

Wisconsin Crop Manager

Volume 21 Number 2 --- University of Wisconsin Crop Manager --- February 13, 2014

Crops

- WI Soybean Research Program WI Crop Management Conference Research Presentations 7
- Webinar: Corn Rootworm Management in the Transgenic Era 7
- Winners of the 2013 WI Soybean Yield Contest are Announced 7
- Crop Management Workshops February 21 8

Insects and Mites

- Cold Killing Insects Podcast Now Available 8

Plant Disease

- New Publication on Corn Disease Loss Estimates in the U.S. and Canada 9
- Plant Disease Diagnostic Clinic (PDDC) Update 9
- New Pythium Root Rot in Soybean Scouting Card 9

3:30. This webinar is supported by a USDA-NIFA North Central IPM program grant.

You will need a computer with speakers and can start the connection process 5 minutes prior to the planned start time by navigating to <https://connect.unl.edu/r9ra3734mey/>. When you arrive at the login page, click the radio button that allows you to “Enter as a Guest”, type in your name and hit the “Enter Room” button.

To test your connection prior to the start of the webinar (suggested), or for troubleshooting during the webinar click on <http://www.extension.iastate.edu/testconnect/>

Topics/speakers

Rootworm biology and behavior; Dr. Joe Spencer, Illinois Natural History Survey

Resistance evolution and IRM for rootworm; Dr. Aaron Gassmann, Iowa State University

Adult management options; Dr. Lance Meinke, University of Nebraska-Lincoln

Larval management options; Dr. Bob Wright, University of Nebraska-Lincoln

Decision tree for grower management options; Dr. Ken Ostlie, University of Minnesota

WI Soybean Research Program Wisconsin Crop Management Conference Research Presentations

The WI Soybean Research Program Wisconsin Crop Management Conference Research Presentations are now available. The presentations include WCMC 2014: 80 Years of B(reeding) x A(gronomy) Interactions in 30 Minutes or Less, WCMC 2014: Relationship Between SDS and SCN in Commercial Soybean Fields in Wisconsin, and WCMC 2014: Economic Risk & Profitability of Soybean Seed Treatments at Reduced Seeding Rates. To view the presentations visit www.coolbean.info.

Webinar: Corn Rootworm Management in the Transgenic Era

Bryan Jensen, IPM Program

A free webinar is being offered by the North Central Region’s extension and research entomologists on February 20, 2014. Several speakers will present timely topics which are listed below. The webinar starts at 1 pm and will conclude by

Winners of the 2013 WI Soybean Yield Contest are Announced

Shawn Conley, Soybean and Wheat Extension Specialist

The 1st place winner in Division 4, Dean Booth of Cuba City, grew Asgrow AG2431 and harvested 82.7 bu/a. In second place, Mary Kay Booth of Cuba City grew Asgrow AG2433 and harvested 81.8 bu/a. In Division 3, RnK DeVoe Farms of Monroe won 1st place with Pioneer P28T33R at 92.1 bu/a (highest overall yield) and in 2nd place, Ellis Farms Inc. of Walworth harvested 74.4 bu/a with Dairyland DSR-2190/R2Y. Also in Division 3, the Wisconsin Bean Team of UW Graduate students Adam Gaspar, David Marburger, and Ethan Smidt grew Pioneer P28T33R and harvested 87.4 bu/a. The WI Bean Team is ineligible for official prizes as they are grad students of Dr. Conley; however their efforts are still recognized. In Division 2, Stetzer Brothers LLC of Melrose achieved 71.2 bu/a from Pioneer 91Y90 for first place. In 2nd place, Triple Maple Dairy LLC of Manitowoc harvested 65.0 bu/a from Renk RS183NR2 soybeans. In Division 1 at 57.8 bu/a was Paul Graf Farms LLC from Sturgeon Bay. They planted Pioneer

90Y90. 2nd place winner in Division 1 was Kloos Acres from Stratford. They harvested 55.0 bu/a from Pioneer 91Y30.

The contest is sponsored by the WI Soybean Program and organized to encourage the development of new and innovative management practices and to show the importance of using sound cultural practices in WI soybean production.

Agronomic Practices of 2013 WI Soybean Yield Contest Winners

Avg. Planting date	May 14 th
Avg. Seeding rate (seeds/acre)	176,111
	% using this practice
Inoculant	33
Seed fungicid	67
Seed insecticide	56
Foliar fungicide	56
Foliar insecticide	22
Row spacing < 30"	89
Conventional tillage	56
Previous crop not corn	11

For more information please contact Shawn Conley, WI State Soybean Specialist at 608-262-7975 or spconley@wisc.edu

Crop Management Workshops February 21

Crop Management Updates, Hillsboro and Sparta, WI

Friday February 21, 2014

9:30 Registration

Program 10:00 am to 3:30 pm

Jake's Northwoods Sparta, WI & Hillsboro Firemen's Community Center Hillsboro, WI

Topics: (Speakers will rotate between locations between morning and afternoon)

Farm Bill and Crop Insurance Update for 2014- Dr. Paul Mitchell, UW Extension Ag Economist

Extreme Nutrient Management- Dr. Carrie Laboski, UW Extension Soil Scientist

Do's and Don'ts of Soil Compaction Management- Dr. Francisco Arriaga, UW Extension Soil Scientist

Weed Management on 2013 Prevent Planted Acres and Cover Crop Weed Management- Dr. Vince Davis, UW Extension Weed Scientist

Get the Most from Your Time Crop Scouting: Tips and Practices for Efficient Crop Scouting- Bryan Jensen, UW IPM Program Specialist

Local Update including Alfalfa Fungicide Trial Results from 2013- One of the Area UW Extension Agriculture Agents

Pre-Registration:

Please pre-register for this workshop to help us plan accordingly for meals and handout materials:

To pre-register for the Sparta location contact the Monroe County Extension Office at 608-269-8722 by February 17th

To pre-register for the Hillsboro location contact the Vernon County Extension Office at 608-637-5276 by February 17th

Cold Killing Insects Podcast Now Available

Russel Groves, Associate Professor-Department of Entomology

[Transcript](#)

Sevie Kenyon: You tell us that this sub zero weather is actually good for something. Can you describe what that is?

Russell Groves: Yeah, as we're speaking, the forecast tonight may be about twelve below zero. What that is going to do for us is it's going to provide enough chilling degree-days, or cold temperatures, that's going to kill a lot of insects that are trying to [survive] over winter. This is the year we need; to set them back.

Sevie Kenyon: Explain to us how it works?

Russell Groves: The air temperature itself can have the ability to directly freeze an insect, but it is a little bit challenging for you know insects that are in the soil, to be exposed to that air temperature. And in fact, a little bit of the snow that we have is a real good insulator. So what we do need is extended periods of cold temperature, and we also need a little bit of this wind. So where we have these cold temperatures and we have these extreme wind chills, when the wind comes and it blows the fields wide open, it really allows that cold temperature to reach the soil and our frost line to go deep, and by doing that can get to these insects, and drive the temperature down to levels that can be killing.

Sevie Kenyon: This isn't just about killing bugs in Wisconsin.

Russell Groves: this is sort of a big, synoptic, weather event that's really over much of the upper Midwest and even over the east. So this effect is going to be felt across many many areas of the state, Emerald Ashborer, and Emerald Ashborer populations might be getting effected by this, especially in the areas where we're really getting these cold temperatures. And the same phenomenon is the case, we have to have these extended periods of cold temperature in order for the interior of the trees to reach the temperatures that can be a killing temperature. In the case for a lot of our insects that effect crops, again where they're in the soil, we have to have these extended periods, and it is, it's happening over a very large area in the country.

Sevie Kenyon: What other insects are affected by such cold temperatures?

Russell Groves: As a vegetable entomologist here in Wisconsin, probably a couple of the insects that I deal with, most often, one would be the Colorado Potato Beetle. And of course that's probably our key pest with potatoes. That's an insect that over winters in the ground, usually winters on average over twelve, to fifteen, maybe twenty inches in the soil, and so it's these types of temperatures that are reaching these kinds of populations. Another one is Striped Cucumber Beetle. In our squashes are Cucurbits, and insects that over winters not in the ground, but on the soil surface, again when these fields blow open because of this wind and this cool, it's getting to them. And we're getting a few of them.

Sevie Kenyon: We've been visiting with Russell Groves, Department of Entomology, University of Wisconsin Extension and the College of Agricultural and Life Sciences, now celebrating 125 years, and I am Sevie Kenyon.

To listen to the audio of this podcast click [here](#).

New Publication on Corn Disease Loss Estimates in the U.S. and Canada

Damon Smith, Extension Field Crops Plant Pathologist

A new publication on corn disease loss estimates in the U.S. and Ontario, Canada in 2012 has been developed. The publication is a product of a team effort composed of plant pathologists from across the corn production belt of the U.S. and Canada and describes the predominant disease of corn in 2012 and the estimated loss as a result. [CLICK HERE TO DOWNLOAD A PDF OF THIS NEW PUBLICATION.](#)

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from January 1, 2014 through January 3, 2014.

Plant/Sample Type, Disease/Disorder, Pathogen, County

VEGETABLES,

Basil, [Root Rot](#), *Pythium* sp., Columbia

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.

New Pythium Root Rot in Soybean Scouting Card

Damon Smith, Extension Field Crops Plant Pathologist

A new Pythium root rot in soybean scouting card has been developed by research and extension soybean pathologists in the North Central region. The card describes risk and symptoms of Pythium root rot and how to scout for the disease. Management recommendations are also included in this short and concise pamphlet. Scroll down to the end of this newsletter to view the card or [CLICK HERE TO DOWNLOAD A PDF VERSION OF THIS SCOUTING CARD.](#)

Follow us on



Description of *Pythium* root rot

Pythium root rot is primarily a seedling disease. Early planting dates increase the risk of disease. A seedling disease survey of the North Central Region of the United States and Canada in 2011 and 2012 recovered approximately 50 species of *Pythium* from diseased soybean seedlings. The species identified differed by latitude. Moreover, the diversity of species recovered was related to precipitation, soil type, and temperature. Survey data suggest *Pythium* has the potential to persist in soil environments and may become a long-term disease challenge.

Pythium species cause pre- and post-emergence damping off and, consequently, reduce stand. Infected seed appears rotted and soil sticks to it. Infected seedlings have water-soaked lesions on the hypocotyl or cotyledons that develop into a brown soft rot. Diseased plants are easily pulled from the soil because of rotted roots. Older plants become resistant to soft rot, but root rot retards plant growth and affected plants may be yellow, stunted, or wilted if infection is severe.



Scouting for *Pythium* root rot in soybean

Acknowledgments

Authors
Alison Robertson, Department of Plant Pathology and Microbiology, Iowa State University; Martin Chilvers, Department of Plant, Soil, and Microbial Sciences, Michigan State University; and Nathan Bestor, Department of Plant Pathology and Microbiology, Iowa State University

Contributors
The following contributed data that were used to develop this publication: S. Markell (NDSU), T. Chase and E. Byamukama (SDSU), L. Giesler (UNL), D. Jardine, (KSU), L. Sweets (UM), A. Robertson (ISU), D. Malvick (UMN), P. Esker and D. Smith (UW), J. Rupe (U of A), C. Bradley (UJL), M. Chilvers (MSU), K. Wise (Purdue), and A. Tenuta (Ontario, Canada).

Production
Layout and design courtesy of Iowa State University Extension and Outreach; photographs by Martin Chilvers and Alison Robertson; map by Rich Beachler; and disease cycle illustration by Renée Tesdall

Funding
This is an output of the Extension Network team for USDA-NIFA Project No. 2011-68004-30104, *Integrated management of oomycete diseases of soybean and other crop plants*. This project was supported by Agriculture and Food Research Initiative Competitive Grant no. 2011-68004-30104 from the USDA National Institute of Food and Agriculture.



For more information, see www.oscap.org.

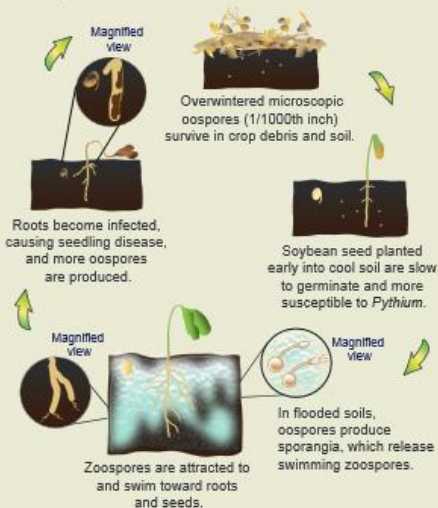
February 2014



Scouting for *Pythium* root rot in soybean

Risk

Conditions favoring *Pythium* are early planting, cold soil temperatures, and saturated soils. Low-lying fields with poor drainage are at the highest risk of *Pythium* root rot and other soil-borne diseases. No-till soils increase the risk of *Pythium* infection due to increased soil moisture and decreased soil temperature.



***Pythium* disease cycle**

Scouting

Scouting for *Pythium* should be done from VE through V2, particularly in fields where soil temperatures have been cold (<60°F) and very wet. Diseased plants often occur singly or in small patches in low-lying areas of the field that are prone to flooding.

Stand counts may seem low, and there will be visible areas of rotted seedlings. Digging in areas where emergence is inconsistent may reveal rotted seedlings that never emerged.

Pythium-like symptoms in late-planted soybeans may actually be seedling blight caused by *Phytophthora sojae*.



Management

Planting in cold, wet soils should be avoided to reduce infection by *Pythium* species that infect at low temperatures.

Seed treatments may protect stand in high-risk situations, but no seed treatment is effective against all species of *Pythium*. Both mefenoxam/metalaxyl (Apron XL[®], Allegiance[®]) and ethaboxam are effective against many *Pythium* species. Resistance to mefenoxam/metalaxyl has been documented. Strobilurins may have some activity against certain *Pythium* species.

No-till soils often have higher soil moisture and lower soil temperatures, factors that increase the risk of *Pythium* infection. If tillage is considered to improve drainage, use conservation tillage practices to maintain soil quality.

