

Weed Management Options for Strawberries

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Managing weeds in strawberries is a challenge, partly because strawberries are herbaceous perennials and a number of similar weeds tend to become established in fields as they get older. Available herbicide tools are also somewhat limited because perennial strawberries grown in the eastern and Midwestern states are such a minor crop and the potential for injury to strawberries is relatively high. Effective management requires knowledge of the herbicides options and weed identification. Herbicide options available for Michigan strawberries are summarized in MSU Bulletin E-154, Michigan Fruit Management Guide. An excellent book on weed identification is 'Weeds of the Northeast' (Cornell University Press, 1997). Here are some suggested practices:

PRE-PLANT YEAR

If perennial weeds such as quackgrass, Canada thistle, red sorrel, or yellow weed sorrel are present, treat the site with glyphosate (Roundup, Touchdown) in the fall prior to planting. Treat weeds when they are still green and do not till for 1-2 weeks. The site can also be treated in the spring 1-2 weeks before planting, but spring sprays are less effective on established perennials.

PLANTING YEAR

Key periods for weed control in new fields are 1) planting time 2) late summer/early fall, and 3) prior to mulching in late fall. A large flush of weeds usually germinate shortly after planting. Sinbar or Devrinol can be applied shortly after planting to control these weeds. Use Devrinol 50DF-XT at 4-8 lb/acre. Devrinol can inhibit rooting of runner plants so use the lower rate on sandy soils. Use Sinbar 80WDG only if the soil contains more the 0.5% organic matter. Apply 2 oz/acre on sandy soils with 1-2% organic matter or 3 oz on heavier soils with more organic matter. Make sure your sprayer is calibrated and avoid spray overlap; berries are sensitive to Sinbar. Be cautious with varieties such as Annapolis, Cavendish, Earliglow, Honeoye, Kent, Tribute, and Tristar. Sinbar can be re-applied in the late summer or late fall as long as the seasonal total does not exceed 6 oz on the low organic soils or 8 oz on high organic soils. If Sinbar is applied when new strawberry leaves are present, irrigate soon after spraying to wash the herbicide off the sensitive new tissues.

Prowl H2O can also be used on new fields for preemergence control of grasses and broadleaf weeds. Prowl will burn new strawberry tissue so it should only be applied directly over plants before or shortly after planting (before growth begins).

Spartan 4F has a 24(c) label in some but not all states so check to see if it is labeled in your state before using. Like Prowl, Spartan will burn new growth so apply before strawberries begin growing. Spartan controls several troublesome weeds, including common groundsel, field pansy, mayweed or dog fennel, pineapple-weed or chamomile, several pigweeds, and white campion, and may suppress yellow woodsorrel and yellow nutsedge.

Useful postemergent herbicides approved for strawberries in the planting year include Stinger (labelled in NY and several other states; check your state), and the grass killers Poast and Select Max. Stinger controls many weeds in the composite and legume families (Canada thistle, dandelion, common groundsel, maretail, mayweed, clover, vetch) as well as black nightshade and smartweeds. Stinger can be used in July after new plants are well established. Use Poast or Select Max when grasses are 4-6 inches tall and actively growing. Use a crop oil concentrate to improve control. Quackgrass control requires repeat applications.

Sinbar 80W, Devrinol 50DF, or Spartan 4F can be very effective when applied just before mulching in late November or December. Sinbar or Spartan applied prior to mulching can provide effective control of many weeds through the spring. Remember not to exceed the maximum yearly rates. Devrinol at this time is most effective in controlling volunteer grain and other grasses in the spring.

FRUITING YEARS.

In the early spring of a fruiting year, Devrinol can be applied to control early season grasses and some broadleaf annuals. If grass is still a problem, consider treating emerged grasses with either Poast or Select Max. Stinger 3L can also be applied at this time (up to 30 days before harvest) if susceptible weeds are present. Do not apply Stinger more than twice per year or exceed 2/3 pint per season. Stinger can cause leaves to cup or twist, and may cause fruit to ripen over a shortened period of time.

Renovation after harvest is an important time from a weed management perspective because strawberries are in a semi-dormant state and more tolerant of herbicides at this time. This is an effective time to use 2,4-D amine to control most broadleaf weeds. Spray weeds and wait several days before mowing plants. Never use ester formulations of 2,4-D as injury will result. Stinger can also be applied at this time, but it may not control as many types of broadleaf weeds as 2,4-D. Renovation is also a useful time to re-apply preemergent herbicides to suppress new weeds for the rest of the summer. Try Sinbar, Spartan (if labelled), Prowl or Ultra Blazer. Follow label cautions and restrictions carefully. These materials can be re-applied in the late summer/early fall as long as the seasonal maximum rates are not exceeded. This brings us to late fall (pre-mulching), another key time for weed management. The herbicide options described for late fall of new beds apply for established beds as well.