

## Suggestions for Work at New Exper't Station

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THE establishment of a new experimental farm in the Niagara district was mentioned first in connection with plant-breeding.

It was thought that the Ont. Govt. should undertake this work. In order to draw out discussion of this question through the press and at fruit growers' meetings this winter, the following is submitted. Others will no doubt discuss the experimental and research work to be undertaken. Plant-breeding in Ont. must have 4 objects in view:

1. The improvement of our present commercial varieties with respect to their shipping qualities and the production of new varieties of superior excellence in this regard. This is the crying need of the Ont. fruit industry to-day. Our fruit is handicapped in the distant markets in which we are compelled to sell because it does not carry well and consequently arrives at the door of that consumer in poor condition. Shipping quality is lacking in all early and mid-season peaches; also in many otherwise excellent plums, and in most grapes. Earlier peaches as good as Crawford and as firm as Elberta; plums like Reine Claude but of different season, and compact bunching, mildew-proof grapes, as firm as Lindley, are within the range of possibility, and would reward all effort and outlay in producing them. Many other lines of improvement might be mentioned that will occur to fruit growers.

2. The production of good varieties of sufficient hardiness to withstand the vigorous climate that prevails over the greater portion of this province. Many who are not fortunate enough (horticulturally) to live in the region adapted to tender fruits desire to grow their own plums, grapes, cherries, etc., and it will be seen at once that their interests are to a certain extent opposed to those of growers in the more favored sections. While the needs of the Niag. dist. growers should occupy a large share of the attention of the plant-breeder, plans for the future should be broad and comprehensive, and everything possible should be done on the new farm for both interests.

The extent to which hardiness can be bred into a plant is a matter of conjecture and remains to be determined. In the light of recent knowledge it would seem that this work can be carried on to a greater or less extent in the Niag. dist. It is conceded that selection within the limits of the species can result in no change in hardiness; the only alternative is cross-breeding or hybridizing. At So. Dakota this crossing is done in the greenhouse, because the tender species which they desire to use will not stand their winter unprotected, and because the high winds which prevail make outdoor crossing difficult and arduous. It would seem that the crossing could as advantageously be done out of doors within the habitat of the less hardy species, and the new station is favorably situated for much work in this direction. The actual testing of the promising seedlings produced would, in any event, require to be general throughout northern sections.

3. The production of new varieties of excellent merit without regard to their shipping quality or hardiness. Large quantities of this class of fruit are already consumed in the fresh state in the Niag. and Essex peninsulas, and sold in the markets adjacent to them. Additional large quantities are made use of by the canning factories, and these 2 interests are practically identical in the quality of fruit used. Extension of season in either direction, so as to give a better succession of high-class fruits throughout the year, is much to be desired. Cold storage facilities aid in lengthening the canning season only in 1 direction, and good early varieties of peaches, pears and plums would be most welcome to the canner and to the home consumer.

4. The improvement of fruits native to but uncultivated in the more northern sections. Our

native cherries have never been improved, and the hardiness and productiveness of these and of other fruits, such as blueberries, offers an interesting field to the plant-breeder. This work must be forwarded in the section to which the fruits which it is desired to improve are native, but it should be done under the direction of the head of the plant breeding department.

There are many other problems arising out of the foregoing, such as the production of disease-resistant varieties, and of more suitable stocks for grafting and budding, which require solution. In addition to these the problems of the vegetable grower and florist demand attention. The breadth of the work and the importance of the interests concerned merit generous treatment at the hands of the government. The director of the new station should be thoroughly capable of directing the experimental and plant-breeding work, and should be allowed a free hand in doing so.

No work in hybridizing can be undertaken at the new farm until trees and plants reach bearing age. In the case of the tree fruits this means several years' time lost unless work can be begun in other places. This brings to mind the experiment stations and their stock of varieties already in bearing. It is quite possible that excellent use could be made of some of these.

The Dept. of Hort. at the O.A.C. has made a beginning in plant-breeding and has several promising seedlings under test. Extended work with fruits, flowers and vegetables is being planned for the future. The dept. would be pleased to obtain results of accurate observations on disease resistance. It is desired to find out if there is variation in this respect within the variety. If such is the case, selection alone would probably bring about the desired end. If such is not the case, the crossing of varieties, which is a much more uncertain process, would have to be resorted to. Information concerning specific examples of resistance to mildew, scab, rot or blight in varieties subject to these diseases would be gladly received.

### Letters from Hort'l Societies

The St. Thomas Hort'l Soc. was organized in Jan., 1906, and we enrolled over 80 members. Our first work was to start a lawn and garden competition. We have been trying to get the city council to beautify certain plots and to acquire property for park purposes in the city. In conjunction with the schools of the city, a flower show was held on Sept. 22. No prizes were offered, but through the school children a large exhibit was secured. THE CANADIAN HORTICULTURIST was given to each member and bulbs were distributed in Oct. We expect to distribute seeds next spring to the school children and to our members. A committee of 2 of our members contributed seasonable articles to our daily papers, for the information of members. On Dec. 6, a public lecture was given by P. M. Thompson, M.A., Science Master of the Coll. Inst. on "Plant Societies." There was a good attendance. We expect a strong society next year.—S. Silcox, Pres.

#### THE KINCARDINE SOCIETY

The Kincardine Hort'l Soc.'s work the past year has exceeded the work of any year of the former 7. Its progress is steadily onward. Every encouragement is given to plant for recreation and profit. Nearly every garden and home is embellished with plants of rare beauty and merit.

We have encouraged the culture of fruits, and always place a fair proportion of fruit trees bushes and vines on our premium list, as well as plants and bulbs. We aim to give every member many times more value than is got from the membership fee of \$1, as you will see by the following list of trees and plants presented to

the members: Fruit trees, 192; Elms, 108; perennial phlox, 15; callas, 24; dahlias, 40; gladioli, 150; tulips, 805; hyacinths, 240; azaleas, 39; geraniums, 180; roses, 98; and shrubs, 35.

Our membership the past year was about 135. We hope to have it over 150 the coming year.

Our annual show was held on Aug. 30, and was well patronized by young and old. From the schools were about 250 pupils, and there was a steady stream of visitors, many wishing that the exhibition would be open the following day. The flower show was free to all and a handsome display. Many of the plants would be no discredit to professionals. A very instructive lecture was given by Prof. H. L. Hutt, with which many of our local fruit growers and gardeners were highly pleased.

With carefulness and economy, the willing efforts of our directors, the earnest zeal of our secretary, the kindly recognition of our town council, and the solid and financial aid of our provincial government, a society has been built, whose refining influence is seen and recognized by town and country. This year we will give as a premium to every member (in addition to the flowers or fruits), the best, neatest and cleanest horticultural magazine in Canada—THE CANADIAN HORTICULTURIST.—Wm. Welsh.

### Kind Words

Many encouraging letters are being received from our subscribers concerning the improvements that have been made in THE CANADIAN HORTICULTURIST within the last year. A few of those just received are here given. Naturally, it is encouraging to us to receive such letters. Here they are:

"Our society is well pleased with THE HORTICULTURIST, and our members wish it every success."—Robert Davis, Secy. Hespeler Horticultural Society, Hespeler, Ont.

"I am delighted with the appearance of THE HORTICULTURIST. It is one of the best monthlies I know of on orcharding and the cultivation of fruit. Not only that, but the information it gives on the marketing of apples is worth everything to the fruit grower. I have given a few copies of it to parties I thought ought to have it."—John Spencer, Henrysburg, Que.

"Here is one dollar as a renewal for your magazine for two years. We are pleased with the improvements and congratulate you upon the able manner in which you advocate the interests of the horticulturists. With best wishes for your success."—R. Jack & Sons, Chateauguay Basin, Que.

### Of Interest to Fruit Growers

Every one who grows fruit, either on a large or small scale, will be interested in the advertisement of *The Fruit-Grower*, St. Joseph, Missouri, which appears in our columns. This publication is issued monthly, is handsomely illustrated, and comprises from 32 to 80 pages each month, and all phases of fruit growing are covered. The first four issues of 1907 will be handsome special numbers, the January issue devoted mainly to reports of meetings of horticultural societies, February to spraying, March to gardening and April will be the small fruits number. Every reader of this paper who is interested in fruit culture should take advantage of the liberal offer of the publishers to send *The Fruit-Grower* for three months on trial, absolutely free. Read the advertisement and send your name and address at once, mentioning this paper.

On page 300, Dec. issue of THE CANADIAN HORTICULTURIST, the orchid cuts should have been transposed.

Books For All. We have listed in our book catalog all the popular modern horticultural works, at the most reasonable prices. Send for a catalog. It's free!