

one of Spies and four of Baldwins, last year had a crop of 3,600 bushels, and had received in one year from this six-acre orchard net returns of \$2,800. They have to spray, of course. Up to six years ago, they hardly knew what it was to hear of a sprayed orchard in that neighborhood, nor of pruning or cultivating. Last year, there were seventeen spraying outfits; this year, nearly fifty, and next year there were likely to be about two hundred. In that locality now, the first thought is the orchard. Geographical lines, however, cannot be drawn, as there are great variations within ranges of five miles.

Last year they did not realize nearly as much out of fall as the winter fruit. This year they did unusually well with it, netting nearly \$2.85, shipped to Rockdale, Ill. The winter fruit did still better even this year, realizing \$3 to \$3.25. He did not advise planting Ben Davis, but has great regard for the Greening, and would favor planting it to quite an extent. It is a great cooking apple, and bakeries in large cities prefer Greenings, even though they are unable to obtain so choice a sample as of other kinds. Greenings are no longer discounted by buyers.

Then followed an experience meeting. W. H. Dempsey, of Trenton, during the past twenty years had averaged more money per acre as well as more per barrel for early varieties, such as Duchess, Gravenstein, Snow, Wealthy and Trenton. If planting again he would include some fall apples.

Mr. Sherrington thought it would be folly for people in the favored winter-apple districts to plant fall apples. J. L. Hilborn, of Leamington, thought there was a good opportunity for planting such sorts as Duchess, to be followed by Gravensteins. The Greening is worthless in his location along the lake.

Prof. Macoun pointed out, with regard to the probable Northwest market, that we should not overlook the possibilities of fruit production in the West. As is well known, Dr. Saunders has produced a large number of hybrid crabs, from which results may be expected. In Russia, there are large orchards as far north as 55 degrees lat., with conditions not unlike those in our own West, and he thinks there are favorable conditions west of the Great Lakes for the production of hardy apples.

Mr. McNeill, while agreeing with Mr. Macoun, urged that our early fruit could be produced and marketed in the West before their own fruit was matured. An Essex man had produced Astrachans by July 20th. Essex people could commence the first week of August to ship Duchess, and a continuous supply of these could be secured from various other districts up until November. He praised the work of Mr. Johnson in Norfolk County, who had so changed conditions there that orchard yields formerly worth 50c. a barrel were now worth \$1.50. Southern orchardists who had the winter varieties, should not chop them down, but should make the most of them.

A. W. Peart said that in Halton County they plant both fall and winter kinds. His advice to a young man about to plant was to go to a successful orchardist in his own locality.

President Jones, in concluding the discussion, cautioned against extensive planting of the fall varieties, which are more easily overdone than the winter kinds. The former must be marketed soon after they mature, the latter may be held, and for them there is a far larger demand.

THE HORTICULTURAL EXPERIMENT STATION.

H. S. Peart, B. S. A., Director of the new Horticultural Experiment Station at Jordan Harbor, Ont., reviewed the work accomplished during the year. This has been of a preparatory nature. The farm has been completely underdrained with ten and a half miles of tile, there being a few hundred more feet yet to put in. They commenced with a subsoil plow, but found it too light. A ditching machine was then tried for half an hour, but was useless on account of stone. They finally procured a Verity pavement plow, which worked well with four horses. The whole job of tiling was completed for three-quarters of the lowest tender for ditching alone, the tender, of course, not having been accepted. The farm has been surveyed into blocks, having regard for soil peculiarities. An incidental experiment with sod culture for the apple orchard showed that the trees in sod were noticeably unthrifty, as compared with those cultivated. Sixty acres of land have been plowed, and most of it manured and ribbed up for winter.

Suggestions for future work were next invited. Hybridization, with a view to the production of varieties combining all known excellencies in superlative degree, was emphasized by several. Mr. Sherrington thought the present local fruit experiment stations should be continued as before. He also urged that in developing and experimenting with new varieties, none should be allowed to leave the station until thoroughly tested and proven equal to or better than those already in general cultivation. Murray Pettit, of Winona, suggested fertilizer experiments, experiments with pruning, and tests to show the advantage of regular thinning of such fruit as peaches.

A well-timed word of admonition was thrown in at the end by Dr. Wm. Saunders, who pointed out that the developing of a new variety of wheat, combining the qualities of the Red Fife with the earliness of some other sorts, was a very difficult task, and it would be much harder to breed superior new fruits, owing to the length of time it takes for results to show themselves. He warned the audience not to expect too much.

CANADIAN FRUIT PRODUCTS IN BRITAIN.

Market conditions in Great Britain was the subject of an interesting address by J. A. Ruddick, Dominion Dairy and Cold-storage Commissioner, who, while thoroughly appreciating our Northwest market, pointed out the immense openings for trade in Britain, urging development in this direction rather than scattering our exports in other countries. A large quantity of produce of a certain kind in any one market commands attention, and builds up a reputation. Our apples are becoming more popular, and the Fruit Marks Act is helping to establish confidence in Canadian fruit. The apples are not sold on the strength of the grade marks, but sample barrels are dumped out in the auction-room, so it is impossible to fool the purchaser, even if misrepresented fruit did escape detection by the Dominion inspectors. Nevertheless, the Fruit Marks Act is of indirect advantage as promoting good grading and packing and inspiring confidence on the part of British dealers. Canadian apples are now the best ones reaching the British market, although not yet commanding as high prices as some foreign apples specially packed and catering to a special trade. Oregon apples, in boxes, this past fall netted the growers \$1.32 per box. Large quantities of Tasmanian apples are now reaching Britain, and, while they do not compete with ours, they cut quite a figure in the market. Mr. Ruddick emphasized the importance of catering to the interests of the British retailer, who can do much to influence consumption in favor of goods which, by reason of special convenience in handling or otherwise, it may be to his interest to sell. The dealer is almost more important than the actual consumer.

With reference to Canadian canned apples, the chief complaint was lack of care in assorting varieties, there being sometimes two kinds in the same can, often unevenly cooked.

Mr. Ruddick concluded with a description of the cider industry in Britain, which is rather an extensive business in Somersetshire and some other counties. Cider there is not apple juice, but fermented and clarified. He didn't know whether a profitable export trade could be worked up in Canadian cider or not.

HON. NELSON MONTEITH.

Hon. Nelson Monteith, in a brief introductory address as Chairman of the Wednesday evening meeting, expressed his delight with the Horticultural Exhibition in Massey Hall, urging that it was the duty of fruit-growers to popularize it throughout the country. He assured his audience that the Department recognizes the importance of the fruit industry, and during the past year had issued several bulletins, including "The Fruits of Ontario," of which he hoped to publish a larger edition. If the estimated 7,000,000 apple trees in the Province could be made to bear 1 1/2 to 2 1/2 barrels apiece, it would mean a great deal to the people of Ontario. We must strive for co-operation in picking, packing and marketing. He then called upon Willard Hopkins, of Youngstown, N. Y., whose excellent paper on "Commercial Fruit-growing in Western New York" must be reserved for later publication in extenso.

THE CODLING MOTH.

During a limelight address by T. D. Jarvis, O. A. C., Guelph, on "Five Common Insect Enemies of the Fruit-grower," an interesting discussion sprang up regarding the life-history of and remedies for the Codling moth. In reply to a question, Mr. Jarvis explained that, while ordinarily there was but one brood a year in Eastern and two in Western Ontario, in the Niagara District there appeared to be a continuous brood, because of irregularity in the date of appearance of the second brood.

Joseph Tweedle related a noteworthy experience. In a portion of his orchard, where the old-grass border had been burned off, they had much less trouble with the codling moth than on other portions, owing, presumably, to the hibernating pupae having been destroyed. He asked for someone from the College to go down to the Niagara District and investigate the grass borders, with a view to learning more, if possible, about how the codling moth passes the winter. The offer will be accepted.

As for remedies, bandaging was conceded to be one of the best, but the bandages must be removed every eight, ten, or at most twelve days, during the pupating season, and the insects destroyed by wringing or otherwise, else the bandages will do harm instead of good. Spraying with Paris green (along with Bordeaux mixture, for fungous diseases) is an effective safeguard against the first brood, but is not much protection against the second, except in so far as destruction of the first brood may serve to prevent a second one appearing. One man advocated using a much larger proportion of Paris green than commonly recommended. He favored eight or ten ounces of Paris green to the barrel, and six or eight pounds lime instead of four ounces green and four or five pounds of lime, as stated in most formulas.

SAN JOSE SCALE CONTROLLED IN PENNSYLVANIA.

The Convention was fortunate in having the services of Prof. H. A. Surface, of Harrisburg, Penn., or San Jose scale. He gave two addresses, the first outlining the methods of controlling the scale in Pennsylvania. Four factors were essential to this end:

1. Determination of the scale by a system of inspection, and then instructing the owners of its presence.

2. Educating the public in the importance and methods of checking such pests.

3. Carefully inspecting nursery stock and surrounding localities, to guard against dissemination of the scale.

4. Guarding against importation of the pest.

While they have no hope of stamping out the scale, they have so well succeeded in controlling it by these means, and by thorough spraying with lime-sulphur wash, that orchards formerly threatened with destruction are now producing large crops of excellent fruit. The State Legislature is so well satisfied with the results that two years ago \$30,000 was voted for the work; last year it was increased to \$40,000, and henceforth whatever money may be needed will be forthcoming. Features of the Pennsylvania method are the monthly bulletins on insects and spraying, including two a year on San Jose Scale. These are mailed free on application, and a large mailing list has been built up. Inspectors are sent out into the orchards, lawns, etc., to look for the scale, and, when any is discovered, the owner is notified and information given him how to spray for it by a circular leaflet, on which are printed four methods of treatment. If the owner fails to carry out the treatment, the State does the work, and the charge becomes a lien on his property. Another feature is the series of public demonstrations in preparing and applying spray mixtures. Authority to prevent importation of infested nursery stock and to control the scale generally is vested in the State Secretary for Agriculture, who is given a free hand to use such means as he sees fit. Every nursery in the State is inspected twice a year, first in February or March, and again about August. Of the 150 nurseries in the State, the percentage infested has dropped, in three successive years, from 75 down to 60, and then down to 40 per cent., showing that the nurseries are gradually being cleaned up. With regard to the scale on fruit, Prof. Surface staked his professional reputation on the statement that the scale is not spread on ripe fruit, but only in its young and free-moving state, or on wood that will grow again.

ELECTION OF DIRECTORS.

Under the head, "Election of Directors," a small change in the constitution was made. Previously, there has been a director for each agricultural district in the Province, the directorate districts being those defined some years ago by the Department of Agriculture when subdividing the Province for official purposes of agricultural administration. This division had been made, however, without regard to the fruit industry, and, as a result, the basing of directorship on these lines of division gave insufficient representation to the Niagara Peninsula and other leading fruit districts. It was therefore proposed to remodel the divisions, to make the representation more equitable. The St. Lawrence and Ottawa Valleys were given two instead of three directors, and the Niagara District was allotted an extra one. Other minor changes were also made.

This proposal was the subject of a dramatic protest from A. A. Wright, M. P., of Renfrew, who objected to these new and developing fruit regions being shorn of their representation. In reply, it was pointed out that the Ottawa and St. Lawrence Valleys still had a much larger representation than the extent of their fruit interests warranted, and they might rest assured that it would be increased when the growth of the business in that region warranted such action.

Following are the directors for the ensuing year: For district No. 1, comprising counties of Renfrew, Carleton, Lanark, Russell and Prescott—R. B. Whyte, Ottawa; district No. 2, comprising Frontenac, Leeds and counties eastward—A. D. Harkness, Irenia; No. 3, Lennox and Addington, Hastings and Prince Edward—E. S. Wallbridge, Belleville; No. 4, Victoria, Peterborough, Durham and Northumberland—Wm. Rickard, Newcastle; No. 5, York and Ontario—R. W. Grierson, Oshawa; No. 6, Halton and Peel—A. W. Peart, Burlington; No. 7, Wentworth—E. D. Smith, Winona; No. 8, Lincoln—Geo. A. Robertson, St. Catharins; No. 9, Welland, Haldimand, Norfolk and Elgin—Jas. E. Johnston, Simcoe; No. 10, Lambton, Essex and Kent—D. Johnson, Forest; No. 12, Dufferin, Wellington, Perth, Waterloo, Oxford and Brant—C. W. Gurney, Paris; No. 13, Grey, Simcoe and the north—C. L. Stevens, Orillia; No. 14, Middlesex, Huron and Bruce—A. E. Sherrington, Walkerton. The other officers will be elected by the directors in January.

NEW FRUIT MARKET NEEDED AT TORONTO.

The necessity for an improved fruit market and terminal facilities at Toronto, was the subject of an address by H. Dawson, Commission Merchant, Toronto. The present fruit market is discreditable in appearance, insanitary, inadequate, cramped, and inconveniently situated. There is not room for proper display of the fruit, which sometimes has to be piled 10, 14 or 15 tiers high, and after every rain pools of water lie underneath it. The express companies do not handle the fruit properly, and will not hire sufficient competent help. The wonder is that shortages do not oftener occur, as the commission merchants seldom know how many packages are coming from a consignor, and can't check the lots off. The companies should give the consignee a copy of the bill of lading, as they do now in shipments from Clarkson and Oakville. To improve the present bad conditions, Mr. Dawson suggested two plans. The better one would be for the city to have full control of the fruit market, and provide an adequate building. City property out at the St. Lawrence market would answer admirably. With a good market, Toronto would become a competitive point for