

Weed Control in Caneberries

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Weed control in caneberries is done for many of the same reasons as other crops; weeds compete with the crop for light and water, and contaminate the crop and soil with seeds and debris. There are several additional matters with weed and vegetation management in caneberries however.

One particular problem is that caneberries are usually grown over multiple years and canes for next year are produced vegetatively in the cropping year. First year, non-bearing canes are called primocanes, while flowering and fruiting canes are called floricanes. However, while the primocane is next year's crop, it also competes with the current crop for nutrients, so it is vital that this vegetative cane be managed properly to minimize the potential for yield loss brought about by competition for nutrients.

There are several options available to growers to manage the vegetative cane. Growers generally remove the first flush of vegetative cane, or all cane when in the last year of production. Cane can be removed by hand, but this is very expensive and time consuming.

... In California, herbicides are playing a larger and larger role in the management of primocane. The use of herbicides is of twofold utility, one to control weeds and the other to control primocane. Paraquat (Gramoxone), while very effective in burning down primocane and weeds, has very little residual effect. Oxyfluorfen (Goal), which is not registered in California, appears to have a longer residual effect in suppressing primocane and weeds. Some growers in the Pacific Northwest, where this material is registered, do caution that this material can be deleterious to a weakened caneberry stand. Finally, carfentrazone (Shark) is effective in suppressing primocane and has a small residual effect, as well as being registered in California.

Tillage is effective for weed control in caneberries, outside of the hedgerows which are generally too thick to work with tractor drawn implements. Caneberry roots do not generally grow into furrows and row middles, since there is very little water there in the summer, so tillage does very little harm there.

... Cover cropping is also an important tool in suppressing weeds, especially during the winter months when it can be difficult to get into the field with a tractor because the soil is so wet. Still, cover crops should be low growing and not interfere with air circulation through the caneberry hedgerow. Cover crops should be seeded after completion of harvest in the fall, and tilled back into the ground in the spring.

The loss of methyl bromide, controlling methyl bromide and glyphosate resistant weed species, primocane control, hardships of hand weeding and organic production methods are all challenges facing strawberry and caneberry growers in California.

The impending loss of methyl bromide as a pre-plant soil fumigant has brought about the use of several alternative fumigants, such as 1,3-D, chloropicrin and metam sodium. Since many of these alternative fumigants are applied through the drip system with the bed mulch already in place, strawberry growers are working with fuller and longer duration bed coverage, better water management, and planting through the mulch. Additionally methyl bromide tolerant weed species, such as little mallow, *Malva parviflora*, and glyphosate resistant weeds such as burning nettle, *Urtica urens*, will be less of a problem with the application of alternative fumigants. The use of the herbicides flumioxazin (Chateau) in the furrows and oxyfluorfen (Goaltender) over the top of the bed has gone hand in hand with the bed applications of the alternative fumigants.

Management of vegetative primocanes in is an important part of caneberry cultivation. Growers can burn these canes with a propane burner, cut them out by hand or use herbicides. Herbicide use and flaming is most advantageous in raspberries, where the floricanes is woody and resistant to burning. Most of the cane of blackberries is green, and more susceptible to herbicide and flaming damage. One trial done on our farm tested the efficacy and length of control of applications of paraquat (Gramoxone), oxyfluorfen (Goal- not registered in California) and carfentrazone (Shark) in suppressing primocanes. Oxyfluorfen appeared to have a little longer effect than carfentrazone, and significantly longer than paraquat.

Organic production of caneberries presents more challenges in terms of weed control. A promising herbicide for organic use, pelargonic acid, is yet to be registered, so organic caneberry growers continue to use hand weeding as their main weed management strategy in organic caneberries.