



Orchard and Apiary of C. H. Martin & Son, Port Hope, Ont. (See accompanying article)

success largely to the fact that he has been specializing; his three special lines being the orchard, the apiary, and early potatoes.

Every spring Mr. Martyn begins the season with thirty to forty colonies of bees. On these he clears one hundred to two hundred dollars annually. There is no disease in his hives, and they require comparatively little work for the returns received.

There are eight to nine acres of orchard coming into bearing. Four acres were planted in the spring of 1912 and there were from two to three acres already planted when the farm was bought. The trees are set thirty feet apart each way. Last year the orchard produced in the neighborhood of three hundred barrels. The varieties planted in the young orchard are Spy, McIntosh, and Snow, Baldwin, Stark, Ben Davis, and Gano. The trees are cared for according to the best orchard practices. Complete spraying methods are practised—the lime-sulphur being made on the farm.

The orchard is carefully pruned, fertilized, and worked. Between the rows Mr. Martyn follows the practice of growing various crops, mainly cultivated crops, such as mangels, corn, and potatoes. These crops in addition to keeping the orchard clean, help to pay for the outlay expended in planting. Three-quarters of an acre is also devoted to strawberries each year. The earlier varieties are grown, and although somewhat low yielders they bring high prices. Last year about two thousand boxes were sold for approximately one hundred and ninety-five dollars.

For seven years potatoes have proved a great source of revenue. Mr. Martyn grows the early varieties chiefly, and never has enough to supply the demand,

receiving high prices for his crop. Consistent spraying is practised with this crop. Last year, although blight was very bad in the district, spraying practically saved Mr. Martyn's entire crop. His success shows the advantage of specialization.

Winter vs. Summer Pruning

By Dr. C. D. Jarvis, Conn. Agr'l College, Formerly of the Guelph Agricultural College

(Continued from May issue)

For assistance in the preparation of this paper, I have appealed to some of the best authorities in this country and in Canada. Personal letters were sent to twenty-four different people, mostly college and experiment station horticulturists. Twenty-two replies were received. While these replies brought out many conflicting statements with regard to the time and method of doing the work, they mostly agree that there is a place for summer pruning in our orchard practice. Extracts from some of these letters may be of interest here:

Professor M. B. Cummings, of the University of Vermont, writes: "In general, I am very much inclined to believe that much of our pruning is best done in the summer time, and if annual attention is given this matter, very little of the severe winter pruning will be required. I think the taking out of the laterals where the crown is too thick and pinching out the terminal buds will tend to hold the tree in check and shape it up better for the permanent stocky branches."

Professor U. P. Hedrick, of the New York Agr. Expt. Station: "We have several dwarf orchards in different parts of this state. We have done some pruning in these orchards every season for the past seven years, the time ranging from the middle of July to the end of

September. As yet, we have found no time in the summer in which trees can be pruned to advantage in this state. If the work is done early in the season the weak, succulent growth which is nearly always winter-killed follows. If the work is done late in the season, the effects of pruning do not differ from those obtained by winter pruning. We have about concluded that summer pruning is wholly unsuccessful for this climate. At least, it is in the average season, under average conditions, and in the hands of the average fruit grower." Prof. Hedrick's opinion seems to be based upon the behavior of dwarf trees only.

Professor C. A. McCue, Delaware State College: "I am a firm believer in this method of handling trees and I believe that in the past we have done altogether too much winter pruning on peach and apple trees. Of course, summer pruning can be overdone, and if care is not used and proper judgment exercised, a tree may be seriously injured by pruning during the summer season."

CONCLUSIONS AND RECOMMENDATIONS

I believe that with young trees we should do very little winter pruning, and that we should direct the growth largely by summer pruning. The work to be most effective should be done a little each year and at just about the time the tree completes its annual growth, which in this section is about the first week in July. If done too early it will defeat its aim and produce a strong growth of shoots. If done too late, it forces out a soft growth which is likely to be winter-killed. The object of the work at first should be to direct the growth and later to induce fruitfulness. Only strong growing trees should be pruned during the growing season, remembering that it is a de-vitalizing operation and may easily be overdone.

With regard to bearing apple trees the necessity for summer pruning is less pronounced if not entirely eliminated. Since our mature trees tend to overbear there is no necessity for inducing fruitfulness, and winter pruning would therefore be the most logical practice. The problem is an intricate one, and since there is so much difference in the character of soils and the behavior of varieties, it is going to be difficult, if not impossible, to formulate any set of rules that any fruit grower may safely follow. The physiologist in time may be able to reveal the underlying principles in connection with the work of pruning, but the problem always will be a local one, and the details relating to the practical application of the principles must be worked out by each fruit grower.