

## **Strawberry Weed Management Update**

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### **Introduction**

The 2008-2009 version of the New England Small Fruit Pest Management Guide will be available soon all small fruit growers should have a copy of this publication. Members of the New England Vegetable & Berry Growers Association can receive a copy of this publication free as part of their membership. I do not expect that copies will be available for sale at the Conference but will be available from all 6 New England Extension services.

### **Major Herbicide Label Changes**

The new formulation on the market for paraquat is Gramoxone Inteon. This formulation is designed to be safer to the user. However it is still restricted use and the signal word is still "Danger". Gramoxone Inteon contains an "alginate" which is made from seaweed and slows absorption into the bloodstream. There is also an alerting agent that smells like decaying grass, and emetic and purgative, and a green dye. The new formulation also comes with some rate changes. With the old formulation (Gramoxone Max) the rate range was 1.7 to 2.7 pints per acre. Rates for the new formulation are 2.5 to 4 pints/acre.

Chateau (flumioxazin) is registered for postemergence weed control in dormant strawberries. In DORMANT strawberries, the rate is 3 oz/acre. Also apply a crop oil concentrate at 1% or a non-ionic surfactant at ¼% by volume. A residual grass herbicide such as Devrinol (napropamide) or Dacthal (DCPA) is still needed. Chateau will control emerged chickweed, field pansy, and oxalis if sufficient contact is made with the weeds. Chateau will not control all emerged weeds. Scout the field and check the labels. 2,4-D may still be required to control other emerged weeds. Sinbar may still be necessary to provide residual control or early-spring emerging broadleaf weeds and to aid in control of volunteer grain weeds that may be in straw.

Dacthal 75WP (DCPA) is still expensive at \$14 per pound. The most common use of this product will be on new plantings.

Sinbar 80 WP (terbacil): Remember that the supplemental label for strawberries has been revised to allow use during the transplant year as well as on soils with between 0.5% and 2% organic matter. During the planting year, Sinbar may be applied at 2 to 3 ounces per acre after transplanting but before new runners start to root. If strawberry plants have developed any new foliage prior to application, irrigation or rainfall (0.5 to 1 inch) is required to wash the Sinbar off the strawberry plants. In late summer or early fall, a second application may be applied at 2 to 6 ounces per acre to control winter annual weeds. This application must also be followed by 0.5 to 1 inch of irrigation or rainfall to wash the Sinbar off the plants. A third application of 2 to 4 ounces per acre can be applied, as usual, after the strawberry plants are dormant and just prior to mulching. For soils with at least 2% organic matter, there is no maximum amount per application; however, no more than 8 ounces of Sinbar can be applied per year. For soils with between 1 and 2% organic matter, a maximum of 4 ounces of Sinbar can be

applied at any one time with an annual maximum of 8 ounces per acre. For soils with between 0.5 and 1% organic matter, a maximum of 3 ounces of Sinbar can be applied at any one time with an annual maximum of 6 ounces per acre. Following the establishment year, applications can only be made just after renovation and just prior to mulching. Applications are now allowed, however, on soils with between 0.5% and 2% organic matter using the same guidelines for rates as above. As always, be careful with Sinbar in strawberries, especially with potential overlap of sprayer passes which will double the rate and increase the potential for injury in some varieties. Please consult the new supplemental label for additional information, rates, precautions, etc.

Select 2EC (clethodim) is a newer grass herbicide registered in strawberry. It is applied at 6 to 8 ounces per acre. It is effective on small, actively growing grasses. It has improved activity over Poast on cool-season and perennial grasses. Add 1 qt/100 gal spray of crop oil concentrate. Repeat application at 14 days for perennial grasses. Ammonium sulfate can be added at 2.5 lb/acre to improve activity on perennial grasses. Do not apply within 4 days of harvest. Select will not kill old established grasses. Avoid spraying on hot humid days or some crop burning will result.

Roundup Ultra (glyphosate) is now sold as Roundup Weather Max. It is a newer formulation with improved activity on perennial weeds. Roundup is primarily used to control perennial weeds during the summer and fall prior to planting.

### **Late Summer Planting of Oats**

Also in strawberry, growers have been experimenting with using oats as a living or dead mulch. The purpose of this is to add organic matter and to help hold added mulch in the late fall from blowing away. It is not a weed management option. Some tips to follow. They include planting in mid-August at a rate of 100 lb/acre either broadcast or banded. Use of Sinbar, Devrinol (napropamide), or Dacthal at renovation will adversely affect the germination and growth of the oats. If possible, band the herbicides only in the row so that the oats can establish between the rows. Herbicide applications or other weed control options may still be required after establishment. Look for the oats to grow at least 18 inches tall. The oats will winter kill

### **Using Row Covers Instead of Straw Mulch**

Growers that use row covers for winter protection should take extra precaution to insure that winter annual, biennial, and perennial weeds are not present in strawberry field during the winter months. Row covers will increase daytime temperatures and cause these weeds to grow at a much faster rate than if they were under straw mulch. This is especially true in the Spring before the covers are removed.

### **Specific Timings to Control Weeds**

Late Fall/Winter: after the strawberries are dormant.

1. Apply Chateau or Formula 40 (2,4-D) to emerged weeds.
2. Apply half the annual rate of Sinbar
3. Apply half the annual rate of Devrinol

Spring Weed Management: up until bloom

1. The only common herbicide options at this time would be either Poast or Select for emerged grasses. Either will control volunteer rye or other small grains that emerged in the spring from seeds in the winter mulch.

Renovation Options:

1. Formula 40 applied just after the last harvest to control, emerged broadleaf weeds.
2. Apply half the annual rate of Sinbar after mowing and tilling.

Late Summer: prior to the emergence of winter annuals

1. Apply half the annual rate of Devrinol to control winter annuals before they emerge.

### **Cultivation**

During the establishment year, cultivation is an important tool until daughter plants start to grow and root.

The most common time for using cultivation in established strawberry fields is from renovation until daughter plants start to root. If herbicides have been used, cultivations should be shallow to avoid diluting the herbicide. Even when herbicides are not used, cultivations should not be deeper than 1 to 2 inches to avoid damaging crop roots and drying out the soil.