

Horticultural Notes.

BY W. W. HILBORN, LEAMINGTON.

Concord is still the grape for the million. Worden, somewhat earlier, is its closest competitor.

Cuthbert, all things considered, is still the best red raspberry.

Among sixty varieties of strawberries last season, none of the older sorts was equal to Bubach.

Black Champion currant stands at the head of the list of all black kinds thus far tested. Try it.

I never knew an apple tree once affected with black heart to fully recover.

Many orchards have been ruined by winter pruning. It often produces black heart, which results in premature decay and death. Prune after all hard freezing is past.

If you wish to try any new varieties of strawberries, Woolverton, Saunders, Lovett, Advocate, William's and Beder Wood are among the best.

All varieties of English gooseberries yet tested in Canada will mildew some seasons in most localities, especially after they have borne several crops of fruit.

Hill's Chilli is one of the hardest peaches grown. If peaches do not succeed well in your locality, try one of the above and one of Barnard's Early; plant on the north side of some building, or where the sun will not strike directly on the tree during winter.

Now is the time to make out your orders for fruit trees and plants for spring planting. Do it yourself, and not allow some oily-tongued agent to make it out for you.

Select such varieties of fruits as prove most satisfactory with your neighbors on similar soils and with such cultivation as you intend to give them.

If you have not already planted a sufficient quantity of small fruits to supply your family with all they can use during the whole year, plan to do so next spring, by all means. In no other way can you supply so much food, health and happiness at so little cost.

Do not buy new, untried varieties of fruits, unless you have tested most of the old standard sorts. Many a farmer has been discouraged from growing small fruits, simply because some oily-tongued agent had persuaded him to begin by planting some new, high-priced, untried kinds that proved worthless, instead of advising him to plant the old standard sorts that succeed with nearly everybody.

Much diversity of opinion prevails regarding the best method of managing the orchard. Many recommend seeding down and mulching around the trees with manure, straw, etc., to keep down weeds and grass, while a large majority advocate clean cultivation. Good results have been obtained from both systems. The latter method will usually give the best satisfaction, if properly done, on most soils. Always cultivate to about the same depth. The soil just beneath that portion which is stirred with the plough and cultivator is completely filled with small fibrous roots. These are the feeders of the tree, and should the plough run two or three inches deeper just once during the season, thousands of those feeding roots are cut off and the health of the tree injured. All results from cultivation can nearly always be traced to this cause, and that cultivating has been done at too great intervals, early or during the growing season.

Black knot can be hunted out now, while there are no leaves on the trees and before the weather becomes warm enough for the spores to increase. The disease may be kept in check if all affected parts of plum and cherry are cut out and burned as fast as it makes its appearance.

If your strawberries are not already mulched, give them a thin coat of manure or straw, putting most of the material in the middle between the rows of plants. This will protect them from the sudden changes of freezing and thawing in early spring; will prevent the soil from drying out, and keep the fruit clean. Just before growth begins in spring, rake off any of the material that remains on the plants, and leave it to cover the soil not taken up by them.

When planting trees, bushes, vines and plants, many are injured and some killed outright by allowing manure to come in contact with the roots. This should always be avoided. If you have manure to use, put it on as a mulch on top of the soil after the tree is planted, or, to get the best results, mix the manure with the top soil. The manure prevents the soil from drying out, and the soil keeps the manure from drying out. The manure is thus more soluble, and the valuable properties are carried down by the rains to the little rootlets and supplied in just the form required. None can be taken in by the large roots. The end of each little fibrous root contains a cell or mouth, that drinks in the nourishment required. This should be remembered by those who pile up manure around the trunks of their trees instead of spreading it out under the branches, where it can do the most good.

By the courtesy of Mr. Henry Wade, Recording Secretary, we have received the first volume of the Dominion Swine Breeders' Record. It contains the pedigrees of 1,338 Berkshires, 700 Yorkshires, 200 Suffolks, 249 Chester Whites, and 198 Poland Chinas. There is a separate and complete division in the volume for each breed. A copy has been mailed to each member of the Dominion Swine Breeders' Association.

Farmers' Clubs.--When Started.

BY W. R. L., COBOURG.

In the FARMER'S ADVOCATE for October there is an address by J. S. Thomson to the Farmers' Institute of Melita. In this address he says:—"The first organization of any kind for the farmers' benefit was started in Germany about thirty years ago. *** I saw an account of them at the time. I wrote to the Toronto papers at the time about starting farmers' clubs. I spoke to a few neighbors about organizing, which we did about twenty-nine years ago in the county of Brant, so that I claim to be the father of them in Ontario, at least." Had Mr. Thomson said that he was the father of farmers' clubs in that part of the country, we would have taken no notice of the matter, but certainly there were farmers' clubs in Ontario long before the time he mentions. The oldest that has come under our notice was the Township of Hamilton's Farmers' Club, which held its first meeting at Cobourg on the first Saturday of July, 1845, now more than forty-six years. Should Mr. Thomson have access to the old files of the Canadian Agriculturist for 1852-3 and onwards, he will find reports of the meetings of the above-mentioned club, and many other farmers' clubs, and there may have been farmers' clubs in Ontario older than any of these. In looking over some old volumes of the London (England) Farmer's Magazine for 1841-2-3, we find reports of a great many farmers' clubs in Britain at that time.

ENTOMOLOGY.

Injurious Insects--No. 10.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA, ONT.

INSECTS INJURIOUS TO FARM CROPS IN 1892.

Although it is true that there have been no remarkable outbreaks of new insects injurious to farm crops during the past season, a considerable amount of attention and labor has been necessary to prevent or check injuries by well-known pests. In grain crops the Hessian Fly, the Wheat-stem Maggot and the American Frit Fly have in different localities largely reduced the farmers' gains, and the importance has been shown of knowing the life-histories of these pests, so that the simple and effective remedies might be applied. Corn, on the whole, was particularly free from the depredations of Cut-worms and other enemies. In some districts the devastating Cut-worm injured fields of fall wheat seriously. The habits of Cut-worms are so various and the number of different kinds so great that it is impossible to give a remedy practicable under all circumstances, but particular mention should be made of two which have again this year been used successfully upon a large scale:—

1. *Poisoned traps.*—These are bundles of weeds or other succulent vegetation tied up loosely and scattered over the surface of infested land before the crop of the season is planted, or distributed through the crop when found to be infested.

2. *Wrapping.*—For tomatoes, cabbages and such plants as are set out by hand, even over large areas, wrapping a piece of ordinary newspaper around the stem at the time of planting has been found to protect many from the attacks of Cut-worms.

TOMATO STALK-BORER.

The caterpillar of a Stalk-borer, *Gortyna cataphracta*, was sent in from several parts of Ontario as a destroyer of many different kinds of plants, as, mentioning them in the order of those most injured: tomatoes, potatoes, sunflowers and garden flowering plants, and even the fruit of gooseberries. The caterpillar bores into the stem, of which it eats out the centre, and the plant soon withers. The best remedy is to watch carefully when these caterpillars occur and destroy each one as soon as found. Fortunately they seldom appear in large numbers in any one place.

HOP COLLAR-WORM.

An insect belonging to the same family as the former is the Collar-worm of the hop (*Gortyna immansis*), a large caterpillar which has committed much havoc in the hop-yards of Prince Edward County, Ont. During the past season I have succeeded in working out the life-history, which is briefly as follows:—The perfect insect is a large heavy-bodied moth, with deep, rich brown wings marked with darker lines. It passes the winter in the perfect or moth state, and in the spring flies to the hop-yards and lays its eggs upon the tips of the young stems during the month of May. The eggs hatch, and the little caterpillars at once eat their way into the leading shoots and destroy them. The effect of this is to cause two shoots to grow from the buds of the next joint below, on each stem, producing what are known as "Bull-heads." After remaining in the shoots for a week or two, the caterpillars drop to the ground and bury themselves just beneath the surface at the root of the hop-plants, where they gnaw the stems partly through and live upon the sap. Here they may be found during July, and in August they turn to large brown chrysalides, from which the moths emerge in September. As a remedy, the destruction of the young larvae in May by hand-picking as soon as the faded leaders betray their presence would be an effective means of checking their numbers, if carefully attended to; for every caterpillar found later in the season at the roots has begun life earlier in the season in a leading shoot. The application of fish manure to the roots of the hops has also proved efficacious; but this is only applicable for hop-yards situated near lakes or the sea-coast. Skunks are said to perform a useful office in digging out and destroying these insects.

ROOT MAGGOTS.

Turnips, radishes, cabbages, onions and some other plants suffered severely in June and July from the attacks of the root maggots. For garden treatment, kerosene emulsion and hellebore tea were efficacious in treating onions and cabbages; but for field application no practical remedy was discovered, although some turnips sown very late were quite free from attack and gave good returns. Fine radishes were grown free of maggots by watering them once a week with carbolic wash, made from Prof. Cook's formula:—Two quarts of soft soap boiled in four quarts of rain water till all is dissolved, then turn in one pint of crude carbolic acid and stir well. When required for use, take one part and mix it with fifty of water, and when well mixed together sprinkle directly on the plants. This was done once a week beginning two days after the first seed was sown, and perfectly clean radishes were grown.

TURNIP FLEA.

This troublesome pest was not so abundant as usual in most localities in Ontario, but nevertheless several complaints of its depredations were received from all parts of the Dominion. Seed sown about the third week in June in Ontario gave the best results, and Paris green one pound in fifty pounds of land plaster destroyed the beetles satisfactorily in such instances as it was applied. This was done by dusting the dry powder over the young plants early in the morning when the dew was on them. If land plaster is not on hand, finely sifted road-dust or lime will do to mix with the paris green.

THE RED TURNIP-BEETLE (*Entomoscelis adonidis*).

During the last three years many specimens of this showy scarlet beetle, with three black stripes down its back, a black patch on the collar and black legs, have been sent in from Manitoba and the Northwest Territories, as a serious pest of turnips, radishes and cabbages. This beetle resembles in general outline, but is rather smaller and narrower, the Colorado potato-beetle and like it attacks the foliage of the crop. I have succeeded in breeding this insect from the egg, and find that the black hairy grubs also feed upon the leaves of the same plants, although curiously enough not one of my many correspondents has observed them in the fields infested by the beetles. It is just possible that as yet the grubs feed preferably upon some native cruciferous plant; but even should this be the case, there is not the slightest doubt that, unless carefully watched, it will before long follow the example of the Colorado potato-beetle, and increase largely upon cultivated plants allied to its natural food.

POTATO BEETLES.

Ontario farmers now recognize the importance of treating their potato fields promptly with Paris green as soon as the young grubs hatch. One pound of the poison to 200 gallons of water is then sufficient. Where this was applied in August, mixed with the Bordeaux mixture, as recommended in the August number of the FARMER'S ADVOCATE, very decided advantage was apparent in treating at one time both the potato-beetle and the fungous disease known as the potato rot.

With regard to spraying plants and fruit trees with Paris green, one of the most important recent discoveries is the fact that if milk of lime (made by slacking about one pound of lime in one gallon of water) be added to the Paris green mixture, in the proportion of one gallon to fifty of the mixture, it prevents to a large measure the corrosive action of the arsenite. The most serious injuries complained of by the Colorado potato-beetle were from the Maritime Provinces, particularly from Cape Breton and Prince Edward Island.

In the Northwest Territories and British Columbia some species of blister beetles were the worst enemies of the potato crop. Several specimens of two species, the Black Blister-beetle (*Epicauta pennsylvanica*) and the Spotted Blister-beetle (*Epicauta maculata*), were sent in from those provinces, where they had caused heavy loss. The latter of these species was very abundant in the Fraser Valley, B.C. The best remedy for these voracious insects is a prompt application of Paris green. Another member of the same family is the large Western Blister-beetle (*Cantharis Nittalli*), which was unusually abundant and destructive, and ate up completely the bean crops in some districts of Manitoba and the Northwest. This is a large and very beautiful beetle about an inch long, with rich plum-colored wing-cases with golden sheen. The thorax or neck and the head are metallic-green with the same golden lustre, and the legs blue-black. An interesting point about this insect is the fact that, although so injurious in the perfect state, when in the larval stage it is a parasite upon the Rocky Mountain locust and other locusts.

Since the beginning of the publication of these Notes on Injurious Insects in the FARMER'S ADVOCATE, I have received many letters of enquiry from farmers who had read them in that valuable magazine, and I wish to say that it is always a pleasure to me to answer correspondence concerning injurious insects. I would also state that, as Government Dominion Entomologist, I consider it my duty to give any information or assistance in my power to all who may apply for it, and it may not be amiss to mention that all letters addressed to me officially on this subject may be sent free of postage.

Mr. W. W. Chapman, 27 Baker street, Portman Square, London, England, Secretary of the British Southdown Flock Book, has sent to this office the first volume. It is strongly bound and well edited, and contains the pedigrees of a large number of Southdown sheep, as well as much valuable information relative to this ancient breed of sheep. Canadian Southdown breeders should procure a copy.