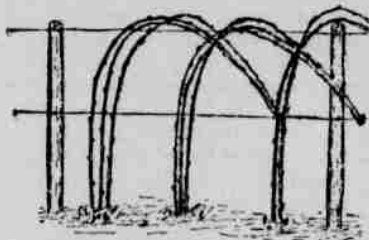


## Growing of Blackberries and Raspberries

The following instructive article on berry growing, by W. S. Thorber, Horticulturist, Washington Agricultural Experiment Station, Pullman, Washington, was published some time ago, but not generally circulated. The Farm Magazine Section prints it by request.

**THE SOIL**, temperature and general conditions of many parts of the State of Washington are admirably adapted to the commercial growing of practically all kinds of small fruit. This is particularly true of raspberries, blackberries and loganberries. Several localities west of the Cascade mountains have already become famous as berry growing districts. Probably nowhere in the



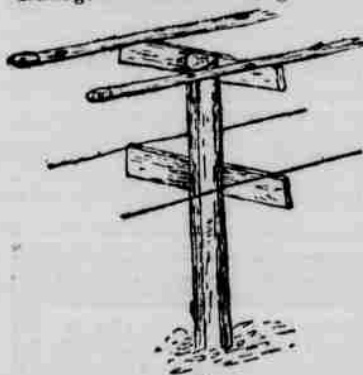
One Way of Handling Twelve-Foot Canes of Red Raspberries.

United States do these fruits grow to a higher degree of perfection than in these districts. With the opening up of large tracts of land for orchard purposes comes the demand for an early yielding, highly profitable crop that can be grown among the trees without danger of injuring them, and so for this reason large acreages of these plants are annually being planted in many parts of the state.

### Soils Preferred.

While raspberries and blackberries are more or less cosmopolitan as to their likes and dislikes of soil, yet they prefer a deep, rich, moist (but not wet), sandy loam, abundantly supplied with humus and nitrogen plant foods. However, they can be successfully grown on basaltic and volcanic ashy soils after humus has been added, provided there is sufficient moisture during the growing and fruiting season. Some of the soils of the irrigated sections of the state are not adapted to these fruits until one or more crops of green manure have been plowed under.

One of the essential features of a good berry soil is thorough drainage, not only during the growing season, but also during the winter months. Soil that becomes saturated with water and so remains for even a short time is not adapted to berry culture, and should not be used until artificial drainage has been provided. Much trouble from root rot and root fungus can be avoided by providing good drainage. The factor of air drainage should also be considered in the making of a berry plantation. Good air drainage minimizes the danger of late



Best Form of Support for Wine-Producing Sort of Grapes.

spring frosts and materially lessens the injuries caused by some of our plant diseases.

### Thorough Tillage Necessary.

Nothing can take the place of good, thorough tillage in the berry patch. A heavy mulch may keep down the weeds and hold the moisture, but it does not liberate plant food like cultivation. The spring cultivation should start as soon as the soil is dry enough to be worked, and should be deep enough to loosen up the soil, yet not so deep as to injure the feeding roots of the plants. The summer tillage should be shallow, but frequent, and continue regularly until the crop is safely harvested, and afterwards only frequent enough to maintain

growth and keep the suckers and weeds down.

The perishable nature of berries make them one of the most difficult fruit crops to market that is commonly grown. However, if they are picked just as they are turning red, taken at once to the packing or cooling shed and handled with reasonable care they will be in their prime in from twelve to twenty-four hours. Berries picked in the morning ship better than those picked in the heat of the day, and under no circumstances should fruit be picked when the leaves of the plants are wet with dew or rain.

Where berries are not grown in sufficient quantities to warrant the use of refrigerator cars, the Pony refrigerator should be used. Overripe fruit should be consigned to the cannery, and never be permitted to be sent to any distant markets.

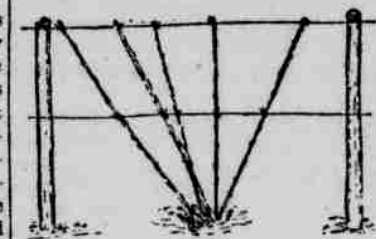
### How to Get Best Results.

The difference in the growth of varieties makes it necessary to use different plans to get the best results for all varieties.

For the convenience of this discussion I group all of these fruits into two classes, i. e.: "Upright growers," or such plants as produce erect canes, and "viny growers," or such plants as the Logan and Phenomenal berries, and Evergreen, Himalaya Giant and Early Mammoth blackberries, which produce long prostrate vines or canes.

The two general planting plans: "hill" and "continuous row" systems are about equally used in the commercial fields of the state. Each has advantages as well as disadvantages, and if not crowded either will give good results. The hill system affords the best opportunities for cultivation, air drainage, sunlight on all sides of the plants and ease of harvesting the crop, while the continuous row system permits the planting of more plants per acre without serious crowding.

The "upright growers" may be



Good Way to Support the Canes of Small Fruits in Windy Localities.

profitably planted according to either system, but "viny growers" must be grown in hills or they become a dense hedge, making satisfactory harvesting an impossibility.

### A Common Fault.

The one common fault of practically all amateur fruit growers is the over-planting of their land. The fertility of the soil, annual rainfall or irrigation, and variety materially govern the distance apart plants should be planted. On the rich moist soils of Western Washington, where heavy growth is a certainty, or dry soils of Eastern Washington, where the conservation of the moisture must be practiced, the "upright growers" should be planted not closer than six feet apart each way in the hill system, or three by eight in the "continuous row" system. In irrigated sections, where moisture can be supplied at will, the plants may be planted closer. However, it is not advisable, since what may be gained in additional number of crates per acre is frequently lost by the grade or quality of the fruit. On similar soils the "viny growers" should be planted in rows eight feet apart and the plants from sixteen to twenty-four feet apart in the row, using the alternate system, and thereby affording a greater feeding area for the roots of each plant.

### Staking Vines.

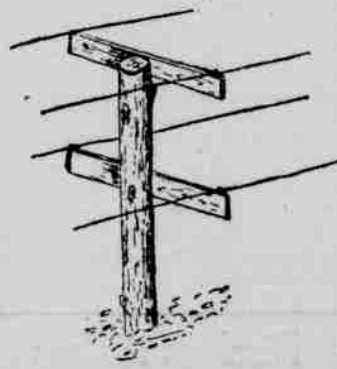
The "upright growers," where planted in hills, can best be staked by a single strong stake, from four to six feet in height, and the canes loosely, but very securely, fastened to the stake. Some growers prefer to set two stakes about fifteen inches apart at each hill of blackberries with the idea of training the fruiting canes on one and the growing canes on the other. Where the "upright growers" are planted in a continuous row they may be trained to and supported by a two-wire trellis,

consisting of a single row of posts four to five feet high with a single No. 19 wire stapled to the top, and another from eighteen to twenty-four inches from the top. The more common method, however, is to set a single line of posts four or five feet high in the row, nail an eighteen-inch cross-arm three feet from the ground and another at the top of the posts, and to the ends of these arms staple heavy wires, thus forming firm lateral supports for the canes.

### The Trellis Support.

The four-wire trellis, with the addition of notched cross pieces to lay on the lower wires, makes an excellent support for the "viny growers," the purpose being to suspend the growing canes by means of small cloth strings an easy system to work and keeps the growing and fruiting canes separate, thereby simplifying the picking.

In sections where there is danger of winter injury the old fruiting canes should be left until spring, while in other sections they may be removed and under the upper wires for the first year, and at pruning time lower them to rest



Good Framework for Supporting Canes of Red Raspberries.

on the notched pieces on the lower wires for their fruiting period. This makes the plant cleaned up immediately after they are through fruiting. The cutting back of the tops and final chinning of the canes should be done late in the winter or early in the spring, after all danger of winter injury is past. The "upright growers" should be cut back to sound wood from three to five feet in height, while the "viny growers" should be cut back to canes from six to twelve feet in length, depending upon their condition and strength.

The number of canes to be left per plant must be determined largely by the variety and the vigor of each plant. Strong upright plants will support from four to seven canes, while weak ones should not be expected to support more than two or three. Four canes per plant is the most satisfactory number for the "viny growers."



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