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Notes from the winter meetings 2. Sweet Corn

From: Dr. Bill Tracy, Sweet Corn breeder, Univ. of Wisconsin.
Dr. Bernard Zandstra, Michigan State University;
Other References: Wisconsin Vegetable Production Guide; OH Vegetable Production Guide
Bob Precheur

Critical Period for Sweet Corn Germination

From: Dr. Bill Tracy, Sweet Corn breeder, Univ. of Wisconsin.
First 24 hours toughest on sweet corn seed germination; This is the critical period.
Research has documented 50% loss in % germination with some high quality sweet corn varieties during this period. Good Practices:
Good guideline is to use 60 degrees as minimum soil temperature.
When planting early and know a cold rain is coming, it would be best to wait a day or two.

Sweet Corn Herbicides and Weed Control, Dr. Bernard Zandstra, Michigan State University;

Other References: Wisconsin Vegetable Production Guide; OH Vegetable Production Guide
Preemergence Herbicides include:
atrazine (Aatrex), alachlor (Lasso), s-metolachlor (Dual Magnum), dimethenamid-P (Outlook), pendimethalin (Prowl)

Postemergence herbicides include:
2,4,D (Weedar 64), bentazon (Basagran), clopyralid (Stinger), halosulfuron (Permit), carfentrazone (Aim)
Atrazine (Aatrex),
Restrictd use pesticide (RUP), Pre or post, controls grasses and broadleaf weeds. Use 1-2 lb active ingredient per acre per year. Because of ground water contamination, follow all restrictions on amount, method and timing of applications. It has a broad spectrum of control and very safe on sweet corn. Follow carry over

restrictions to avoid injury to subsequent crops. The cost is about $2.50-$5.00 per acre.
Alachlor (Lasso), RUP, preemergence control of annual grasses and some broadleaves. The rate is 2-4 quarts per acre. The cost is $12-$24/A.
s-metolachlor (Dual Magnum). Preemergence control of annual grasses, some broadleaf weeds and some yellow nutsedge activity. Does not control velvetleaf, and weak on common lambsquarter. Good control of pigweed. Ineffective on muck soils. Use 1.2 to 2 pt/A. Short residual and no carryover. Cost is about $15-$25/A.
Dimethenamid-P (Outlook) Preemergence control of annual grasses, some broadleaf weeds and some yellow nutsedge activity. Weak on common lambsquarter, does not control velvetleaf. It does not control emerged weeds but can applied to sweet corn up to 12 inches tall in single or sequential treatments. Use 12 -21 fl oz/A/year. Moderate residual with no carryover. Cost is about $14-$24/A. 50 days PHI.
Postemergence
Pendimethalin (Prowl)
Use early postemergence to 24 inch tall corn. Do not apply preemergence. Apply with drop nozzles. Controls annual grasses, wild prosso millet and some broadleaf weed control. It does not control ragweed and mustards. Does not work on emerged weeds. Do not use on muck soils. It can be applied until corn reaches 24 inches tall. Use 1.8 4.8 pt/A. Cost is $5-$13/A.
2, 4-D (Weedar) For post broadleaf control. Apply before corn is 8 inches tall. Some supersweets are sensitive to 2, 4D. Use 1 pt/A. Cost is about $1.50/A.
Bentazon (Basagran) Apply when weeds are small, less than 2 inches. Apply twice for yellow nutsedge control. Include 1 qt per acre crop oil concentrate. Use 1.5 2 pt/A. Cost is about $15-$20/A
Halosulfuron (Permit). Apply as broadcast or directed spray to corn from spike to layby stage. If needed, make a second application as a directed spray. Do not apply to sweet corn unless the seed company, processor or your state extension service has tested the herbicide on the cultivar in question. Do not apply to corn under stress. It is poor on lambsquarter and does not control nightshade. Use 0.67 oz/A. May cause carryover problems on sensitive crops. Cost is about $11/A
Clopyralid (Stinger) Stinger controls all composite weeds, nightshades, and legumes. Has good activity on problem weeds like Canada Thistle, common and giant ragweed, and cocklebur. For Canada Thistle, apply when most plants have emerged and are 6-8 inches tall but before pre-bud stage.
For annual weeds, apply before weeds exceed the 5 leaf stage. Apply before sweet corn exceeds 18 inches in height as a broadcast or directed spray in 10-20 gal/A. Stinger may be tank mixed with other herbicides labeled for sweet corn. Rain within 6 hours reduces effectiveness. Apply when corn is less than 18inches tall. Use 5.3 10.6 fl oz/A. See the label for Days to Harvest and crop rotation restrictions. Cost is $21-$42/A. 30 day PHI
Carfentrazone (Aim). Post control of morning-glory, common lambsquarter, nightshade, pigweed and velvetleaf. Some sweet corn cultivars are sensitive to Aim and users assume all responsibility for crop injury. Not all varieties of sweet corn have been tested for tolerance. Check with your seed company or extension

specialist. Use 05 fl oz/A. Use in combination with other herbicides. Cost is $3.00 per acre.

Notes from the winter meetings 3. Tomatoes and Shoulder Check
Summary of a Research Project: Boron, Calcium and Surface Moisture Affect Shoulder Check, A Quality Defect in Fresh Market Tomato
By Jinsheng Huang and Sieglinde Snapp, Dept. of Horticulture, MSU, East Langsing, MI

Background: Fresh market tomato growers in MI have experienced a severe problem with a fruit defect (shoulder defect, russeting or weather check). Losses are as high as 80%.
Shoulder Check: Minor concentric cracks that penetrate the cuticle or deeper into the epidermis frequently occurred in combination with a russeting pattern of parallel necrotic cells on the fruit surface. Russeting was the primary evidence of shoulder check.
Objectives: 1. To describe the quality defect.
2. To evaluate the role of weather conditions and fruit surface moisture in inducing shoulder check.
3. Evaluate if boron and calcium sprays could reduce the incidence of the fruit defect and enhance fruit quality.
Treatments: 1. Control.
2. Plastic cover for field study.
3. Foliar and fruit sprays a. Surround (kaolin), b. Calcium, c. Boron, d. Calcium plus boron.
Results: Yield of unblemished, marketable No. 1 fruit was significantly higher in the plastic cover treatment for two years and in Ca + B treatment in one year.
Conclusions: Shoulder check occurred when weather conditions changed from very dry to very wet. A plastic cover treatment was associated with dry fruit and the lowest level of the defect. Calcium plus boron or boron alone applied as a foliar spray provides growers with a relatively inexpensive means of providing some measure of protection against this defect.
For more information and complete details, email: huangji@msu.edu

Truck Crops 2004

Bob Precheur

From the VegNet home page, You can access most of the Powerpoint presentations from the Truck Crops Sessions at the 2004 Ohio Fruit and Vegetable Congress in Toledo, OH. They are best viewed with Internet Explorer 5 or higher.
Go to the home page at: http://vegnet.osu.edu

Then go to the menu page.
Click on the titles you want to view.

Reminder: Ohio Vegetable Production Guide Survey
R. Precheur

It is not too late to complete this survey. The survey has been designed to get feedback on all aspects (size, format, content) of the Ohio Vegetable Production Guide. Your input will help us improve the quality of the guide and it will only take a few minutes. Go to the VegNet home page to complete to take this short online survey.

What's New At The VegNet Web Site
Online 2003 Research Reports, Go To the Home Page
Ohio Vegetable Production Guide Survey
We want to know what you think about the content and format of the guide. Take this on line survey available on the home page and let us know. It only takes a few minutes. http://vegnet.osu.edu

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