

### Crop Stress Reduces Tolerance to Herbicides

D. J. Doohan

The heavy and persistent rains which have occurred in some areas have resulted in water saturated root zones, a condition which can be a stress for many crops. Crop stress may increase the likelihood of injury from selective herbicide use. Crop tolerance to selective herbicides almost always requires a healthy crop. Usually, tolerance is related to the crops ability to metabolize the herbicide into non-toxic compounds. Anything that reduces crop vigor will also reduce its ability to metabolize herbicides, and thus injury can result.

We have observed unusually severe crop damage in test plots treated with herbicides which are normally safe to use. Although, we are not sure, it seems as if saturated soils may be involved. Because most herbicide labels include language indicating that injury may occur if the crop is growing under conditions of stress, growers may be 'on their own' if a problem develops. Be careful, especially if you are contemplating use of a herbicide that is new to you or the field where you are planning to use it. Make sure you **READ THE LABEL AND OBSERVE ALL INSTRUCTIONS**. Remember the label is a legal document.

### Disease Update

R. Precheur

#### Sweet Corn:

Mac Riedel and Mark Bennett report quite a lot of Maize Dwarf Mosaic virus (MDMV) in the sweet corn plots at the Lane Ave farm in Columbus. This virus disease was also prevalent in southern OH at many locations 2 weeks ago.

Symptoms first appear on the youngest leaves as an irregular, light and dark green mottle or mosaic which may develop in streaks on a chlorotic background. Hold the young leaves up to the light to see this pattern. Early infection can lead to severe stunting. Later on, the disease may cause skipping or blank portions on the ears. Control Johnsongrass and try to select varieties that have good tolerance or resistance.

#### Rust:

Mark and Mac also report rust beginning to develop on sweet corn in Columbus. Circular to elongate pustules develop on leaves that are golden brown to cinnamon-brown in color and are sparsely scattered over the leaf surface which later become dark brown or rust colored. Severe chlorosis or death of the leaves can occur. Rust that comes in early can cause quality problems at harvest by coating the flag leaves and ears which is difficult to wash off. Refer to the sweet corn section, page 216, of

the 2000 Ohio Vegetable Production for recommended fungicides. Or, use the Online edition at the VegNet website.

#### Vine Crops

**\*\*VegNet News FLASH!! \*\*** Powdery Mildew has been reported today on several fields of yellow summer squash in Wayne county (R. Becker). Refer to page 207 of the 2000 Veg. Guide for recommended fungicides.

Mosaic virus symptoms are being reported in southern OH on cucumbers, squash and melons. Symptoms first appear on younger leaves as mottling and severe distortion. The plants can be stunted depending on the type of virus infecting the plant. Fruit generally become mottled in color, misshapen or warty making them unmarketable. For bush type squash, the use of white or aluminum colored reflective mulch may reduce the incidence of the disease for those viruses vectored by aphids. There is little effect on fast growing or vine type cucurbits because they quickly cover the reflective mulch. There are virus resistant varieties of summer squash and zucchini but many of these are GMO's and may not be accepted in the market. Check with your buyers to see if this is a problem.

#### Bacterial Wilt:

With the heavy cucumber beetle infestations reported in many areas, bacterial wilt has been reported in zucchini summer squash in southern OH and in early planted pumpkins in Columbus. First symptoms are dull green, wilted areas on a leaf. Later, more leaves and branches begin to wilt. Eventually the entire plant wilts. Early control of cucumber beetles is essential.

#### Crop Reports

Bill Evans and Hal Kneen

#### SouthEast:

Wet, foggy and muggy describe the past week's weather in Meigs County. Ideal for diseases especially early blight and buckeye rot in tomatoes. Those tomato growers using timely fungicide sprays of Quadris, Bravo, and Dithane have had minor problems however those farmers missing a spray or two are seeing visible leaf and fruit loss.

Tomatoes are being picked throughout Meigs county especially in Mountain Spring, Sunleaper , PikRed, and Sunstart varieties. Prices are averaging \$1.00 per pound but quantities are limited. Greenhouse tomatoes continue to be harvested however Canadian imports are arriving in at fifty cents per pound delivered and are hurting local sales. Cabbage is almost completed except for local farm market plots. It was not a good season as price was low \$5.50- \$6.60 a crate with crate prices at \$1.55- 1.65 each.

Cabbage yield and quality was good. Questionable as to how many growers will grow cabbage for the 2001 sales season. Homeowners growing broccoli have been calling about a bug eating their mature plants. Identified as Harlequin Bug (Lygaeidae) which belongs to the stink bug family. This bug seems to exist in tremendous numbers when it appears. According to my sources the bug

overwinters as an adult and lays double rows of keg-shaped white eggs with black bands.

Sweet corn harvest continues. Initially grown under plastic corn is almost completely harvested while in traditionally grown corn is just beginning to be harvested. Expect full harvest will begin the week of July 10th. First planted corn fields have poor yields with April 10-20 planted corn stands looking excellent. It should be a good sweet corn year. HelioTrap counts were low for both European Corn Borer and Corn Earworm for this past week.

Melons are forming. Cantaloupes range from quarter to soft ball size and are quickly growing. Watermelon fruits are just forming. Noticing a lack of female fruit buds in some fields but lots of male flowers and plenty of bees.

Pumpkins are still being planted. Plantings from two weeks ago are up with two sets of developed leaves on them already.

Peppers continue to grow rapidly with king fruit quickly enlarging. Picking some Hungarian Wax peppers.

NorthCentral:

Water continues to be the main adversary in north central Ohio. The Celeryville area has fared better than points north and west. Fields in the northern half of Huron County, west along the turnpike all the way to the Indiana state line, have pockets of standing water. Stunting and nitrogen shortages are evident in corn fields. Vegetable fields likely have similar variable conditions. Reiterating what has been written by Dr. Kleinhenz and others earlier this season on VegNet, cultivation after some drying of the fields should improve aeration and root health, hastening recovery from water stress. Pumpkin growers needing to replant should keep in mind that this week (June 26th) may be the last week to replant and still get a mature crop before mid-October. Those needing an early crop may not be able to replant at this time. Downy mildew continues to be abundant in brassica greens. Onion and leeks are also susceptible and should be sprayed as long as the weather remains relatively cool and moist in the mornings. Phytophthora is perhaps showing up in low spots of pepper fields. Plants are wilting, browning, and dying out as saturated conditions persist.

Cutworms and a few aphids are being found. Growers are also making applications for corn borer. See Dr. Welty's trap count update in this issue for regional pest trap counts. As the wheat begins to dry, onion thrips scouting should begin in onions, garlic, and leeks. Thrips have been found in local onions around Celeryville.

Weed pressure is high due to the warm, wet weather. The lack of calm, dry days for spraying has exacerbated the weed problem.

Please join us at the Muck Crops Branch for our field day, this Thursday, June 29, 2000, from 10-12. [www.oardc.ohio-state.edu/muck](http://www.oardc.ohio-state.edu/muck)

TomCast Report  
K. Scaife

At Fremont,. The total DSV's as of 27 June are 30. Last week, 21 June 25 DSV's. Daily accumulations for Fremont will be reported on the Tomcast page at the VegNet website but updated only once or twice a week.

#### The 7 Day Outlook\*

##### AKRON-CANTON

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX | 52 77| 55 80| 59 83| 63 86| 66 89| 66 88|

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

PREC

PROB 24| 14 | 18 | 26 | 30 | 30 | 34 |

##### CLEVELAND

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX | 54 76| 57 80| 59 84| 63 85| 65 87| 66 86|

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

PREC

PROB 24 | 15 | 20 | 28 | 30 | 31 | 33 |

##### COLUMBUS

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX | 54 80| 55 81| 59 86| 64 88| 67 91| 69 90|

WIND | 3 5| 3 5| 3 6| 3 6| 3 6| 3 6|

PREC

PROB 24 | 10 | 13 | 22 | 29 | 30 | 34 |

##### CINCINNATI

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX| 54 78| 57 81| 62 86| 66 89| 70 90| 70 89|

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

PREC

PROB 24| 12 | 11 | 20 | 29 | 30 | 33 |

##### DAYTON

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX | 55 80| 59 81| 63 86| 67 88| 69 91| 69 90|

WIND | 4 6| 4 6| 4 7| 5 6| 4 6| 4 7|

PREC

PROB 24| 12 | 13 | 22 | 30 | 30 | 33 |

TOLEDO

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX | 54 81| 57 82| 58 87| 64 88| 66 89| 67 86|

WIND | 5 8| 3 8| 5 8| 5 8| 4 8|

PREC

PROB 24| 17 | 20 | 27 | 31 | 31 | 32 |

YOUNGSTOWN

DAY DATE | FRI 30| SAT 01| SUN 02| MON 03| TUE 04| WED 05|

TEMP

MIN/MAX| 52 77| 54 79| 54 82| 59 86| 62 87| 63 86|

WIND | 5 7| 4 6| 5 7| 4 7| 5 7| 5 7|

PREC

PROB 24| 17 | 21 | 28 | 30 | 31 | 34 |

\* 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 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

Pumpkin Production Chart

Originally available only in the print version of the 2000 Ohio Vegetable Production Guide, this WEB version can be found in "The Pumpkin Patch" The chart is a quick guide and timeline to key factors necessary for a successful pumpkin crop.

Another NEW! VegWeb Fact Sheet.

Table on Susceptibility of sweet corn hybrids to Stewart's Bacterial Wilt as rated by Jerald Pataky (Univ. of Illinois). Adapted by Dr. Celeste Welty, Extension Entomology, OSU Columbus. This table was published in last week's VegNet Newsletter. A WEB edition is now available from the VegNet homepage. More information on Stewart's wilt and its history in Ohio will be available soon.

Vegetable Faculty WEB Pages.

Dr Matt Kleinhenz has recently posted his faculty webpage. At the site you can find his research projects, results and review his presentations made this past winter. A link from VegNet will be provided soon. To visit Matt's homepage, go to:

<http://www.oardc.ohio-state.edu/kleinhenz/>

From Dr. Brent Rowell, Univ of KY,  
email: [browell@ca.uky.edu](mailto:browell@ca.uky.edu)

Our new KY Vegetable Recommendations book is on the web now. A print version is also available. The introductory section on marketing might be of interest to southern OH tobacco growers.

<http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>

The marketing section is also available as a separate publication.

<http://www.ca.uky.edu/agc/pubs/id/id134/id134.htm>

Visit: "The Library, Online Edition of the 2000 OH Vegetable Production Guide, NOW AVAILABLE.

The OH Vegetables Production Guide ranks #22 in top downloads from OSU Extension Ohioline with over 1,000 downloads. Most of the new features are available in the online edition including the New Insecticide Efficacy tables. The new Pumpkin Production Chart is not there but I hope to have it posted soon in "The Pumpkin Patch" section of the VegNet website.

NEW! VegWeb Fact Sheets.

This new feature offers some valuable information on certain aspects of vegetable production that you can print out directly in your home or office. The first two are by Dr. Mac Riedel, OSU Plant Pathology, and are available from the VegNet homepage.

Fungicides Labeled for Pumpkins

Confused by the many new fungicides now available for pumpkins. Check out this fact sheet to see how to use these fungicides.

Fungicide Activity For Control of Tomato Diseases Which fungicide is best for a particular tomato disease.

Available from the Vegetable Crops Homepage, [Click Here!](#)

The 1999 Pumpkin Review and Slide Show.

Yield Data plus pictures of pumpkin cultivars from this year's trials. Also, see pumpkin varieties rated for powdery mildew resistance. There are many new and interesting pumpkin varieties in all size categories.

Visit: 'The Pumpkin Patch' for pictures and yield data.

The 1999 Green Pepper Evaluation and Slide Show.

Yield Data Slide Show From The Muck Crops Branch at Celeryville,

From The Enterprise Center

Comparison of Disease Control on Fresh Tomatoes using TOMCAST and SKYBIT to Time Fungicide Applications.

Evaluation of Watermelon Cultivars for Southern Ohio, 1999

1999 Ornamental Corn Evaluation

Evaluation of Eastern Style Muskmelons for Southern Ohio, 1999

[Link To Research Summaries From The Enterprise Center at Piketon.](#)

[Return to Vegetable Crops Homepage](#) | Ohio State University Extension

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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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