

Sweet Corn Herbicide Update  
Doug Doohan

AIM -

FMC received a national label for Aim on sweet corn earlier this year. Aim controls emerged weeds and is applied postemergence to the crop, up to the eight collar leaf stage. Weeds should be actively growing and not more than 4 inches high, or 3 inches across. At 1/3 ounce of product per acre, Aim controls lambsquarters (up to 3 inches), morningglories (2-3 leaf stage), eastern black nightshade (up to 4 inches), redroot pigweed (up to 4 inches) and velvetleaf (up to 18 inches). Triazine-resistant biotypes will be controlled. For broad-spectrum weed control Aim must be tank-mixed with other herbicides. Labeled tank-mix partners include atrazine, Permit, and 2, 4-D. Always add Aim to the tank first when mixing the product with other herbicides. A non-ionic surfactant (NIS) must be included in the tank whenever Aim is used, at a rate of 2 pints (80% a.i.NIS.). Adding a crop oil concentrate instead of NIS may provide superior control under dry conditions. Good spray coverage is important. To minimize the chance of crop injury, maintain spray tip height at least 18 inches above the crop and avoid application directly into the whorl of the growing corn plant. While there is no evidence that crop injury will be a major problem with Aim, provided all recommended precautions are followed, FMC has included disclaimer of liability on their product label. This means the grower must accept all responsibility for crop injury, and must determine that the varieties to be treated are tolerant of Aim.

Bicep Lite II Magnum/ Bicep II Magnum -

Both products are fully labelled for use on sweet corn. Bicep Lite II Magnum contains 2.67 lbs. of atrazine and 3.33 lbs. of s-metolachlor per gallon. Bicep II Magnum contains 3.1 lbs. of atrazine and 2.4 lbs. of s-metolachlor per gallon. What do these differences mean? For a typical Ohio medium to fine textured soil, with 3% or less organic matter, the label rates for the two products are 1.1 to 1.5 qts./A and 1.6 to 2.1 qts./A, respectively. In other words using Bicep Lite II Magnum, the actual atrazine applied would be 3/4 to 1 lb/ A; safe to most rotational vegetable crops planted the following year. With Bicep II Magnum the atrazine applied would range from 1 1/4 to 2 lbs./ A; marginally-safe to definitely unsafe for rotational vegetables the following year.

BLADEX -

Distribution and use of Bladex may continue until September 30, 2002. Expect supplies to be extremely limited.

PERMIT -

Permit (also sold as SEMPRA) which was labelled for use on sweet corn in late 1999, is of great interest to farmers who grow sweet corn, and other vegetables in rotation with sweet corn (consult the label for specific rotational crop guidelines) because of its excellent activity on yellow nutsedge. The supplemental label for sweet corn transfers all responsibility for crop injury to the user. The Permit label, stresses that tolerance of sweet corn cultivars has not been determined and that tolerance might vary between cultivars. Research was conducted at OARDC in 2000 to assess tolerance of 14 fresh-market varieties. Sweet corn varieties included 'Seneca Dancer', 'Temptation', 'Sweet Rhythm', 'Amazingly Sweet', 'Kandy King', 'Immaculata', 'Fortune', 'Confection', 'Bandit', 'Sensor', 'Ice Queen', 'X-tra Tender', 'Candy Corner', and 'Silver King'. Permit was applied at 0, 2/3 and 11/3 oz/A on June 28 in a volume of 23 GPA, when sweet corn was 10 inches high on average, and had 5 to 7 collars. Early growth of all varieties was reduced relative to the untreated plots and slight chlorosis was observed on all except 'Ice Queen'. Twenty-one days after application, stunting had generally declined but could still be detected on all varieties. Permit did not affect plant height, rows of kernels, kernels per row, and average number of ears per plant. However, weight of marketable ears and height of ears above the ground were affected by Permit rate. Tolerant varieties at 1 1/3 oz/A were Kandy Corner, Ice Queen, Bandit and Seneca Dancer. Tolerant varieties at 2/3 oz/A were Sweet Rhythm, Sensor and Extra Tender. Tuxedo was used as a guard row variety in this study due to previously demonstrated tolerance. Sensitive varieties were Fortune (most sensitive), Amazingly Sweet, Kandy King, Immaculata, Confection, and Silver King. Excessive rainfall and below average temperatures prior to Permit application may have contributed to reduced crop tolerance in 2000. This research will be repeated in 2001 at OARDC and the study will also be conducted at Purdue University. Growers should proceed very cautiously with Permit until at least an additional year of research is completed.

PROWL -

Corn growers who had long-standing problems with triazine- resistant weeds welcomed the registration early last year of Prowl on sweet corn. The Prowl label stipulates the steps that must be taken to prevent sweet corn injury when the herbicide is used. Research was conducted at OARDC in 2000 to determine the importance of seeding depth and time of application in preventing injury. We found that crop stand, # of ears and size of ears were all reduced when Prowl was applied preemergence to corn that was seeded shallow (less than 1 inch deep). Deeper seeding (1 inch) eliminated the injurious effect of Prowl on crop stand and on ear size but the number of ears per plot was still affected, especially when the herbicide was applied preemergence. Delaying application until the crop was emerged was not adequate protection against injury when the crop was planted too shallow. Preliminary results can be summarized simply: Plant sweet corn 1 1/2 inches deep and delay application until the crop has emerged if you are planning to use Prowl.

What's New At The VegNet Web Site

Sweet Corn Tour and Workshop

June 19, 4-8 PM

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Sweet Corn Disease Resistance Ratings

The following are summarized lists of Dr. Pataky's work at the Univ. of IL on disease reactions of sweet corn. In these summaries, all experimental and processing varieties have been removed and only named varieties which were rated for common rust or MDM are included. The first list are those named varieties rated for common rust. The second list are only those named varieties rated for Maize Dwarf Mosaic virus (MDM). For a complete report, E-mail: Bob Precheur:

[precheur.1@osu.edu](mailto:precheur.1@osu.edu)

Common Rust of Sweet Corn

MDM of Sweet Corn

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Find out what we've been up to. The OSU Vegetable Team Report is available in PDF file format for downloading from the VegNet homepage.

Sources of Pheromone Traps Used in Vegetable Pest Management.

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