

Bramble Basics: Site, Soil, Planting Systems

David T. Handley, Vegetable and Small Fruits Specialist
University of Maine Cooperative Extension
Highmoor Farm, P.O. Box 179, Monmouth, Maine 04259
david.handley@maine.edu

Choosing a site

Site selection is critical to successful raspberry production. The wrong choice will generate chronic problems which, at the very least, will tax management skills and reduce profits, and may result in a failure of the planting.

A good raspberry site should have an excellent soil. It must be well drained. A site that holds too much water will reduce the vigor of the plants and greatly increase the probability of *Phytophthora* root rot infection. Avoid soils heavy with clay. A sandy loam with acceptable levels of organic matter (2% or higher) will provide the greatest chance of success. The site should receive full sunlight and have good air circulation. This will encourage a dry microclimate within the planting to reduce the incidence of fungal diseases.

Preparing the soil

Have the soil tested to determine what amounts of nutrients need to be added to encourage optimum growth of raspberries. Applications of lime, to adjust the soil pH to 5.8 to 6.5, and fertilizers should be made according to soil test recommendations. Prior to planting, organic matter levels can be increased by incorporating compost, animal manures and/or plowing down cover crops. The use of cover crops prior to planting can also be an effective technique to reduce weeds and improve the nutrient status of the soil. Cover cropping should be carried out for at least two years to effectively reduce weed populations and improve soil conditions.

Raised beds can also be used to improve soil drainage. Beds can be 4 to 10 inches high, depending on the equipment available, and should be 18 to 36 inches wide. Trickle irrigation will be necessary on raised beds to prevent drought, and the chances of winter injury to the plants may be increased.

Planting Raspberries

Raspberry plants are often started from dormant one-year-old canes, however, plants are now also available as tissue-cultured, virus-free plantlets from several nurseries. Although the cost of plants propagated this way is somewhat higher (50-100%) than conventionally propagated plants, the exceptional vigor and uniformity of these plants, in addition to virus indexing, may make them a worthwhile investment for the commercial grower.

Raspberries are best planted in the early spring, usually from mid-April to early May. Fall plantings are possible, but usually experience higher plant mortality, prolonging the time necessary for the planting to reach its full production potential.

Plants should initially be spaced two to three feet apart within rows, with a minimum of ten feet between rows. Spacing rows too close together is a common mistake. There must be adequate room between the rows to allow equipment through once the planting has reached its full size. Wide row spacing will also encourage air circulation, which will reduce disease problems.

Irrigation and Mulch

Trickle irrigation should be put in place immediately after planting. A well-designed trickle irrigation system will greatly speed the establishment of the planting and encourage consistently good growth and yields. If tissue-cultured plants are used, they should be mulched immediately after planting with a three-inch layer of straw. This will help to conserve soil moisture and reduce the germination of weed seeds in the soil, both critical to a quick establishment of the raspberry plants. The straw should be removed early the next spring to prevent root rot. A more permanent mulch, such as wood chips or shavings can be applied at that time to provide long-term benefits. As the plant rows become established, they should not be allowed to become wider than one and a half feet. Wide rows will not allow adequate light penetration for healthy fruit buds to form in the row centers, and will increase disease problems due to poor air circulation.

Trellis

Summer-bearing raspberries should be trellised. Current research indicates that a “V” type trellis optimizes yields and fruit quality and is relatively simple to manage. The idea is to train the fruiting canes out from the center of the row at approximately a 30-degree angle. This is accomplished by tying fruiting canes to wires supported by posts set in the ground at the appropriate angle. Two strands of wire are run along the posts, one approximately one foot above the ground and the second at three to four feet above the ground, depending on the expected height of the canes. Spreading the fruiting canes out in this manner encourages new cane growth to come up from the center of the row, rather than the edges. Posts should be set approximately every 30 feet in the row and anchored at each end to prevent frost heaving. Spraying, harvesting and pruning are simplified with trellising because the fruiting canes are limited to the outside of the row. Increased light penetration and air circulation within the row as a result of the V trellis may also reduce the incidence of diseases such as gray mold and spur blight.

Purple and black raspberries and blackberries only produce suckers from the base of the crown and will not fill out a hedgerow as red raspberries do. For this reason, they are frequently grown in the hill system. Under the hill system plants are initially set 4-5' apart within rows. A sturdy post is set next to each plant. A wire can be run along all the posts in the row, about 4½ feet above the ground. The fruiting branches of each plant should be spread along the wire, or the canes of each plant can simply be tied to the post next to them.

Consider putting part of your planting into everbearing (primocane fruiting) varieties. These will bear a crop on first year canes in the fall. The canes can then simply be mowed down late in the winter, eliminating the need for selective pruning and a permanent trellis. A temporary trellis made of re-rod or pvc pipe is often used to support the canes when the fruit is set to ease harvest, and is easily removed for mowing. Bear in mind that annual mowing eliminates the summer crop from two-year-old canes.

