

Plant-breeding at Jordan Harbor.

The Horticultural Experiment Station at Jordan Harbor, Ontario, is situated on the shore of Lake Ontario, and in one of the finest peach-growing localities of the renowned Niagara Fruit Belt.

The farm comprises some 97 acres, only a small portion of which consists of the deep, sandy loam so highly prized for peach-growing, the greater portion being of a heavy clay.

A large portion of the farm is planted with orchards of a few acres each of apple, pear, peach, plum and cherry trees, plots of currants, raspberries and gooseberries, and a further portion is devoted to the testing of varieties of vegetables.

In 1907-08 the whole farm was thoroughly underdrained, under the supervision of Prof. W. H. Day, of Guelph, and the beneficial results derived from such a system are now fully apparent.

An important line of work recently started at the Experiment Station is that of plant-breeding. The object of the plant-breeder is to originate new varieties which will combine to a greater degree than the varieties now grown the qualities most sought by the grower, the shipper and the consumer. Let us take, for an example, the Elberta peach, grown more extensively than any other variety, yet by no means an ideal peach. The Elberta tree crops heavily with large fruit of excellent shipping quality, but it is surpassed by some varieties in flavor, such as St. John and Mountain Rose; by others in immunity from disease and in time of ripening. It ripens in the middle of the peach season, when a glut is most probable, and prices are generally low. It seems, therefore, that a seedling of Elberta, which would ripen earlier, a fruit equally firm, but of better quality than the parent, would be a most profitable fruit for both grower, shipper and consumer.

On the Experiment Station there are at present some six thousand seedling strawberries, several thousand seedling tomatoes, seedling peaches, pears and apples; at the close of the present season these will be considerably added to.

The seedlings that have fruited or are fruiting this season are being carefully noted and compared with the parent plants from which they were originated.

Not only is it the work of the plant-breeder to improve the size, quality or appearance of the fruit, the vigor or size of the tree, but also to keep a watchful eye that the selected progeny show less susceptibility to the many insect and fungus attacks that destroy such numbers of our fruit trees and bushes to-day.

ARTHUR J. LOGSDAIL,
Lincoln Co., Ont. Expert in Plant-breeding.

Milking the Aphides.

Man is not the only being that utilizes inferior animals for his profit. A curious analogy, familiar to all entomologists, is furnished by the ant, which is very fond of the "honey dew" secreted by plant lice which suck the juices from plant tissue, and where these swarm, ants are liable to abound. The intelligent insect, whose industry and thrift are proverbial, has discovered that, by touching the lice upon the two little knobs that grow outward and upward from the body, the aphids or plant lice can be induced to give up some of their honey dew. Some kinds of ants actually colonize plant lice, harboring them in their ant burrows, where they suck the juices from tree rootlets. Prof. S. A. Forbes, of Illinois, who has made an exhaustive study of the corn-root aphid, declares that certain species of ants collect the eggs of the corn-root aphid in the fall in their underground nests, and in the spring they place the young hatching from these eggs on the roots of suitable food plants. As these grow and multiply, the ants transfer them from one plant to another, as necessity may arise. During nearly the whole season the ants are dependent on their helpless charges for food, which they find in the abundant fluids given off by the plant lice as they suck the sap from the growing plant. Thus, by harboring these aphides, the ants work an indirect injury to the corn crop.

Plant lice are, therefore, the ants' domesticated cows, which they know how to milk as effectively in their way as man milks the bovine.

Peaches for Great Britain.

From time to time reports come to Canada encouraging the expansion of our fruit shipments to the Old Country market. There seems to be an especially good market for the more perishable varieties of orchard produce, the only difficulty of our reaping handsome profits from such a trade being the danger of loss due to the length of time in transit. Since peach production is so steadily increasing in Ontario, the Department of Agriculture at Ottawa is this year going to make trial shipments of this fruit to Britain. Single layer cases will be used entirely in these experimental shipments, three being strapped together for convenience. There will be, in all, about 1,000 cases shipped, going from the vicinity of St. Catharines. The fruit will be pre-cooled, packed in refrigerator car, and shipped in cold storage. The Department is very hopeful of success by careful handling of this shipment. Fruit-growers generally will watch eagerly for the results.

THE FARM BULLETIN.

South Ontario Notes.

Editor "The Farmer's Advocate":

Haying is finished, with the exception of the stragglers, and grain harvest is once more in full swing. The hay was about an average crop.

A larger acreage than usual was sown to winter wheat last fall, and is now looking splendid. Barley is scarcely an average, as it ripened too quickly, but oats, on the whole, look well. Alsike is now being threshed, some high yields being spoken of, as well as fancy prices obtained, but we have nothing reliable enough at hand to state what prices are being paid.

Corn is growing nicely. A great deal had to be resown on account of poor germinating of seed, also because of a cold wet spell that came shortly after much of the corn was sown, and on low, undrained land suffered severely. More care is being taken in the selection of seed corn than formerly, many buying on the cob; in this way one may see the sort of corn one is getting.

Mangels are looking fairly well, but turnips will probably fall away below the average. Much of the Swedes did not grow, and the flies played havoc with some. The potato beetle is giving much trouble; it seems able to stand good doses of Paris green. One of our progressive farmers sent some of his hard-earned cash to the States to find out a sure way of killing the potato bug. The reply came, and was simple: "Take the bug, lay him on a flat stone, and hit a sharp crack with another stone." When will the people cease to be fooled?

Apples, on the whole, will scarcely reach an average yield, but what lacks in yield may be made up in quality. More spraying was done last spring than formerly. The prepared lime-sulphur was mostly used, with arsenate of lead mixed for second spraying. Spraying is so much less trouble this way than when the mixing and boiling was done at home we may look for more in future.

A higher standard of farming may be observed on all sides; this is quite noticeable in the increased interest taken in the short rotation of crops, alfalfa, draining, ensiling corn, standing field-crop competition, etc. The true farmer of to-day must be an agriculturist—one who studies from books and agricultural papers, and finds out what he must do for the well-being of his farm.

The perennial sow thistle is scarcely so conspicuous as it has been the last few years. The season, we believe, has not been so favorable for it.

There are few apiarists in this district, but, from reports, the quality and quantity was quite satisfactory, with a keen market for all that could be produced. A great many colonies die annually, mostly through ignorance or neglect.

Ontario Co., Ont. F. H.

The Cost of Living.

The Massachusetts Commission on the advance in the price of foodstuffs reports that the tariff has been one active element favoring the upward trend, and suggests at the next revision consideration should be given the expediency of removing duties on all food products. It is claimed that the tariff was never seriously intended to apply to the foods of the people, save for the development of such industries as fruit in Florida, as sugar beets in the West.—(Why there alone is not explained.) The design is simply to create and preserve manufacturing industries. This bald statement of the situation rules out completely any pretence of making the farmer a beneficiary of the protective tariff system, which will hardly commend itself to a large element in the United States. Contrasting points, like Windsor and Detroit, Montreal and Boston, St. John, N.B., and Bangor, Me., it is reported that groceries are higher in Canada; meats, provisions, including dairy products, less. Some half dozen sorts of common vegetables were 17 per cent. dearer in Windsor than in Detroit. It is pointed out that a tariff on foods prevents each country from mitigating the damage of a short crop when the other is plentifully supplied. Also, it prevents getting the full benefit of seasonal advantages. Green vegetables and small fruits mature later in Canada, of course. The tariff prevents Canada from profiting by our early crops, and prevents us from profiting by Canada's late crops. The Commission found that men's clothing could be bought cheaper in Canada than in the States, the material in the former being better, but the workmanship not so good or fancy. This was reported to be true of many lines of manufacture. The report assumes that extension of reciprocity in manufactures will not now be acceptable to Canada, but urges that amicable relations be maintained, so that mutual concessions may from time to time be made. The retailer is charged with being responsible for much of the discrepancy between wholesale prices and those paid by the consumer.

The Canadian Department of Labor, Ottawa, has also issued in report form the results of an exhaustive enquiry on the same subject in Canada. From 1890 to 1897 prices in Canada followed a downward trend. This was succeeded during the ensuing decade by a more rapid upward movement, which culminated in 1907. Prices in the last-mentioned year were by a considerable margin the highest in the twenty-year period. Prices fell in 1908, but were upward again last year and this year.

Comparing the high year 1907 with the low year 1897, the advance amounted to approximately 37 per cent. Comparing the year 1909 with the low year 1897, the increase shown is approximately 31½ per cent. The advance in products, such as grains, fodder, meat-producing animals, milk, eggs, wool, fruits, vegetables, are reported to have increased in price only 37 per cent., while meats, bran, flour, hides, leather, etc., increased by over 34 per cent., comparing the 1909 decade with that of 1899. Fish products did not advance quite as high as those of the farm. Lumber advanced about 50 per cent., but manufactures generally showed only about 10 per cent. advance.

Poultrymen See Minister of Agriculture.

A representative delegation of poultrymen of the Dominion on Wednesday, July 27th, interviewed the Hon. Sidney Fisher, Minister of Agriculture. The delegation presented five important recommendations to the Minister for his earnest consideration. These recommendations, placed in the form of requests, were, tersely stated, as follows: We ask (1) that a Poultry Commission be appointed to study the question of poultry products from a national standpoint; (2) that in the Department of Agriculture and under the direction of the Poultry Commissioner there be established a department of scientific research along lines of poultry diseases, etc. (3) Since the standardization of poultry products has already been introduced, that the Department of Agriculture assume the expense of this work. (4) Since the present poultry plant at the Experimental Farm, Ottawa, is inadequate and out of date, that the interests of the poultry industry would best be served by its discontinuance as a local station, and the equipment be given to the use of the Poultry Commissioner. (5) That in consideration of the noble work done by Prof. A. G. Gilbert during the past twenty-five years, he be relieved of the personal supervision and management of the poultry plant at the Central Experiment Farm, and his services retained, by appointing him Chief Lecturer in Poultry for the Dominion.

To all of these requests of the poultrymen the Minister showed consideration, and to some at least a favorable disposition, expressing a willingness to do whatever is needed for the best interests of the industry. That the poultry industry needs constructive management and the services of an efficient poultry commissioner, and that the industry is of such magnitude as to warrant considerable expenditure, ought to be patent to every reading man. Poultry producers throughout the entire land will do well to put forth their best efforts in support of their delegation in the attainment of their requests.

Renewing Alfalfa and Pasture.

In semi-arid sections old alfalfa fields which have begun to yield poorly are frequently rejuvenated by disking. This harrow, besides pulverizing the land surface and improving moisture conditions, cuts the crown of the alfalfa plant and many of the roots near the surface. It is found that the parts of the injured crown each become as productive as the old whole crown, giving a much thicker stand. This practice has been followed quite largely in the alfalfa-growing sections of America. This same method has been tried very satisfactorily by a good many men in renewing pasture lands that are old yet cannot be conveniently broken up. The harrow requires to be set so as to do most cutting and well loaded. It appears to be doing much damage, but in reality does much good, allowing for aeration and improving moisture conditions.

Enquiries frequently come to us bearing the signature "Old Subscriber," or similar appellation. We do not publish the name of an inquirer at any time; neither can we give any attention to queries or correspondence unless the writer signs his or her name. Subscribers will please conform to this rule.

There is on foot a plan to form an organization of three million members in the United States to protect the public and political interests of farmers. If it be intelligently directed it will give but a short life to the protective system.