The Basics of Growing Raspberries

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Choosing a site

Appropriate site selection is critical to the success of a raspberry planting. A poor site will generate chronic problems which, at the very least, will tax management skills and reduce profits, and could result in failure. Well-drained soil is critical. A site that holds too much water will reduce the vigor of the plants and greatly increase the probability of *Phytophthora* root rot. Avoid soils heavy with clay. A sandy loam with acceptable levels of organic matter (4% 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 at least a year before planting to determine what amounts of nutrients need to be added for optimum growth of raspberries. Applications of lime, to adjust the soil pH to 5.8 to 6.5, should be applied the fall before planting. Pre-plant fertilizer applications should be made according to soil test recommendations. Incorporating compost, animal manures cover crops prior to planting, can increase organic matter levels.

Varieties

Select appropriate varieties for your site and market. The most important characteristic in New England is winter hardiness. Relatively few of the varieties available have adequate hardiness to dependably survive our winters. Ripening season, fruit quality, yield potential and disease resistance are other characteristics that should be considered. To extend the harvest season, plant a combination of early, mid and late-season ripening varieties, and perhaps include primocane everbearing varieties to extend the season into the fall. Recommended varieties for New England include: *Early* - Prelude, Boyne, Killarney, Reveille; *Midseason* – Nova, Newburgh, Latham; *Late* – Taylor, Encore; *Everbearing* –Polana, Polka, Joan J, Autumn Bliss, Autumn Britten, Caroline.

Planting Raspberries

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

Plant raspberries in the early spring, as soon as the soil is workable. Plants should initially be spaced about two 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 spread its full size. Wide row spacing will also encourage good light penetration and air circulation, which will reduce disease problems.

Irrigation and Mulch

Trickle irrigation should be put in place at planting. Iirrigation 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 conserve soil moisture and reduce the germination of weed seeds in the soil. The straw should be removed early the next spring to prevent root rot. Permanent mulches, such as wood chips or shavings can be applied at that time to provide long-term benefits. As the plant rows become established, do not allow the base of the plant row to get wider than one and a half feet. Wider plant rows do not allow adequate light penetration for healthy fruit buds to form on canes in the center of the row, 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° 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. 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.

Pruning

Pruning should be given special attention. Every season, regularly prune out any first year canes that emerge outside of the desired one and a half foot row width. This opens up the planting to encourage growth of the other first year canes, which are setting fruit buds for the next season. Dormant pruning should be left until the late winter or early spring. All canes that fruited the previous summer should be pruned out. Any canes that are growing outside of the desired 18 inch row width or showing signs of insect or disease injury should also be pruned out. Only the most vigorous canes, those with the greatest height and basal diameter, should be left in the row. Thinning should continue until the desired cane density of four to five canes per foot of row length is attained. The remaining canes should be attached to the trellis wires. Finally, all of the prunings should be removed from the field. These may harbor diseases and insects that may attack the healthy canes. To view a video on raspberry pruning, visit: http://umaine.edu/highmoor/videos/pruning-raspberries/

Everbearing Raspberries

Everbearing (or primocane fruiting) varieties bear a crop on first year canes in the late summer. All of the canes can then simply be mowed down late in the winter, eliminating the need for selective pruning. Although this practice also eliminates the conventional second year crop from two-year-old canes, many growers prefer this method to reduce labor and risk while still providing profitable yields. Allow plants to become established for at least three years before beginning to mow them. This will allow the plants time to establish a healthy root system and reduce stress caused by mowing. Most everbearing varieties mature their fall crop late in the

season, which can be lost to frost. Select varieties that can successfully mature their crop in your area.

Pest Management

It is critical that raspberry growers become familiar with the major pest species that effect their crop, including insects, diseases and weeds, and know what management options are available for each. Weeds and diseases are two of the most common reasons for the failure of raspberry plantings. A grower should be well aware of the pest situation in the planting at all times through frequent and regular monitoring. Information on pest management is available in the New England Small Fruit Pest Management Guide, which can be purchased through your state University Extension or online at http://ag.umass.edu/fruit/publications/new-england-small-fruit-management-guide

Marketing

Demand for raspberries is typically high. However, because the fruit are very perishable and the labor required to harvest them is expensive and often difficult to find, getting good quality berries to market at a price that brings a fair profit is often difficult. While "pick-your-own" marketing can greatly reduce harvest labor, it will probably not suffice as the only marketing channel. Fresh, pre-picked fruit can be sold through stands and farmers markets, as well as to local restaurants, schools, and groceries. However, care must be taken with picked fruit to ensure good post harvest fruit quality through proper and careful picking, packing, storing and transportation practices.