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RED RASPBERRIES FOR THE TANANA VALLEY

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Cultivars. Red raspberries grow wild throughout interior, Alaska. Early gardeners domesticated the wild raspberry, but size, flavor and quality of the fruit makes the wild berry a poor second to the hardy cultivars. The hardiest cultivar is 'Kiska', developed by Dr. Arvo Kallio at the Agricultural and Forestry Experiment Station, Fairbanks. Other cultivars grown successfully include 'Latham', 'Boyne', 'Cuthbert', 'Chief', and 'Mammoth Red'. At the experiment farm, all of the cultivars except 'Kiska' show varying degrees of winter injury each year. For instance, fruiting canes of 'Boyne' are often killed back to the crown. This, and the other listed cultivars, have grown well at other locations, particularly sites protected from strong winter winds.

Red raspberries produce non-bearing leafy shoots called primocanes during the first season. In the second year, these primocanes become floricanes; they flower, produce fruit, then die. The crown is perennial, and as the floricanes are fruiting, new primocanes grow. These primocanes will produce next season's fruit crop. In an unmanaged field, a mixture of canes is present in any one year: fruiting floricanes, new primocanes, and dead floricanes. If unmanaged, raspberries quickly become a spreading, unproductive mass of living and dead canes.

Field Establishment. Raspberries do not tolerate wet, cold soils. Optimum soils are silt loam or sandy loam with a pH of 5.5-7.5. Clean cultivate fields at least one year before planting to minimize competition from perennial weeds. If available, incorporate compost into the soil at approximately 1 pound per square foot prior to planting.

Fields may be established by planting purchased plants, root cuttings or established suckers that have been dug and separated from mature plants. Keep roots moist during planting; exposure to sun and drying winds is the main cause of poor plant establishment. Space plants 2 feet apart within rows. Row spacing should be a minimum of 8 feet. Spacing may be wider depending on the type of soil cultivation equipment and whether trellises are used. Prune plants back to 6 to 8-inch height to encourage vigorous sucker growth. Irrigate immediately.

'Kiska' raspberries have thin, willowy canes. Under optimum fertility and moisture, canes may easily reach 6-8 feet in height. These canes tend to bend outward and downward making harvesting difficult. Because of this growth habit, 'Kiska' raspberries often are supported by a wire or polypropylene rope trellis. Space 5-foot steel fenceposts 12 feet apart in the row. Run a strand of wire or rope along the length of the row on each side of the posts and 4 feet high. Depending on the width of the individual row, wires may be suspended from the post or from cross "T's" made of wood and attached to the fenceposts. After plants begin to fruit, prune canes to a 4-5 foot height and place between the wires or rope. The support wires may be tied together for additional support.

Pruning. One of the most time consuming, but necessary tasks in raspberry growing is pruning. Some people perform this task in autumn, whereas others prefer to wait until spring to prune out any effects of winter injury and damage done by moose. During the second growing season, some floricanes will fruit, but most growth will be new primocanes. In autumn or spring, prune out all dead floricanes. Thin out all weak, spindly canes that are pencil-sized or less in diameter. Till shallowly on either side of the row to maintain a row width of 18 inches. Suckers should begin to fill in the spaces between plants in a row. Repeat this pruning procedure every year, removing all dead floricanes and thin, weak canes. Thin out remaining canes to maintain about 8 canes per linear foot of row.

All pruning must be done by hand since actively-growing floricanes and primocanes are interspersed with the dead and spindly canes. An alternative to this procedure is used in some commercial fields. Fields are divided in half. After fruiting, all canes including the new primocanes are removed from half of the field. This field will not produce fruit the next year, only new primocanes. Because all canes are pruned, fruit is produced every other year. Each half of the field is pruned to fruit in alternating years. These fields are mechanically pruned, saving hours of hand labor. Not all raspberry cultivars can tolerate this system. Research at the Fairbanks experiment farm will evaluate the usefulness of this method on 'Kiska' raspberries during the next 5 years.

Fertilizer and compost. Collect soil samples for analysis through the Cooperative Extension Service to determine baseline information on pH and nutritional content. Plants benefit from an annual side dressing of well-rotted compost. Optimum levels of nitrogen, phosphorus and potassium are not known for raspberry production in the Tanana Valley. A general recommendation is to work in 2-3 pounds per 100 feet of row of 8-32-16 each spring.

Irrigation. Raspberries benefit from irrigation, particularly during fruiting. A trickle irrigation system may be set up at planting time. The frequency and quantity of irrigation have not been identified for raspberries in the Tanana Valley. Good yields have been obtained with 1 - 1 1/2 inches of water applied per week during flowering and fruiting.

Pests andWeeds Weeds are probably the biggest headache for raspberry production. Shallow cultivation will remove weeds between rows. Several herbicides are recommended for raspberries. Powdery mildew occurs in some years on most cultivars. 'Latham' is especially susceptible to mildew. Several fungicides are available if mildew is severe. Recent research has shown the effectiveness of baking soda as a mildew control agent. Check with the Coopeartive Extension Service pest scout in your area for the most recent chemical recommendations.

One insect pest is a significant problem to raspberry growers: the raspberry fruitworm. The adult is a beetle that feeds on fruit buds and leaves, sometimes destroying the blossoms. These beetles lay eggs on buds or stems and upon hatching, the larvae make their way into the developing fruit where they feed, mostly on the central white core. Infested fruit often crumbles apart when harvested. Mature larvae drop to the ground, pupate in the soil, and emerge as adults the following spring. They rarely appear in large numbers, but they do attack most cultivars, and especially wild raspberries and 'Kiska' raspberries. The easiest way for a home gardener to deal with the fruitworm is to ignore it. After fruit is harvested, soak them in water, and the occasional larva will float to the surface and can be skimmed away from the fruit. Rotenone may be used to kill adult beetles before they lay eggs. Three treatments are applied starting shortly after the first blossom opens, then at 7-10 day intervals thereafter. Follow label directions for further information.