

A shipment of several hundred bags of wheat was recently made from Manitoba to London (England,) consigned to the Hudson Bay Company, with the view of making its quality known upon the English markets. A portion of this wheat was exhibited by the Canadian Government agent at Liverpool on the Corn Exchange, and distributed among the principal millers and importers. They state that it is, without exception, the strongest sample of wheat ever offered in Liverpool, and that although the Californian wheat is of very fine quality, it lacks the properties which the Manitoba sample possesses in such a marked degree, rendering it exceedingly valuable for mixing purposes.

Sir Alex. Galt and family left by the Sarmatian S. S. on Thursday last, for Canada. I understand that he will proceed to Winnipeg, where he will be joined by his son, and will then make an extended tour in the North-west territory, visiting the Bow and Belly River districts near the Rocky Mountains, and returning by the Union Pacific Railway. Sir Alexander is expected to return to London about the middle of October.

The Ontario Agricultural College.

The distribution of prizes took place at the above College on the 7th ult.; a large number of visitors were present. Mr. Mills, President of the College occupied the chair. With him on the platform were the Professors of the College, Prof. Buckland, of Toronto; the Revs. Messrs. Howie, Panton and Westmacott; Dr. Bryce; Mr. William Johnston, ex-President of the College, and Mr. Jas. Innes.

Mr. Mills spoke highly of the students, and said the competition for the higher honors had been very keen, especially for the Governor-General's medal, which after a keen conflict had been awarded to R. J. Phin, of Waterloo. Out of the whole number of marks of 5,000 there was less than a difference of a hundred. Second, and close to Phin, was Motherwell, from Lanark, and third on the list was J. G. Ross, of Montreal. Close behind them came Ballantyne, of Stratford, and Grindley, of Montreal. He spoke highly of all these young men, whose ability and diligence reflected credit on themselves and on the institution.

The following students of the second year having passed successfully in all the prescribed subjects received diplomas: R. Phin (medallist), Motherwell, Ross, Ballantyne, Grindley, W. E. Phin, C. S. Dickinson, Robbins, H. Pope.

The Cankerworm and its Ravages.

A knowledge of the foe with which we have to engage in combat is of the greatest importance in warfare, and it is well on our part to make ourselves as thoroughly acquainted as it is possible with those hosts of insect enemies with which we have incessantly to contend in farming, gardening and fruit growing. When we are thoroughly conversant with their habits, we can with the greater certainty preserve from their depredations the fruits that we labour to produce.

There is none of the many insects which infest our fruit trees which equals the cankerworm in the complete destruction it works. We have recently read of the destruction caused by them in an orchard. The orchard was sixteen acres of as good land as could be selected. The trees were of few and choice varieties; they are of a good bearing age and are planted well apart. The orchard had before the inroad of the worm been paying a good profit for the outlay incurred, large shipments of fruit having been made yearly for some time.

The cankerworms made their appearance in the orchard about five years ago, and now the whole

aspect is changed; the luxuriant foliage the fragrant blossoms, the fruit bending down the boughs have almost wholly disappeared. When seen at a distance it seems as if a prairie fire had scorched almost every vestige of vegetable life. Examine it closer and you see the canker worm has been there. The branches, stripped of every vestige of green, are covered by the webs left by the worms. The withered remnants of the leaves adhere to the webs as they fall, the petioles having been gnawed off at the twigs. Almost all the trees have suffered, not one per cent. of them escaping, and there being on the outside of the orchard, the worms having worked out from the centre. Trees which have been attacked for several years are killed, and in the middle of the orchard there is a large area from which the dead trees have been removed. Many of the trees may bear leaves again this season, but there will be no crop of apples. It is doubtful if the proprietor will have in the orchard of sixteen acres enough apples for his own use.

What enemy has done such injury? The cankerworm, the caterpillar of a small insect or moth. The species that has ruined the orchard spoken of is the spring cankerworm; none of the autumn species were seen. The females of the moths from which cankerworms proceed are wingless. The males have antennae or "feelers," with a downy edging on each side; the wings are large and silky and when at rest the forewings entirely cover the hind wings; the forewings are ash colored, with a whitish spot on the front edge near the tip, and two irregular white bands crossing them with black dots along the sides and outer margin; the hind legs are pale ash with a blackish dot near the middle. The expanse of wings is about 1½ inch. The European species is smaller and darker than the American.

Early in spring the females creep up the trunks of the apple trees, having emerged from their winter quarters beneath the surface of the soil. Their ascent in the spring is for the purpose of depositing their eggs, which they place in small masses under the edge of the bark, in clusters of 60 to 100, the numbers usually laid by the female, and are attached by a water-proof varnish. The eggs are hatched in May, about the time of the flowering of the red currant, and the starting of the young leaves of the apple tree; the young worms creep into the buds and blossoms. At first they make but small holes, but afterwards devour all the pulpy part of the leaves of the tree. They do not confine their ravages to the apple tree, they prey upon the cherry, plum, elm and other trees. The worms vary considerably in color, even in the same species. After eating for about four weeks they begin to quit the trees on which they have fed; some creep down, but most let the bodies down from the branches by threads. They burrow immediately into the earth from two to six inches in depth, according to the nature of the soil, and are changed within twenty-four hours into chrysalids, the females being the largest. The chrysalis may remain till the following spring, or it may, in mild weather cease in the autumn. They come out of the ground mostly in the night. The females have no wings and bury themselves beneath the tree from which they descend; but accidents have extended them to remote localities. Their ravages are not very apparent till June, when they are most voracious. Preventing the cankerworm from ascending the trees to deposit their eggs is the most effectual means of exterminating them. For this purpose many methods have been resorted to. Viscid substances have been applied to the trunk on the bark, or on strips of paper or cloth. It is applied in November and removed daily as long as the worms come forth. Tin troughs filled with cheap oil a few feet above the ground have been tried with success on a small scale. Melted India rubber has been recommended in England. When the worms are on small trees they may be destroyed by dusting air slack lime

on them when wet with dew. Showering with a mixture of whale oil soap in water, in the proportion of one pound of soap to seven gallons, will kill the worms without injuring the leaves or the fruit. After they have entered the ground they may be killed by digging or ploughing under the trees. Scattering a few grains of corn and turning hogs into the orchard, they will root up and destroy the chrysalids. Every available means should be used to destroy the cankerworm; something can be done for that purpose throughout the year, merely except the period when the ground is frozen. They can be destroyed in their winter burrows; when emerging from the ground; when creeping up the trees; when feeding on the leaves; when descending from the branches, and on the ground before they have succeeded in concealing themselves. It has not extended its ravages much in Canada as yet, but it has made itself known in some instances, and it is necessary that we be prepared to meet its invasion. The Colorado potato bug invaded the Dominion from the neighboring republic, and we need not be surprised if we have to suffer from a similar invasion by the cankerworm.

Is the Crow Useful or Injurious to Farmers?

The crow is generally accused of being the cause of great mischief, robbing the ground of seed corn when sowed and committing sundry misdemeanors. But hear what a New England farmer says of him in the *Connecticut Farmer*:—

I know the crow does some mischief, but 25 cts. worth of tar will protect all the corn nearly any one in New England raises. Then can we do without them? They are good scavengers to help get rid of decaying animal matter that helps breed disease in hot weather, besides the thousands of worms and insects they destroy that are injurious to the farmer. This year I plowed an old pasture that had not been plowed in many years, the grass had partly run out and briars had run in; the land was very light and full of cut worms. I planted some of it to corn with the hoe and some I sowed for the crows. When planting I told the boys that the worms would be likely to destroy the crop if we were not after them often, but we put in seed on purpose for the worms and crows, and if all should grow the crows could some of eat it. I concluded that in going for the worms often we could see what the crows could do, for I knew they loved worms better than corn, and one day in going for the worms we scared off quite a number of crows thinking we must apply the tar, but in going through the corn we found a very few hills pulled, but found where they had scratched and pecked, in for worms even between the hills. I concluded to let them work, and we soon started the cultid vator and found but few hills missing; the corn stands well, and looks well.

A Russian Mulberry for the Western Plains.

Mr. G. F. Clark, of Beatrice, Nebraska, sends an interesting account of the promise of serviceableness afforded by a sort of mulberry brought by the Menonite immigrants from arid plains in Russia—the steppes of the Volga, in latitude about 49 deg. There this mulberry is the best source of wood for farm supply, and so valuable and indispensable that the new settlers brought along seeds which grow well and, like other sorts of mulberry, very rapidly when young. The full height of the species is claimed to be about 40 feet. As in other mulberries, too, the leaves of the seedlings vary in being more or less lobed; some of these are cut as much as those of any oak, and these varieties are propagated as trees for ornament as well as use. They will, no doubt, make pretty lawn trees, for the foliage and figure of all sorts of mulberry trees in unbroken health are pleasing. The fruit is said to be edible and good, but the pale mulberries are generally inferior both in size and flavor to choice specimens of the dark sorts.

Mulberry wood is very durable, although apparently open-grained and soft. Botanically it is cousin to the Osage Orange, also a very durable wood, and also having fleshy, yellow roots, soft but tough. Undecayed mulberry wood was found by Mr. Layard in the ruins of Ninevah, and mummy cases of the same wood are still in the museums, still sound and fresh to the very chips. This durability renders the trees, even though small, very useful to farmers for stakes and posts.