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CHERRY PRODUCTION IN MICHIGAN

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The ultimate success or failure of a commercial cherry production enterprise in Michigan depends in no small degree on the conditions under which and the way in which the enterprise is started. More specifically this means that location, soil, choice of variety and of nursery stock, decision as to planting distance, and soil and other management methods in the young plantation are all factors of importance in determining yields, production costs and margin of profit in the years to come.

Detailed records that have been kept in one northern Michigan cherry orchard for a period of 16 years furnish definite information on some of these questions.

Varieties. In that orchard Montmorency proved by far the most productive and most profitable variety and observation elsewhere in the state leads to the belief that this is typical of the general situation. Early Richmond and English Morello were little more than half as productive when grown under similar conditions and must be so marketed as to bring considerably higher prices if they are to yield a corresponding income. In general, the Duke varieties were far less productive than Montmorency and are of doubtful commercial value. Of the sweet varieties under trial, Windsor, Schmidt and Bing were most satisfactory. Lambert proved very unsatisfactory because of the high percentage of the fruit that cracked.

Location and Soil. No rules can be given for picking out a location for a cherry orchard. However, every effort should be made to select a site that is comparatively frost-free and likewise where there will be a minimum amount of winterkilling of wood and of fruit buds. All of the overhead, and most of the current maintenance, costs go on during years of crop failure as well as during crop years. This means that the loss of even one crop in ten increases materially the average cost of production per pound and correspondingly reduces the margin of profit.

Cherries may be grown successfully on many different kinds of soil. In general, however, the soil should be well drained and of such character as to permit deep root penetration. It should be fertile enough to promote vigorous growth. If its natural fertility is not high use of fertilizers must be more liberal.

MICHIGAN STATE COLLEGE

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Planting Distance. There is much difference of opinion as to planting distance for cherries. In this orchard, where a number of different distances were employed, close planting (16½ x 16½ ft.) proved more profitable than wider spacing (23 x 23 ft.). Individually the mature trees are smaller and less productive in the close-planted blocks, but the yields and returns per acre have been much greater. Furthermore the returns during the early producing years were much larger, making a net investment of $100-$200 per acre less at the time the crops were of sufficient size to meet all expenses. The advantages of wide spacing have probably been overemphasized.

Soil Management Methods. Experiments and experience with most tree fruits indicate that nitrogen is usually the limiting soil nutrient. This can be readily supplied in the form of nitrate of soda or sulphate of ammonia. Heavy enough applications should be made to keep the trees growing vigorously, producing new shoots each year that are eight to 10 inches long. Applications of barnyard manure and the annual use of cover crops, where weeds do not cover the soil during the fall months, are also recommended for the purpose of maintaining the humus supply of the soil.

Pruning. Pruning practices vary even more than planting distances. Some of the blocks in the orchard in which this study was made were pruned heavily, others lightly. The general effect of heavy pruning of the young trees was to check their increase in size, delay bearing and reduce the size of their early crops. Indeed the experience gained in developing this orchard leads to the recommendation of only light pruning in the cherry orchard—pruning that is limited principally to the removal or cutting back of limbs in order properly to shape the tree. Pruning is not a means of increasing yield in the cherry orchard, nor does it have much influence on size or grade of fruit.

Spraying. In the orchard which furnished the records for this report spraying occasioned one of the major items of expense in the current maintenance, ranging from $10 to $30 per acre, for mature trees. However, this was considered money well spent because it resulted in protecting not only the fruit itself but the foliage from insect and fungus attack. The prevalence of the leaf spot disease makes thorough spraying almost as necessary during years of light crop or crop failure as during years of heavy yield.

Production Costs. In the orchard to which reference has already been made and for which the various costs have been kept in detail, production costs per pound have varied greatly, depending on variety, planting distance, pruning and many other factors. In all of the blocks, however, the overhead costs, including such items as supervision, interest on the investment in land and trees, tree depreciation, taxes and insurance, etc., have exceeded the current maintenance costs for cultivation, pruning, spraying, etc. This serves to emphasize the relative importance of those measures and practices that tend to reduce as far as practicable the amount of the investment per acre, the rate of tree depreciation and the amount that is spent in keeping going the establishment as a whole. It likewise serves to bring out the fact that attempt to effect substantial savings by curtailing spraying operations or reducing fertilizer applications is very likely to prove false economy.

The big expenses go on just the same and the slightly reduced expenditure per acre may result in a considerable increase in cost per pound if yield is materially reduced.

Production in the different blocks for this one orchard actually varied from less than two cents to nearly 20 cents per pound, the lower costs invariably being associated with the heavier yields.

Yields, Prices and Profits. Yields of trees ten years old or older ranged from less than 1,000 to nearly 22,000 pounds per acre, depending on variety, season and a number of other factors. During a 10-year period (1916-1925) prices received for sour cherries ranged from four to 11 cents per pound. The average was about six and three-fourths cents. At those prices the orchard had to yield upwards of 3,000 pounds per acre to pay for all production and harvesting costs. Only where yields above that figure were obtained were profits realized.

To what extent the prices of 1916-1925 are indicative of what they will be during the next one or more decades it is impossible to say. Production costs likewise are likely to vary. Regardless of these variations, however, it is evident that cherry growing gives promise of being profitable under environmental conditions and orchard management methods such that heavy annual yields are obtained. It is equally certain that the business of cherry growing will be unprofitable where soil, site or variety preclude large crops and regular production or where orchard management methods do not provide for vigorous tree growth, heavy production of fruit and the protection of both foliage and fruit from the inroads of insect and fungous enemies.

Note: This circular presents in condensed form the more important points covered in detail in Special Bulletin No. 166 of the Michigan Agricultural Experiment Station. A copy of that bulletin may be obtained upon request.