

## GROWING THE BLACK RASPBERRY IN MICHIGAN

By A. H. TESKE AND V. R. GARDNER

The most important single factor in determining the success or failure of the raspberry plantation is yield and the most important factor determining yield is location or site. Plantations on bottom land or in low frosty pockets may escape injury from spring frosts and winter freezing some seasons but over a period of years the tax levied by untimely or extreme cold is sure to be heavy. The winter-killing of canes and fruit buds in these locations is likely to be even more serious than the damage to blossoms caused by spring frosts. Raspberry plantations should be established only where air drainage is sufficient to provide comparative freedom from winter and frost injury.

**Soils.** The ideal soil for raspberries is a light deep loam underlain with a subsoil loose enough to permit good under drainage but still containing enough clay to retain considerable quantities of water. Deep root penetration is prerequisite to vigorous growth and heavy fruit production and deep root penetration is impossible where there is a high water table during a part of the season or where hardpan is close to the surface. The prevalence in many commercial plantations of spots where the plants have died out are usually evidence of unfavorable soil conditions. It is also desirable that the soil be reasonably fertile, but high fertility is second in importance to good texture and physical condition (See Figure 1).

**Plants and Planting.** When crown gall, anthracnose, mosaic and other virus diseases once get well established in a raspberry field, eradication is almost impossible and commercial control can be obtained only by thorough roguing. This results in many vacant places, with a consequent reduction in yield. Indeed either directly or indirectly disease is one of the most important factors in determining the life of the plantation. The best way to deal with the disease problem is to avoid it by planting only disease-free stock—stock that is obtained from recently set fields of vigorous plants that have been carefully inspected and thoroughly rogued.

Records show that heavy yields are practically impossible where there are less than 3,000 fruiting canes to the acre and maximum production is

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R. J. BALDWIN, Director

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possible only where there are from 5,000 to 8,000. Individual canes in these thickly-stocked fields may be less productive than those in thinly-stocked plantations, but acreage production is greater. A planting distance of eight feet by three or four feet is suggested. That will allow ample room between hills for cultivation. Then if three strong canes are left to each hill the stand will be sufficient for heavy yields. Close planting also reduces injury from wind.

**Cultivation.** Thorough cultivation and enough hand hoeing to keep down weeds until after the close of the fruiting season is desirable, but cultivation should be shallow. Deep cultivation that cuts many of the large roots is sure to check growth and greatly reduce yields.

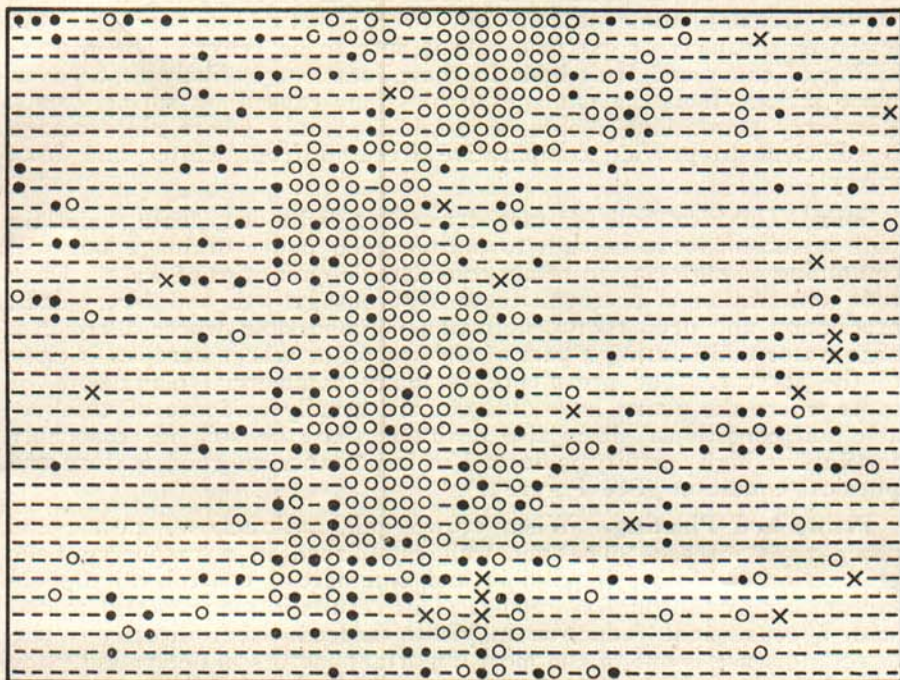


Fig. 1.—A section of Field 6. The circles represent vacant places, the black dots non-bearing plants and the crosses diseased plants. Note the more or less characteristic grouping of the vacancies, due to unfavorable soil conditions in the "draw" or depression extending across the field.

**Production Costs, Yields, Prices and Profits.** Under present conditions it will cost from \$50 to \$100 per acre to establish the raspberry plantation. This includes cost of plants, fitting the land and planting, and the first year's care of the field, together with interest on the investment, taxes, insurance, etc. The subsequent annual maintenance and harvesting costs, including all overhead expenses and depreciation of plants, are likely to equal or even exceed this figure.

Prices vary greatly, depending on season, the supply of other fruits

and many other factors. During recent years they have averaged between \$2.00 and \$2.50 per 16-quart case.

It is obvious that with these prices prevailing at least moderate yields must be obtained to cover production costs. Records obtained from a number of commercial plantations in southwestern Michigan show that in some instances berries are produced and sold at a considerable loss. In others they are produced and sold at a profit. Many others are marginal producers. Where the planting distance is so great or the stand of plants so poor because of unfavorable soil or disease that yields of 30 to 40 crates to the acre cannot be obtained, little hope of profits can be held out for the grower. Where location, soil and management methods are such that 75 to 80 crates or more can be produced to the acre a good profit can usually be realized.

Note:—This circular presents in condensed form the results of a kind of survey of the raspberry industry of southwestern Michigan made in 1925-1926 and reported on in Detail in Special Bulletin No. 165 of the Michigan Agricultural Experiment Station. A copy of that bulletin may be obtained upon request.

