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Aster Yellows and Aster Leafhopper Control

Casey Hoy and Sally Miller

Aster leafhoppers were collected from the Celeryville muck on May 30 and were tested for aster yellows infection using the PCR technique. Of 30 leafhoppers collected, one sample was positive for aster yellows phytoplasma, for an estimated infectivity of 3.3%. This is very similar to the 4% infectivity estimated for leafhoppers captured in Michigan during May of this year. According to the Minnesota "Aster Yellows Index", 7 leafhoppers per 100 sweeps of a sweep net would indicate that insecticide applications are needed in a lettuce field at this level of infectivity. Adult leafhoppers can easily be sampled with a sweep net, lightly brushing the top of the foliage as the net is passed back and forth above the crop. The aster leafhopper has six black spots on the front of the head. The body color is more olive green compared with the bright green of the potato leafhopper, which can also be found in lettuce fields. Nymphs, which do not have wings, are pale yellow or beige. Past research has determined that insecticide applications during May and June are very important in season-long control of the disease during years when the phytoplasma is present.

Within any given lettuce field, research has identified two key times for applying insecticides to control the leafhopper vectors of aster yellows: approximately 10-14 days after transplanting and approximately 14 days before harvest. The first application would protect the treated lettuce field from infection by incoming adults, so the insecticide used should have a long period of residual activity. The second application would protect neighboring younger lettuce fields by killing any infected leafhoppers that could otherwise carry the disease out of the treated field, so the insecticide used should be fast-acting and effective but needn't have long residual activity. Our previous research on aster leafhopper dispersal demonstrated that planting lettuce at least 60 yards from any earlier infected lettuce plantings also could greatly slow the spread of the disease.



Corn Borers are Here

C. Welty

Although late, European corn borers are here and heavy in certain instances. Growers should be checking sweet corn and other susceptible crops for infestation.



Crop Reports

Hal Kneen

SOUTHEAST (From: June 5, and updated June 11, 2002)

What a difference a week of warm nights (60-70 degrees), hot days 85-90 degrees and irrigation make. Tomatoes, peppers and sweet corn have exploded in growth these past 2 weeks. Until Tuesday June 4, rainfall has been scattered, with several growers having to irrigate to supply both water and fertilizer. Heavy winds and rain fell late evening June 4th. A ten minute hail storm hit the northwest part of Meigs County from Pomeroy to the Athens county border. After contacting our several growers located in southern Meigs County, it looks like the hail avoided the major tomato fields.

Tomato growers are trellising and suckering tomatoes, some are at the second trellising stage. Tomato crops using raised plastic culture beds are rapidly making up lost time with the warmer weather. First set fruit size is already tennis ball size and large potato size this week and; silver dollar size on the second flower set.

This was the year to use plastic culture. First plantings of sweet corn initially started under plastic in April is coming into full tassel and expected to be pulled within 7 days from today, June 11.

First of the european corn borers moths were trapped in helio traps last week, only two moths. No corn earworm moths trapped yet. Lots of Colorado potato beetle larvae have been seen in both tomato and potato fields, time to spray some fields.

Bean harvest stated this week (6-11-02) and cabbage harvest has been underway for the last two weeks.



The 7 Day Outlook*

By Robert Precheur

Cooler, unsettled weather ahead.

By the weekend, another large trough will dig into OH. High temperatures will only make it to the low 70's. Generally, unsettled weather will return.

AKRON-CANTON

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	65 74	56 67	52 70	51 69	50 69	51 74
WIND	5 8	7 8	6 8	5 9	5 9	5 9
PREC.						
PROB. 24	70	59	42	33	36	39

CLEVELAND

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	64 74	58 70	53 71	52 70	51 69	51 74
WIND	5 8	6 8	5 8	5 8	6 9	5 8
PREC.						
PROB. 24	67	59	41	33	36	39

COLUMBUS

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	66 78	60 74	55 71	53 73	52 73	54 76
WIND	3 6	4 7	4 7	3 6	4 6	4 6
PREC.						
PROB. 24	76	54	35	32	35	39

CINCINNATI

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	65 76	58 72	53 73	53 73	53 75	55 77
WIND	6 9	7 10	6 9	5 8	6 9	6 8
PREC.						
PROB. 24	77	47	28	30	34	38

DAYTON

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	65 77	57 72	54 72	53 74	53 74	54 77
WIND	5 8	6 8	5 8	5 8	5 7	5 7
PREC.						
PROB. 24	77	51	30	30	34	37

TOLEDO

DAY DATE	THU 13	FRI 14	SAT 15	SUN 16	MON 17	TUE 18
TEMP						
MIN/MAX	61 76	55 71	51 72	51 73	50 72	51 76
WIND	5 9	7 10	6 9	5 9	7 9	6 8
PREC.						

PROB. 24 | 67 | 57 | 35 | 31 | 35 | 38 |

YOUNGSTOWN

DAY DATE | THU 13 | FRI 14 | SAT 15 | SUN 16 | MON 17 | TUE 18 |

TEMP

MIN/MAX | 61 75 | 56 70 | 50 71 | 48 69 | 47 69 | 48 72 |

WIND | 5 7 | 6 8 | 5 8 | 5 8 | 5 7 | 5 7 |

PREC.

PROB. 24 | 67 | 60 | 46 | 34 | 36 | 40 |

* LEGEND:

TEMP MIN/MAX - forecasted minimum and maximum temperature for time periods midnight to noon and noon to midnight.

WIND - MEAN WIND SPEED (KTS) FOR TIME PERIODS midnight to noon and noon to midnight.

PREC. PROB. 24 - probability of precipitation for the 24 hour period.



What's New At The VegNet Web Site

Slide Presentations

Pepper Variety Slides 2001 | HTML Slide Show

Pumpkin Variety Slides 2001 | HTML Slide Show

Go to the VegNet homepage.

VegNet Vegetable Schools

A series of slide presentations are now available in order to update you on the latest pumpkin and sweet corn research. We begin with 6 pumpkin topics in Pumpkins 101 and have 10 slide presentations available in Sweet Corn 101. In sweet corn. Powerpoint presentations and html online slide shows are available now. Go to the VegNet homepage.

Pumpkins 101

The use of trap crops and Admire for cucumber beetle control and New varieties for 2001. In coming weeks, we will have presentations on cover crops for disease control and pumpkin fungicide use. Check back often.

- **Perimeter Trap Cropping. Online html slide show | Perimeter Trap Cropping. PPT, 7 Mbytes**
See also the Research Results section on the home page for text version of the report.
- **Pumpkin Variety Slides 2001 | HTML Slide Show**

Sweet Corn 101

Presently only Powerpoint presentations available. Coming Soon: Online HTML slide shows. Check back often Nine topics including:

- Aspects of Variety Selection based on Disease Control [ppt 40 KB]
 - Internet Link To "Reactions of Sweet Corn Hybrids to Prevalent Diseases" Dr. Jerald Pataky www.sweetcorn.uiuc.edu
 - Producing Early Sweet Corn [ppt 3.5 Mbytes]
 - Managing Weeds in Sweet Corn [ppt, 9 Mbytes]
 - Sweet Corn Herbicides & Variety Sensitivity. [ppt 2Mbytes]
 - Sweet Corn Development and Critical Periods for Irrigation Management [ppt 1.6 Mbytes]
 - Flea Beetle Management in Sweet Corn [ppt 510 KB]
 - How To Keep Worms Out of Sweet Corn Ears [ppt 8.3 Mbytes]
 - Role of Bt Transgenic Hybrids in Sweet Corn Pest Management. [ppt 21.2 Mbytes]
- Bt Sweet Corn Efficacy in OH, 1999-2000 [ppt, 208 KB]

[Online Edition of the 2001 Ohio Vegetable Production Guide - Now Available](#)

[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

[Common Rust of Sweet Corn](#)
[MDM of Sweet Corn](#)

[Do You Know Us?](#)

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.](#)

Do you need to find traps, lures or suppliers, click on the Vegetable IPM button on the left side of the homepage, then click on the 'Sources' document in the Vegetable IPM section.

IR-4 News

Also in the Vegetable IPM section, you can link to the IR-4 website. Read the results of the 2000 food use workshop, monthly and quaterly newsletters. Find out the latest on pesticide registrations for minor crops. Learn about biopesticides plus much more. Click on the Vegetable IPM button on the VegNet homepage and then click on the IR4 link in the Vegetable IPM section.



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We appreciate very much the financial support for this series of vegetable reports which we have received from the board of growers responsible for the Ohio Vegetable and Small Fruit research and Development Program. This is an example of use of Funds from the "Assessment Program".

Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely and accurate, the pesticide user bears the responsibility of consulting the pesticide label and adhering to those directions.

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