

suited to the production of the potato, but, so far, little or no thought has been given by growers to quality. Attention has been altogether given to get big yields, and the result is that, in discriminating markets, such as Boston, New York and Montreal, our potatoes are classed down, and have to take a lower price in competition with potatoes of better quality.

Value of Potato Spraying.

This last season, plots of potatoes were arranged in three series at the Central Experimental Farm, Ottawa, for spraying tests to control blight. One lot was sprayed with Bordeaux mixture the usual number of times, and yielded 272 bushels per acre; a second lot was untreated, and gave 125 bushels per acre; a third lot was treated with the soda-Bordeaux mixture, and yielded 213 bushels per acre. A fourth lot was not treated for blight until after the first of August, and received but one application of Bordeaux; this lot yielded 224 bushels per acre. From this work, it is seen that it pays handsomely to spray with Bordeaux to prevent the ravages of blight, and that in localities where blight is known, one may confidently expect a full crop yield where no treatment is given. It further shows that, unless the season is unusually favorable, it pays to spray three or four times in the season. However, if one fails to spray early, one treatment about the first of August may give handsome results in increased yields.

THE FARM BULLETIN.

A Conference of Farmers' Club Officers.

Another step forward in the organization of the Farmers' Club movement was taken this month, when the officers of the Clubs of Waterloo County, Ont., met in conference at Galt, on November 11th and 12th. The conference was purely a business affair for the discussion of Club operations, and only the men most interested were invited. One of the delegates designated the conference as an Agricultural Board of Trade. It was called by F. C. Hart, District Representative of the Department of Agriculture for Waterloo County, and the thirteen Clubs of the

county were well represented. No set speeches were delivered, but all the delegates took an active part in discussing the topics brought up.

"The Club Meeting, and How to Make It Successful," constituted the subject of the first session. "Starting on Time," "Managing the Business Part of the Meeting," "How to Get Backward Speakers to Take Part," "Choosing the Place of Meeting," "A Social Gathering," subjects that proved especially interesting, were some of the topics threshed out. Addresses were delivered by C. F. Bailey, of Toronto, and H. H. Ledrew, O. A. C., Guelph.

The Saturday morning session consisted of a discussion of the operations of the Clubs outside of the meetings. Under this heading, those present gave their experiences in such matters as "Instituting a Plowing Match," "Obtaining a Railway Station for the District," "Starting a Rural Telephone Service," "Obtaining a Continuation Class," etc. Experiences in co-operation were also given by the Clubs in the matter of getting supplies and buying good seed. None of the delegates were enthusiastic in co-operating to buy supplies that could be obtained from the local merchant. Egg-circles formed an important part of the discussion.

One important result of the conference was the realization of the benefits of working together, and the desire that similar conferences be held annually. Provision was made for the formation of a central committee of the clubs, so that all clubs of the county will in future be kept in touch with one another. There is no doubt that the members of this conference will carry back to their clubs fresh inspiration in forwarding the movement in Waterloo County.

Ontario Crops Good.

The following statements give the area and yields of the principal field crops of Ontario for 1910. The areas have been compiled from individual returns of farmers, and the yields by a special staff in each township, in addition to the regular crop correspondents of the Ontario Department of Agriculture:

Fall Wheat—743,473 acres yielded 19,837,172 bushels, or 26.7 per acre, as compared with 15,967,653 and 24.1 in 1909. The annual average per acre for 29 years was 21.0.

Spring Wheat—129,319 acres yielded 2,489,833 bushels, or 19.3 per acre, as compared with

2,223,567 and 16.5 in 1909. Annual average, 15.9.

Barley—626,144 acres yielded 19,103,107 bushels, or 30.5 per acre, as compared with 18,776,777 and 27.0 in 1909. Annual average, 27.8.

Oats—2,757,933 acres yielded 102,081,924 bushels, or 37.0 per acre, as compared with 90,235,579 and 33.5 in 1909. Annual average, 35.7.

Rye—95,397 acres yielded 1,620,333 bushels, or 17.0 per acre, as compared with 1,573,921 and 16.6 in 1909. Annual average, 16.4.

Buckwheat—194,913 acres yielded 4,693,881 bushels, or 24.1 per acre, as compared with 4,280,790 and 21.2 in 1909. Annual average, 20.3.

Peas—103,414 acres yielded 6,016,003 bushels, or 14.9 per acre, as compared with 7,613,656 and 20.0 in 1909. Annual average, 19.3.

Beans—49,778 acres yielded 892,927 bushels, or 17.9 per acre, as compared with 826,344 and 18.4 in 1909. Annual average, 17.2.

Potatoes—168,454 acres yielded 21,927,804 bushels, or 130 bushels per acre, as compared with 24,615,283 and 145 in 1909. Annual average, 116.

Mangels—68,972 acres yielded 34,686,137 bushels, or 503 per acre, as compared with 28,928,347 and 410 in 1909. Annual average, 459.

Carrots—3,551 acres yielded 1,049,348 bushels, or 296 per acre, as compared with 1,101,653 and 286 in 1909. Annual average, 345.

Sugar Beets—26,879 acres yielded 11,238,577 bushels, or 418 per acre, as compared with 7,001,565 and 353 in 1909. Annual average, 413.

Turnips—108,360 acres yielded 49,425,472 bushels, or 456 per acre, as compared with 50,738,940 and 447 in 1909. Annual average, 430.

Mixed Grains—497,936 acres yielded 18,261,803 bushels, or 36.7 per acre, as compared with 16,199,434 and 34.1 in 1909.

Corn for Husking—320,519 acres yielded 24,900,386 bushels (in the ear), or 77.7 per acre, as compared with 22,619,690 and 70.1 in 1909. Annual average, 71.4.

Corn for Silage—326,627 acres yielded 3,788,364 tons (green), or 11.60 tons per acre, as compared with 3,374,655 and 11.70 in 1909. Annual average, 11.46.

Hay and Clover—3,204,021 acres yielded 5,492,653 tons, or 1.71 tons per acre, as compared with 3,885,145 and 1.20 last year. Annual average, 1.46.

Horticultural Exhibition and Conventions.

Bright Outlook for Ontario Fruit-growing.

Prosperity characterized the appearance and pervaded the tone of the discussions of the Ontario Fruit-growers, assembled in fifty-first annual convention at Toronto last week. High prices, consequent partly upon the very poor crop of apples produced in the Province this year, had something to do with this condition, giving rise to some seemingly extravagant statements, such as that Canada could market one hundred times as many apples as she is now doing. Mr. Case, the New York State delegate, who has 170 acres planted to fruit, and has made at least fifty thousand dollars at fruit-raising in the last ten years, declared that, while he had found by his system of time-cards, he could not under his conditions make dairying pay with butter at 40 cents a pound, he was, on the other hand, making excessive profits out of fruit. Two dollars a barrel, he declared, was as big a price as apples ought to bring, although, of course, when a larger price was going, he accepted it. Instances were cited of orchards in New York State which had yielded ten per cent. interest on a thousand dollars an acre for a successive period of years. "The Farmer's Advocate" orchard, it will be remembered, paid 13½ last year on that valuation, after defraying an exceptionally heavy bill of expenses. Similar examples might be cited from other quarters, and, while these cases are no more representative of average conditions than is the twenty-thousand-pound production of a phenomenal cow, still they indicate the high-water possibilities of the business when managed with expert care. And expert care is the order of the day. Profits from neglected orchards are becoming fewer and smaller. The orchardist of the future, whether a farmer or a fruit specialist, must be an expert. The past season has demonstrated more conclusively than ever before the immense profits of spraying. In many localities it made all the difference between a fair crop and nothing at all. Lime-sulphur and arsenate of lead are the spraying materials of to-day. With them, almost every known fungous and insect pest of our apple orchards may be controlled.

Still, much wants more, or, at least, declines to submit to a decrease, and the convention was led to adopt a resolution opposing reciprocity in trade with the United States. To be sure, it

was aimed not so much against reciprocity in apples as in some other fruits, but as the profit in growing many of these is scarcely less than in apple culture, the objection in their case is based on the belief that the Canadian fruit-grower has rather more to lose by American competition than to gain by opening American markets. As for the consumer—well, he is reminded that the import duty on fruit is already less than on manufactured goods.

Without attempting in this issue a resume of the convention, it will suffice to touch upon a few of the new and outstandingly important points.

President Jas. E. Johnson, in his opening address, urged active participation in the discussions, remarking truly that the man who learns most at these meetings is the man who tells most. Reviewing the season's work, he stated that the co-operative committee of the Association had been active in assisting local co-operative organizations. The sale of fruit last year from the Horticultural Exhibition had defrayed all expenses of transportation and other items incident to the exhibition of it. It was expected that similar results would be the case this year. Raising the question as to the desirability of holding a special apple show in Ontario, he expressed the opinion that this Province should be able to put up as good an exhibition as the one recently held in British Columbia. The apple industry in Ontario has been on the decline, among the causes being the increasing ravages of insect and fungous diseases, careless culture, apple-buyers who will purchase inferior fruit, and the Department of Agriculture at Ottawa being unable to supply enough inspectors to enforce proper compliance with the Inspection and Sale Act. He suggested the passing of a Provincial law regarding the inspection and packing of our fruit, pointing out that British Columbia had some such law. The possibility of conflict of authority between Provincial and Federal officers was not overlooked, but it was considered probable that such might be avoided with care.

Appropriate reference was made to the loss sustained by the Association in the death of three of its oldest members, A. M. Smith, Murray Pettit and W. E. Wellington; also the further loss through the untimely demise of H. S. Peart, director of the Jordan Harbor Experiment Station.

In the correspondence read by the secretary,

P. W. Hodgetts, was a letter from Wm. Armstrong, of Queenston, suggesting an increase in the size of the present legal standard basket, so that it would hold two rows of first-class fruit. He suggested a bottom similar to that of the present 11-quart basket, with sides now used on the 10-quart.

A letter from the traffic officer of the shippers' section of the Winnipeg Board of Trade, pointed out that the railroads now charge \$2.50 per ton of ice on shipments under the 66c. commodity rate from Eastern Canada. This results in a variable icing charge, running from \$12 to \$25 per car, in addition to the initial icing. This makes it rather difficult for shippers and consignees to decide how much they shall allow for icing. A more satisfactory arrangement, it was considered, would be a uniform charge per car, based on the average cost, \$16 being the figure suggested.

ORCHARD FERTILIZING.

The time has come, said Professor R. Harcourt, of the Ontario Agricultural College, addressing the convention on this subject, when we must supplement barnyard manure with commercial fertilizers applied to our orchards. Fertilizers are not, however, to be used exclusively, but rather along with some humus-forming substance, such as barnyard manure and cover-crops. German experiments have demonstrated that fruit crops feed as heavily as vegetable crops, but that fruit trees will not make quite the same use of the fertilizing constituents in barnyard manure as will the vegetables, apple trees being, however, somewhat of an exception to this rule. With apple orchards, potash appears to be the element predominantly needed, nitrogen standing second, and phosphoric acid last. Potash has a function in the formation of starch, sugars and other carbohydrates. Every large-growing, freshly-leaved plant requires plenty of potash and nitrogen. The lack of potash is indicated by poor leaf development. Some remarkable results of European experiments were cited to illustrate the profits of fertilizing, but as these appear to be in excess of what might be ordinarily expected under Canadian conditions, we hesitate to quote them. For example, one German experiment with plums indicated that \$193 worth of fertilizer increased the fruit crop to the value of \$1,709.