

PRIMOCANE PRUNING

to increase red raspberry production

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RED RASPBERRIES have a biennial growth pattern. Each year new canes (primocanes) grow from below ground. The second year these canes produce lateral branches which flower and fruit. After fruiting, the canes die. They should then be removed.

New primocanes begin growing in established raspberry plantings during the early spring. These primocanes develop at the same time the old canes are flowering and fruiting. Pruning to remove the first spring flush of primocane growth from red raspberry plantings effectively increases raspberry yields. This delay of new primocane growth releases food material to the fruiting canes causing them to produce more and larger berries. The pruning can be done chemically in commercial plantings or mechanically in home gardens.

Chemical Pruning (Cane Burning)

Cane burning is the chemical way to prune off new cane growth. It is an inexpensive and efficient method of removing the first primocanes. This delays the formation of replacement canes until later in the season. Cane burning should be used to increase berry production only on vigorous plantings.

What Cane Burning Does: Cane burning has two main effects. It increases yields the year of application. It also reduces cane size and number of replacement canes for the next year's crop. The more times the new canes are burned off in one year, the greater the effects. If cane numbers and size are reduced too much, the next year's crop will be reduced. Therefore, the number of sprays should be balanced with the vigor of the planting.

How to Cane Burn: Cane burning uses a contact herbicide to destroy new shoots as

they being to grow. Spray the new shoots with a mixture of 2.5 lb. dinoseb (Dow General) plus 4 qts. summer spray oil per 100 gal. water. Apply this mixture as a directed spray to the base of the raspberry row (the lower 12 inches). The spray should completely cover all emerged shoots. This requires about 100 gal. of the spray mixture per acre.

Washington State University recommends the use of fan-type spray nozzles operated at 40 to 50 p.s.i. pressure. Spray the lower 12 inches of the plants from both sides of the row. It is important that all emerging shoots be covered from top to bottom.

When to Cane Burn: Apply cane burning sprays when the highest of the new shoots are 7 to 8 inches tall. Begin soon enough that the entire field can be covered before the taller shoots exceed 10 inches. Apply the second spray (if used) at the same stage of regrowth.

Number of Times to Cane Burn: During the winter, examine the size and number of good canes that grew last year. Determine from Table 1 how many times to cane burn this year. Cane burning reduces the cane number of the variety 'Meeker' more than other cultivars. Washington State University, therefore, recommends only one chemical pruning spray on the 'Meeker' variety. Each year re-adjust the number of sprays applied to maintain adequate replacement of cane growth. Do not spray weak hills or weak parts of the field.

Summary: Properly done cane burning will increase yields, make picking easier, help mechanical harvesting, reduce fruit rot, and decrease labor for pruning and training. It is a valuable cultural practice but must be care-

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fully done. Sloppy procedures are dangerous. Follow these recommended procedures:

- *Do* evaluate cane number and size each year and adjust the number of sprays accordingly.
- *Do* use the recommended spray materials.
- *Do* spray at the proper stage of shoot growth.
- *Do* completely cover all shoots.
- *Do* use low pressure and keep spray below 12-inch height.
- *Do* omit sprays on weak plants.
- *Do* irrigate plantings in hot, dry weather to maintain vigorous growth.
- *Do not* use diesel oil.
- *Do not* spray on windy, cold, or rainy days.

Mechanical Pruning for Home Gardeners

Do not use dinoseb plus oil sprays in the home garden. Small plantings can be pruned by hand-cutting the new shoots. The beneficial results are the same. Cut off the first shoots at ground level when they are 7 to 8 inches tall. Use Table I to decide how many times to prune back the new growth. Remember that the pruning must be balanced with the vigor of the planting. Weak hills or a weak planting should not be pruned.

Table 1. Determining the Number of Sprays to Apply

If average cane height is:	If average number canes/hill/is:	Apply this many sprays:
less than 7 feet	less than 10 canes	no spray
7 feet or over	10 canes	one spray
9 feet or over	12 or more	two sprays