



Late Fall Weed Control in Strawberries

In matted row strawberry production there are four windows of opportunity when it comes to the use of herbicides – early spring, renovation, late summer, and late fall. We are now looking through the late fall window and have a number of controls to consider in our weed management programs. These include our old stand-bys of Sinbar, Devrinol and Kerb, in addition to the newly registered Goal 2XL. This article will outline the advantages of each for late fall applications to your strawberry beds.

Sinbar 80 WP: Sinbar is primarily a soil residual herbicide that is absorbed by the roots and translocated to the leaves, where it inhibits photosynthesis leading to death of susceptible weeds. Soil texture and organic matter level impact on the rate of Sinbar required for adequate weed control. As a general rule, lower rates of Sinbar are advisable on sandy soils and those with low organic matter. It should be avoided altogether on soils with organic matter levels below two per cent.

Sinbar also has some foliar activity and will control many small weeds when applied early post-emergence. Sinbar controls the broadest range of weed species and should form the backbone of your weed control program. Sensitive weed species include most annual grasses and volunteer cereals arising from seed and many annual broadleaf weeds including chickweed, mustards, stinkweed, annual sowthistle, lamb's quarters, pigweed, purslane and ragweed. Sinbar also has good activity on several germinating perennials including sheep sorrel, dandelion, and stitchwort.

Serious crop injury can occur with Sinbar if sprayers are not accurately calibrated or if proper application techniques are not employed to minimize spray over-lap. The lower rates should also be used on sensitive varieties like Kent, Micmac and Bounty, or any untested varieties. Finally, Sinbar should only be used on healthy, vigorous plants. In situations where crop injury is a concern, risk can be reduced if 1-2 cm of rain or irrigation immediately follows application. The late fall application of Sinbar is generally made just before mulching and can be tank-mixed with Devrinol or Kerb. The recommended rate for both planting year and picking year fields in Atlantic Canada is 0.65-0.85 kg/ha and should be applied at a minimum of 300 L water per hectare. This will provide residual control of germinating weeds the following spring, through to harvest.

Devrinol 50 WP: Devrinol is a selective surface-applied herbicide that does not control established weeds. It is often applied as a substitute for, or with, Sinbar if certain Sinbar resistant weeds are problematic. These primarily include groundsel and buttercup but Devrinol also gives better control than Sinbar on annual grasses and volunteer cereals.

Only one application of Devrinol per season is permitted, either alone or tank-mixed, and it should not be applied to frozen ground. It should be applied in 200 to 900 litres of water per hectare in a low pressure boom-type sprayer. If rainfall does not occur within seven days of a fall application, a shallow incorporation to a depth of 2.5 to 5 cm or irrigation with sufficient water to wet the soil to a depth of 5 to 10 cm is required to activate the herbicide.

Kerb 50 WP: Kerb is a soil active “selective” herbicide used in late fall, before mulching and freeze-up, to provide short-term control of established perennial grasses such as quackgrass. Control usually breaks around mid-summer the following season. Kerb also controls established chickweeds and stitchwort and will suppress sheep sorrel, creeping buttercup and field horsetail. As it provides no control of most other broadleaf weeds it is usually tank-mixed with Sinbar for broad spectrum control. Kerb is not recommended on planting year strawberry beds due to risk of crop injury. However, in cases of major problems with buttercup, chickweed, stitchwort or sheep sorrel the benefits may outweigh the risks. Kerb is best applied with flat fan nozzles in 300 to 500 litres of water per hectare and should be applied at 2.25 kg per hectare when soil temperatures are low but above freezing, and when soil moisture is high.

Goal 2XL: Goal has been newly registered for use on strawberries. It has both post-emergence and pre-emergence activity on susceptible weeds and is to be applied as a single pre-mulch ground spray to dormant strawberry plants at a rate of 1.0 litre per hectare in 500 litres of water per hectare. Goal will be most beneficial when dealing with “problem” weeds such as field pansy/violet and oxalis (yellow wood sorrel), for which there are no other registered controls. However, it also has activity on several of our “regulars” including lamb’s quarters, redroot pigweed, wild buckwheat and purslane. Reports out of Ohio indicate that Goal is also effective on groundsel.

Final notes: The use of sequential herbicides for weed control in strawberries is only one component of an integrated weed management program. Other complementary practices that will both improve your overall weed management and minimize our herbicide applications include:

- hand-weeding and mechanical cultivation of “escapes” both within and between rows;
- “spot” treatments rather than “blanket” sprays whenever possible;
- prevention of seed formation by cutting flower stalks to minimize the increase and spread of various weed species;
- “wick” wiper applications of Round-up for “above-canopy” perennial weeds like daisy and St. John’s Wort;
- the application of inter-row mulches to suppress the germination of weed seeds;
- the use of “clean” straw for winter mulching and
- maintaining weed control in windbreaks, fences and headlands around fields to minimize weed and seed spread.

Finally, selecting and preparing appropriate sites is important for a successful weed management program. Fields coming out of sod require a minimum of one year for “clean-up” prior to planting strawberries. This clean-up may involve the use of Round-up, repeated shallow cultivations as green “flushes” of weed seedlings appear, and/or the use of smother crops such as buckwheat or annual ryegrass prior to planting strawberries.

For more information, please contact:
John Lewis, Horticulture Crop Specialist
(902) 678-7722

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