronto, there are two broods west and south of the same place. The different stages of this insect pest should be familiar to the apple-grower, for only with this

treated. For the scab two additional sprayings are necessary—one before blossoming and one in July.

The Bordeaux-Paris green mixture is prepared according to the following formula:

Copper sulphate or bluestone	4 pounds.
Fresh lime	4 pounds.
Water	40 gallons.
Paris green	4 to 6 ounces.

The bluestone is dissolved in 15 to 20 gallons of water in a barrel, and in another barrel the lime is slacked carefully, and 10 to 15 gallons of water are added to make a milk of lime. Then the contents of the two barrels are poured into the spray barrel through a strainer. Finally the Paris green is made into a paste with water and put into the barrel along with the Bordeaux. It is very necessary that the agitator should work while the pumping is going on, so as to keep the Paris green well distributed throughout the mixture. Use a good spray pump, and spray the trees carefully at the times mentioned above.

The practice of banding trees is commendable, but everything taken into account, is more expensive than spraying, and is, moreover, actually harmful, unless the bands are examined and the larvae destroyed every ten days or two weeks during the latter half of June and all of July.

Every fruit-grower should acknowledge the value of such birds as the chickadee, downy woodpecker, nuthatch, bluebird, swallows, wren, and song sparrows, in checking the increase of the Codling moth and other injurious insects, for without them fruit could scarcely be grown. Encourage the birds, therefore, to come about the orchard by keeping the gun at a distance, and by punishing the robber of birds' nests.

Ontario Agricultural College.

N. B. Fruit-growers' Association.

Mr. Thos. A. Peters, Deputy-Commissioner of Agriculture in the Province of New Brunswick, has been chosen to fill the position of Secretary of the New Brunswick Fruit-growers' Association, organized in December at the Maritime Winter Fair. Mr. Peters, in his official capacity, takes a special interest in horticulture, and for the past two years in particular has had to do principally with the work of planting out the illustration orchards, which the Local Department of Agriculture is setting out on private farms in various localities, with a view to demonstrating the fruit-growing capabilities of the Province, and introducing up-to-date methods of orchard culture.

As an ardent horticulturist and a publicist, in touch with the prominent fruit-growers of the Province, Mr. Peters should make an efficient secretary of the new association, the objects of which are to organize the fruit interests for common advantage, to encourage the planting of orchards and small fruits, to carry on educational work; and, later, perhaps, to assist or undertake co-operation in purchase of nursery stock, and packing and marketing of products.

There is a splendid field for the new association; New Brunswick's fruit-growing possibilities have not begun to be realized. In strawberries, which do exceedingly well, the lateness of the season enables Maritime producers to place their crop in Montreal and American cities after the berries from other parts of the continent are out of the market; this insures an average price that Ontario growers would envy. Apples, however, will doubtless be the great export crop, and for them many parts of the Province are highly suited. Chief McNell, of the Dominion Fruit Division, and G. H. Vroom, Dominion Fruit Inspector for Nova Scotia, agree that for commercial production of certain varieties of dessert apples the St. John River Valley has almost as bright a future as the famous Annapolis Valley of Nova Scotia. Even now instances of financial success in New Brunswick orcharding are not wanting, and with an energetic, enthusiastic organization to exploit the industry, fruit-growing bids fair within a couple of decades to rival the dairy industry in importance, and to supplement it materially as a source of national wealth.

Fair Play for Canadian Nurserymen.

To the Editor "Farmer's Advocate":

Sir,—In your issue of May 4th, in the Garden and Orchard department, you note that Mr. Thos. Cunningham, Inspector of fruit pests in British Columbia, estimates that half a million of fruit trees are being imported into British Columbia this season, chiefly from Oregon, and you ask the very pertinent question, "Why this nursery stock is not grown in Canada?" Allow me to answer.

It is grown in Canada to a very considerable extent. A considerable portion of the half million trees were supplied by Ontario nurserymen, but under such difficulties that it was only done to save the stock from being thrown away. I estimate that the nurserymen of Ontario have had a surplus of nearly a quarter of a million of trees this spring, and under any sort of fair play would have been extremely glad to have availed themselves of the extraordinary demand in B. C. for nursery trees; but the legislators of B. C. are determined, apparently, to stop all purchases from Ontario. The B. C. Government have adopted, wisely enough, most stringent regulations as to the importation of nursery stock, to prevent the importation of diseases of

of those products in Canada. At the same time, his summary of the situation is by no means all a dream. Undoubtedly, from many parts of Canada, dairy products far from choice are being circulated. This is a sad mistake, and, as may be judged from the above letter, which will doubtless be copied largely by Old Country publications, very detrimental to the Canadian trade. Mr. Shepperson, as representative of Keeps, Ltd., is probably, to an appreciable extent, an authority. He has given his opinion, but it may be hoped that those "whom the cap will fit," may by no means be willing to wear, but rather to get rid of it. Canada's dairy industry must forge to the front, and nothing but the most careful handling and choicest product will place or keep it there.

Keeping Flies from the Cream.

In a series of answers to the query "How may flies be kept out of creameries?" propounded by the New York Produce Review, the following points were emphasized. Many of them may, with profit, be applied to the farm milk-house, as well as to the regular creamery.

1. Keep everything scrupulously clean, not only in the creamery, but all about it. The drainage all around should be good, and if milk is spilled on the ground outside it should be immediately cleaned with hot water, slacked lime then being sprinkled over the spot.

2. Provide good screen doors and windows. One correspondent recommends double screen doors, with Tanglefoot fly-paper between.

3. Darken the creamery just long enough to drive the flies out by the use of a steam hose or other methods; then raise the shades and shut the screen doors. The room must not be kept dark, or it will become musty.

4. Use Tanglefoot in the creamery; never fly poison. The latter may, however, be placed around out of doors.

5. Keep all cream vats, etc., closely covered.

6. If shade trees be all around the building, there will be much less trouble from flies than if it be hot and unprotected.

Dairying on Small Farms.

A. W. Trow, of Minnesota, and, by the way, one of the most successful dairymen in that State, in addressing the Iowa Dairymen's Association this spring, related the following experience of a successful dairyman in Wisconsin:

"It is possible for a man to get a good income from 60 acres of land by the use of the silo and feeding good cows."

"I want to tell you of a man I met the other day. I had heard of this man, Griswold, of West Salem, Wis., who is keeping a herd of cows on 50 acres. I went out there and found him on 50 acres of land, keeping 28 cows, about 20 head of young stock, and the necessary horses for working the land. He is a careful bookkeeper, and I went through his books. I found that on that farm of 50 acres and 10 acres of feed was bought. I hired, only \$430 worth of feed was bought. I found that he had sold \$2,300 worth of cream during 1903. Some may, perhaps, think that this was ice cream, but it was not. The cream sold for 22¢. for butter-fat; \$2,300 from 28 cows—about \$82 a cow. And he has sold \$360 worth of hogs, \$100 worth of potatoes, and \$50 worth of hay. What was he doing, selling hay on that little farm? Well, he had two silos. The increase in stock amounted to \$200, making a total revenue of about \$3,000 from that 50 acres. This is another source of encouragement to young farmers who cannot buy a big farm. Mr. Griswold has a silo 18 or 20 feet in diameter and 32 feet deep, for winter feeding, and another for summer feeding. He fed these cows all the ensilage they would eat both summer and winter, and that was one of the secrets of getting so much from so small a farm. Of course, he took good care of his cows; used the Babcock test and scales to weed out the poor ones. I asked him the secret of his success, and he said: 'First, close attention to my cows, weeding out the poor ones, keeping the heifers from the good ones, and then I could not get along without the use of the silo.'"

The above facts show what can be done by intensive farming. We have often stated that the majority of farmers are attempting to care for too much land. They are not concentrating their efforts on any one line of business, and the result is that poor returns often follow their efforts. If Mr. Griswold can secure a revenue of \$3,000 per year on 50 acres, is it not a fact that he is getting a great deal more out of his acres than the average man who farms 160 acres or more obtains? The silos are, without question, at least partly responsible for his large income per acre. Don't delay building a silo any longer—delay for the man who raises cattle or sells cream means loss of profits.

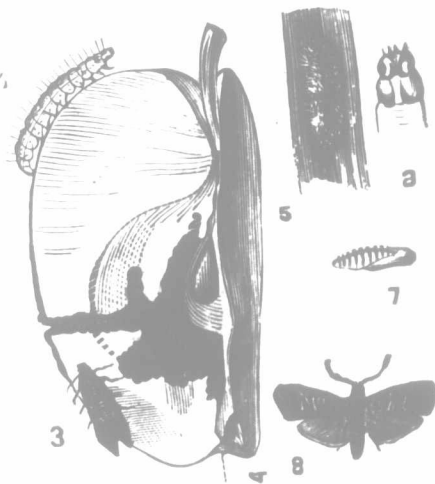
The "Farmer's Advocate" has ever been a highly valued periodical in our home, and I believe it to be the very best agricultural paper I have yet seen.
JNO. M. McCALLUM.
Oxford Co.



Thos. A. Peters, Fredericton, N. B.

Deputy Commissioner for Agriculture in New Brunswick, and Secretary N. B. Fruit-growers' Association.

knowledge can he apply his remedies intelligently. The life-story may be stated concisely, as follows: The insect winters over as a caterpillar in a cocoon in some protected place, and in early June, when the blossoms are falling from the apple, the adult winged moths appear. The females deposit their eggs on the leaves and newly-formed fruit. In about ten days the caterpillars escape from the eggs, and a few days later enter the apples, usually at the calyx end. The worm remains inside the apple about twenty days, after which it comes out to spin a cocoon, within which it lives until spring if there is but one brood, but only about two weeks if there are two broods in a season. The second brood



of moths appear about the end of July or the beginning of August; then eggs are again deposited, and the worms which hatch from these eggs enter the developed apples about the middle of August, leaving them again in September to make cocoons, within which to spend the winter.

With our knowledge of these facts, we are able to state quite definitely the best times to apply remedies. The plan is to poison the worms with Paris green, or some other arsenic mixture before they enter the fruit. The trees should be sprayed, (1) a few days after the blossoms fall; and (2) about the middle of August for the second brood of larvae. An additional spraying ten days or two weeks after the first will, in most cases, be productive of much good. It is advisable, of course, to use the arsenic mixture along with Bordeaux, to control the apple scab-fungus at the same time that the Codling moth is being