

Issued
Each Week

FARM AND DAIRY & RURAL HOME

Only \$1.00
a Year

Vol. XXXI.

FOR WEEK ENDING MARCH 7, 1912

No. 10

SOME IMPORTANT CONSIDERATIONS IN ARRANGING TREES IN THE ORCHARD

Prof. J. W. Crow, O.A.C., Guelph, Ont.

The Various Systems of Orchard Planting Discussed. Why the Square System is Preferred. How to Arrange Varieties to Promote Proper Cross-fertilization and Make Spraying Easy.

THE square, hexagonal, and oblong are the systems of arranging trees in the orchard in most general use among fruit growers. In the last named system the trees are planted at a greater distance in one direction than the other, for instance, 80 feet by 40 feet. If this system is used the trees will ultimately form more or less solid rows in one direction, and all team work must be carried on in the direction in which the rows run.

This system is open to serious objection on the ground that J. W. Crow, cultivation cannot be carried on in both directions, and also from the standpoint of spraying. In order to get the maximum color (which is, of course, secured by taking advantage of sunshine), the rows should run east and west, but it will be found, I think, that east and west rows are less easily sprayed than rows running north and south. In general, I believe it is advisable for efficiency in spraying to have the orchard so arranged that one can drive north and south, thereby taking advantage of east and west winds.

NO. 2 TREES PER ACRE

The hexagonal system of planting has been largely used in western localities, and is chiefly advised for the reason that it will accommodate more trees per acre than any other system, the minimum distance from one tree to all other trees being the same. Close planting may be advantageous when it is a question of selling land to persons who may not be experienced in fruit matters, but from the fruit-growing standpoint it is certainly not advisable to plant too many trees on an acre. The standard distance for winter apples in Ontario is 40 feet by 40 feet on the square. Forty feet by the hexagonal would be too close, as trees planted at that distance and on that plan would be found to crowd each other for root space, as well as for sunshine and air, much more than would trees of the same size planted at 40 feet on the square system.

All things considered, I believe the square system is much to be preferred over any of the others. It gives equal opportunity for cultivating in both directions, and it also gives opportunity for sunshine to reach all parts of a tree. This latter point I

consider of very great importance. Another point in which the square system is to be preferred over the hexagonal is that it gives greater opportunity for the use of fillers. It is a difficult matter to arrange fillers in a hexagonal orchard unless the permanent trees stand at very great distances.

PLAN FOR PROPER FERTILIZATION

The question of adequate cross-pollination is one which requires to be planned for beforehand in arranging the trees in an orchard. Many of our best varieties, such as Northern Spy, McIntosh Red and others, are partially or wholly self-sterile and require other varieties in the immediate vicinity in order to secure proper fertilization of their blossoms. It is stated by some in-

vestigators that even in the case of self-fertile varieties cross-pollination by other sorts is beneficial. In a majority of cases, I believe this to be correct, although there may be occasional instances in which the point is not worthy of consideration.

I should advise alternating varieties and would prefer not to plant more than two rows of each kind together. For convenience in harvesting, rows should be in pairs. Two of a kind might be planted together, or four of a kind. Better pollination would be secured, I believe, where only two rows of each kind are used.

SOLID ROWS, BETTER SPRAYING

For the sake of greatest efficiency in spraying, it is much better, I believe, to plant varieties in solid rows. If two or more varieties are contained in one row, the probability is that some would be ready for spraying earlier than others, and to do the work properly it would be necessary to go over the ground twice. This is especially true of the coddling moth spray for apples. There is

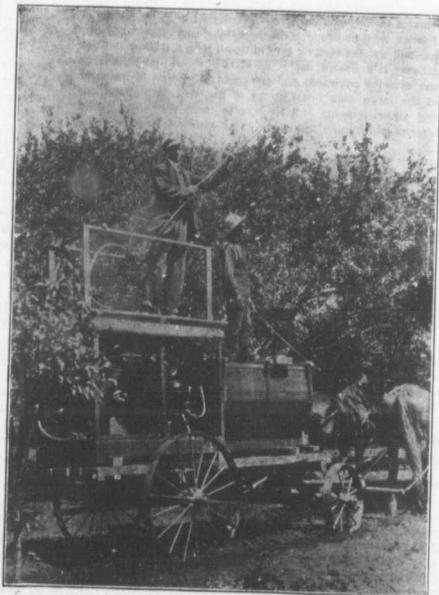
frequently a difference of several days in the blooming period of different varieties, and if solid rows can be sprayed at one time much better work will be done. As mentioned previously, I believe it is a good idea to arrange an orchard so that one can drive north and south for spraying purposes. Winds in this country are mostly from east or west, and in order to make best use of them in spraying it is advisable to drive at right angles to them.

Cultivate Between the Trees

W. Dreaker, Macdonald College, Que.

Measuring the length of roots of young trees and comparing that length with the width of the crown it has been found that the roots occupy an area twice as large as the crown does, it follows that if the trees are planted the usual width apart their roots will ultimately occupy the whole area between the rows; moreover, the roots most actively engaged in taking up food are the youngest, those that are farthest away from the trunk.

These facts show that in order to obtain the best results the whole area occupied by the roots must be cultivated, and this holds equally true for a young orchard, because in that case the ground must always be in such a state as to allow the roots to expand rapidly and grow at a depth where moisture is always available, and where they shall be protected more or less from the plow or frost. The sooner and the better cultivation is practised the better results obtained later—and that with considerable less work.



Orchard Pests Stand No Chance Against an Outfit Such as This
The day is past when we look on wormy or spotted apples as a necessary evil. With a knowledge of the best spraying solutions for each pest now have, we have solved the problem of producing a high percentage of No. 1 fruit. The ranks of up-to-date orchardists are swelling every year. Numerous. This illustration is from a photo taken in an orchard in Halton Co., Ont.