

VegNet Vol. 15, No. 4. May 9, 2008  
Ohio State University Extension Vegetable Crops  
On the WEB at: <http://vegnet.osu.edu>  
If experiencing problems receiving this fax, Call 614-292-3857

### *In This Issue*

1. New Herbicides for Sweet Corn
2. Insecticide Update
3. Crop Reports

## **New Herbicides for Sweet Corn** by Doug Doohan, OSU Weed Specialist

For a long time sweet corn growers have been controlling weeds with far fewer tools than available for field corn. While there are still far fewer herbicides registered for sweet corn, the hard drought in product availability seems to be over. Registration of some long-established field corn herbicides along with several new active ingredients has rounded-up the weed control tool kit. One of the main concerns with these new products is potential hybrid sensitivity. Some have a disclaimer on the label waiving liability if sweet corn is injured. To supplement the information below, this link <http://vegnet.osu.edu/library/res07/sweetcornhybridtolerance.pdf> will take you to a fact sheet developed by University of Wisconsin, where several years of research on hybrid response to Callisto and Accent are summarized. When looking at the fact sheet note that a hybrid sensitive to Callisto is almost always sensitive to Accent and vice versa. This relationship suggests that a variety sensitive to both of them is more likely to be sensitive to other herbicides as well.

Here's what's new along with some guidelines for use.

### **Accent**

What it does: Provides POST control of annual grasses (except crabgrass) and perennial grasses. Foxtails, fall panicum and barnyardgrass are controlled up to 4 inches high, quackgrass up to 10 inches, seedling Johnsongrass up to 12 inches high and rhizome Johnsongrass up to 18 inches high. Some broadleaf weeds are also controlled including burcucumber, morningglories and jimsonweed.

How to use it: Apply 1/3-2/3 oz/A broadcast or with drop-nozzles to corn up to 12 inches high (V5 stage), or with drop-nozzles to corn 12-18 inches high (up to V6 stage). Accent must be applied with NIS (1 qt/ 100 g water) or COC (1 g/ 100 g water). Urea ammonium nitrate (UAN) or ammonium sulfate (AMS) is required for optimum weed control with either adjuvant.

Crop Tolerance: Some sweet corn hybrids are very sensitive to Accent and will not survive treatment and not all hybrids have been tested. If in doubt contact your OSUE Agriculture and Natural Resource Educator, seed company, or herbicide dealer. My next article in VegNet will provide a summary of studies at OSU that have evaluated hybrid response. In the meantime the University of Wisconsin fact sheet provides the best information available <http://vegnet.osu.edu/library/res07/sweetcornhybridtolerance.pdf>.

Rotational Guidelines: Accent has a complicated set of four guidelines for rotational crops. Read the label and make sure you understand how these guidelines apply on your farm. Several crops can be planted within the year of application. For instance field corn may be replanted anytime after an application and soybeans month after. However, popcorn and sweet corn cannot be planted until at least 10 months after Accent. On soils with pH less than 6.5 all crops for which specific guidelines are not provided can be planted 10 months after Accent, but my personal advice is to be very cautious this soon after Accent!

## Degree

What it does: Degree is similar in chemistry and activity to Dual II Magnum and to Outlook/Frontier. ♦ Like them it provides PRE control of most annual grasses except johnsongrass and proso millet. It is a little better on broadleaf weeds than Dual or Outlook, in particular common ragweed. ♦ Degree is an encapsulated formulation of acetochlor the active ingredient also found in Harness.

How to use it: ♦ Degree can be applied PREPLANT, PPI, or PRE to the crop. ♦ Rates vary with soil type ranging from 2.75 to 5.5 pts/A. ♦ Emerged weeds are not controlled and ♦ to ♦ of an inch of rainfall will be needed for activation with all but PPI applications. ♦ Degree can be mixed with atrazine to improve the spectrum of weeds controlled. Atrazine will also improve control of heavy infestations of annual grasses. Ohio research (Dr. Mark Loux) shows that Degree will provide longer lasting annual grass control than Dual or Outlook. ♦

Crop Tolerance: ♦ Degree is safer to the crop than Harness. Information on hybrid sensitivity is not available but is unlikely to be a concern.

Rotational Guidelines: ♦ If a crop is lost, sweet corn, popcorn, or field corn may be planted immediately. ♦ Wheat may be planted 4 months after application and alfalfa, clover and other forage legumes (see label) 9 months after. ♦ The following season potatoes, various dry beans and peas may be planted.

Just In ♦ Turns out that Monsanto has added sweet corn to most, if not all, of their other acetochlor containing herbicides such as Harness and Harness Extra. ♦ There will be lots of product with labels that do not include sweet corn, and these should not be used.

## Impact ♦

What it does: Provides POST control of annual broadleaf weeds and grasses (maximum height varies by species). ♦ In OSU test plots Impact has been an excellent *emergency* treatment on large weeds.

How to use it: ♦ Impact can be applied POST up to 45 days before harvest. ♦ To optimize weed control always apply Impact in a tank-mix with atrazine. ♦♦ Apply ♦ fl oz/A of Impact + ♦-1 lb of atrazine a.i./A to actively growing weeds. ♦ Impact can be tank-mixed with other herbicides registered on sweet corn, but tank-mixing with mesotrione products (Callisto, Lumax, Camix and Lexar) is not recommended. ♦ I think that tank-mixing with Laudis is also unlikely to be a wise choice. Use a reduced rate of ♦-♦ fl oz/A when tank-mixed with Accent (this tank-mix has not been tested for safety on sweet corn). ♦ Methylated Seed Oil (MSO) or COC at 1-1 ♦ g/ 100 g of water and, either UAN or ammonium phosphate at 1 ♦ to 2 ♦ g/ 100 g of water are required to obtain optimum weed control. ♦ MSO will provide better performance than COC.

Crop Tolerance: ♦ We have tested Impact for two years for hybrid sensitivity and so far it has had a clean bill of health. ♦ Weed scientists at other universities have reported similar tolerance and there is a consensus that further testing is not warranted.

Rotational Guidelines: ♦ In event of a crop failure, any type of corn can be planted immediately after applying Impact. Wheat, barley, oats and rye can be planted 3 months after application,

alfalfa, peas, potato, and soybean (south of I-80) nine months after. All other crops, and soybeans north of I-80, can be planted 18 months after Impact.

## Laudis

**What it does:** Provides POST control of annual broadleaf weeds (<6" tall) and grasses (maximum height varies by species).

**How to use it:** Apply at 3 fl oz/A to actively growing weeds from crop emergence up to the V7 stage of corn growth. MSO at 1 g/ 100 g of water must be used if Laudis is applied alone. Tank mixing 3 fl oz of Laudis with atrazine at 0.5 lb a.i./A will improve weed control; however, do not use the tank mix if corn is more than 12 inches tall. COC at 1 g/ 100 gallons of water can be used as an alternative to MSO when Laudis is mixed with atrazine. Addition of UAN or AMS will further improve control when conditions are dry.

**Crop Tolerance:** Laudis contains a safener that increases crop tolerance. Last year out of 28 hybrids tested in trials in MN, NY, WI and DW, only one was significantly injured by Laudis. That hybrid was Merit, the gold standard for sweet corn sensitivity to herbicides (i.e. extremely sensitive), and it was killed. In a screening study at University of Illinois with 249 hybrids, tolerance of Laudis was excellent, except for 7 hybrids all of which were severely injured. This means that while *almost* all hybrids are highly tolerant of Laudis; there are a few that are very sensitive and will be severely injured.

**Rotational Guidelines:** Small grains can be planted 4 months after application; soybean after 8 months; peas, potatoes, tomato, snapbean, canola, alfalfa and sorghum after 10 months; dry beans, cucurbits and all other crops after 18 months.

## Insecticide update by C. Welty

**Coragen** is a new insecticide that just received federal registration on May 1. Coragen is registered for use on cabbage, collards, and other brassica leafy vegetables (3-day pre-harvest interval); pumpkins and other cucurbits (1-day PHI); tomato, pepper, and eggplant (1-day PHI); and lettuce, parsley, and other leafy greens (1-day PHI). The registrant (DuPont) is now pursuing State labels. Target pests include beet armyworm, cabbage looper, imported cabbageworm, fall armyworm, hornworms, and other caterpillars, and Colorado potato beetle. Coragen contains the active ingredient Rynaxypyr, also known as chlorantraniliprole. The same active ingredient for use on fruit crops and potatoes was registered at the same time under the trade name Altacor. Coragen is formulated as a 35% suspension concentrate with 1.67 pounds of active ingredient per gallon. For resistance management purposes, Coragen is in group 28, which is a new chemical group called the anthranilic diamides. Coragen is a reduced-risk product due to its low toxicity to mammals, fish, and birds. The re-entry interval is 4 hours.

**Carzol:** Carzol SP is allowed for use in Ohio on dry bulb onions from 17 April 2008 until 15 September 2008, as detailed in a section 18 exemption label issued by EPA. This is for onion thrips control, and is similar to the section 18 we had last year except that the limit per year is lower than last year. The label allows one application at a rate of 1.25 lbs product per acre, or two applications at 0.75 lbs product per acre, no less than 7 days apart. The pre-harvest interval is 30 days and the re-entry interval is 48 hours. Carzol contains 92% formetanate hydrochloride and is made by Gowan Company. The label is posted on the internet at <http://pested.osu.edu/>.

**Malathion** on parsley: The label for Malathion 57EC, made by Loveland Products Inc., recently had two changes in its directions for use on parsley. Carrot weevil has been added to the list of target pests on parsley, and the pre-harvest interval on parsley has been shortened from 21 days to 2 days.

**Leverage:** Leverage is a mix of two active ingredients, imidacloprid (which is in Provado) and cyfluthrin (which is in Baythroid, a pyrethroid). Leverage has been registered for use on potatoes and cotton for several years, but its label was recently expanded to include cabbage, collards, and other brassica leafy vegetables (7-day pre-harvest interval); lettuce, parsley, and other leafy greens (7-day PHI); tomatoes (0-day PHI); peppers and eggplant (7-day PHI); dry beans and peas (7-day PHI); radish and other root vegetables (7-day PHI); and sweet potato and other tuber and corm vegetables (7-day PHI). Leverage controls a broad range of pests, including sucking pests such as leafhoppers, aphids, whiteflies, and stink bugs, as well as chewing pests such as flea beetles, cabbageworms and other caterpillars. Leverage is made by Bayer. It is formulated as a 2.7 suspension emulsion, and has a re-entry interval of 12 hours.

**Warrior:** Crops recently added to the Warrior label are cucumbers, melons, pumpkins, squash, and other cucurbits, and potatoes and other corm vegetables. Warrior is used to control a wide range of pests including leafhoppers, beetles, caterpillars, and bugs.

## Crop Reports by Matt Hoeflich and B. Precheur

**Northern, Ohio Crop Report May 5, 2008.** ♦ Good field conditions the week of April 4<sup>th</sup> allowed growers in Northern Ohio to plant an early seeding of sweet corn. ♦ Favorable weather conditions over the last several weeks have allowed 2<sup>nd</sup> and 3<sup>rd</sup> plantings. ♦♦ Stands of sweet corn planted April 4<sup>th</sup> are fully emerged and are approximately 3 inches tall. ♦ Subsequent planting are as well emerged from spike through 1 inch growth stage. ♦ Both direct seeding and transplanting of fresh market and processing cabbage began the week of April 21<sup>st</sup>. ♦♦ Direct seeded cabbage planted last week is emerged and stands are excellent and look very strong. ♦ Tomatoes, Peppers, cantaloupe and watermelon transplants have been seeded into greenhouses and field planting of these crops should start by the 15<sup>th</sup> of May. ♦♦ Overall weather conditions have been favorable for field preparation on lighter soils. ♦ The exception has been on heavy and marginal soil types that have been slow dry out and warm up this spring. Lastly, much of Northern Ohio received additional rainfall May 2<sup>nd</sup> into the 3<sup>rd</sup> totaling over 1 inch. ♦♦ Isolated areas as well received Saturday May 3<sup>rd</sup> ♦ inch size hail for a 20 minute period which appears to have caused only minimal crop injury. ♦♦♦♦♦

**Central OH.** ♦ Asparagus harvest continues and spear quality is good. Plastic sweet corn is about 6 inches and starting to look better with improved color after going through some rough weather. Bare ground sweet corn is in the spike stage to 2 to 4 leaf stage depending on planting date and location. Planting continues but late week rains put in a temporary halt. Growers will probably switch to sh2 ♦s next week. Bed making continues for other crops such as tomatoes. Some potatoes were planted about 2 weeks ago. Plasticulture strawberries are looking good with a good portion of the crop in full bloom. Already there is some thumb nail size fruit. Regular matted row strawberries are approaching full bloom.