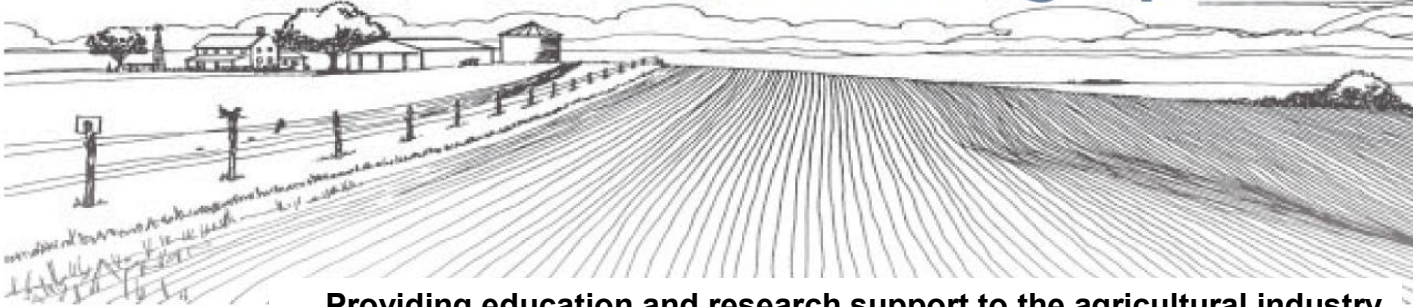


Extension Ag Update



Providing education and research support to the agricultural industry
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Soybean Aphid Scouting

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Keep an eye on population trends of soybean aphids and their natural enemies. Are they increasing or decreasing? Cooler weather (upper 70's and low 80's) can be beneficial to aphid populations which can increase quickly, doubling in 2-4 days. If temperatures move above 90 degrees then populations may decline.

Another weather factor that appears to influence aphid population is heavy rainfalls (> 1”), especially early season. A research study utilizing a rainfall simulator showed that after a 2” rainfall on V3-V4 soybeans there was a 45% reduction in aphid populations after 5 days. The impact of rain decreases as soybean plant increase in size.

Aphid populations are also regulated by natural enemies so monitor these as well when scouting soybean fields. The Multicolored Asian lady beetle, lacewing larvae, syrphid larvae and Minute Pirate Bug are just a few of the beneficial insects in our soybean fields. To see pictures of these helpers check out the following web pages.

The Good Guys

www.inhs.uiuc.edu/chf/outreach/eduresources/good/guysframes.htm

Soybean Aphid Biological Control

http://www.entomology.wisc.edu/sabc/aphid_natural_enemies.htm

Only repeated scouting will help determine what's happening to the soybean aphid populations. "Speed scouting" (developed by Univ. of MN) can decrease scouting time for aphids. More information about this method is on website

www.soybeans.umn.edu/crop/insects/aphid/aphid_sampling.htm

The threshold for treatment is 250 aphids per plant at the R1 (beginning flowering) through R5 (beginning seed) stage of development when 80 percent of the plants are infested, and natural predators are not controlling aphid population. The threshold is designed to give about seven days of lead time between scouting and applying insecticides. Insecticide recommendations can be found in the 2008 Illinois Pest Management Handbook at www.pubsplus.uiuc.edu/IAPM-08.html. For weekly updates on pests and their control look in *The Bulletin* www.ipm.uiuc.edu/bulletin

Continue scouting after treatment. If insecticides are applied too early, early-season predators may be killed, allowing soybean aphid populations to rebound later.

For further information about Soybean Aphids, checkout the University of Illinois IPM webpage at <http://www.ipm.uiuc.edu/fieldcrops/soybeans/insects.html>

RESEARCH RESULTS

Benefits of Cover Crops

Candace Pollock, Ohio State University, pollock.58@cfaes.osu.edu, (614) 292-3799;
Source: Kent Harrison, OARDC, harrison.9@osu.edu, (614) 292-5056

The benefits of cover crops continue to grow. Touted for conserving soil while filling forage needs, some plant varieties also have the potential to suppress soybean cyst nematode populations in no-till fields. Ohio State University researchers in the Department of Horticulture and Crop Science have found that Italian ryegrass (also known as annual ryegrass), when planted as a fall cover crop, reduces soybean cyst nematode egg populations 30 percent to 50 percent in a single growing season. Additionally, researchers discovered that Italian ryegrass reduces weed populations by as much as 50 percent, including purple deadnettle which is a prolific overwintering host for soybean cyst nematode.

Kent Harrison, a weed ecologist with the university's Ohio Agricultural Research and Development Center, said that the findings offer an additional tool for managing soybean cyst nematode, a small round worm that can cause significant yield reductions in soybeans. Soybean cyst nematode is the No. 2 soybean pest in Ohio, behind Phytophthora root rot. "A rotation with non-host crops still works as the best tool for managing soybean cyst nematode populations. We are not advocating growing cover crops as a substitute for annual crop rotations in pest management," said Harrison. "We see this work as just providing another tool for managing the pest with something that has multiple uses, benefits the soil, as well as acting as a short-term grazing crop. Italian ryegrass can do all of these."

Harrison and his colleagues conducted the work over a five-year period at OARDC's Waterman Farm in Columbus, Ohio, inoculating a small no-till plot with soybean cyst nematode and then planting half the field with Italian ryegrass and leaving the other half untouched. Harrison said the fieldwork was inspired by lab work conducted in Canada that found certain cover crops, such as perennial ryegrass and white clover, suppressed soybean cyst nematode populations. Italian ryegrass produced the strongest results. "It is possible that the presence of Italian ryegrass causes soybean cyst nematode eggs to hatch prematurely, in the fall rather than in the spring, depleting egg numbers and killing off populations because they have no winter host to feed on," said Harrison. "The ryegrass grows quickly, produces a massive root system, and harbors beneficial organisms that eat weed seeds, so it just out-competes other weeds in a no-till field, including purple deadnettle."

Harrison and his colleagues haven't figured out yet why some soybean cyst nematode eggs hatch prematurely, but they speculate it might be chemically driven. "Soybean cyst nematodes hatch in the presence of purple deadnettle. There's got to be some chemical signaling involved that says a host is present, and it's possible that Italian ryegrass is mimicking this chemical signal," said Harrison. "Other cereal grasses do this, as well, but to a lesser extent."

Harrison said Italian ryegrass works most effectively when it is planted in the fall before

soybean cyst nematode completes its first life cycle on purple deadnettle, usually in September or October. Like most other cover crops, Italian ryegrass must be burned down in the spring before crops are planted. Though a beneficial crop in the fall and winter, come spring and summer it can become a nuisance weed if allowed to go to seed.

RESOURCES TO CONSIDER

Publications Plus –*University of Illinois Agricultural and Horticultural Publications*
Call 1-800-345-6087 or order on the web www.PublicationsPlus.uiuc.edu

It's a one-stop shop for a current catalog of research-based information (Mastercard and VISA accepted)

Illinois Farm Report

http://www.nass.usda.gov/Statistics_by_State/Illinois/Publications/Farm_Reports/2008/08schedule.htm

Keep up-to-date with this report on farm statistics and prices.

A Transition Guide to Certified Organic Crop Management

Margaret Huelsman, Organic Food and Farming Education and Research (OFFER) Program, Ohio Agricultural Research and Development Center (OARDC)

This manual details rules and realities of organic farming — specifically, of grains, fruits and vegetables.

Among the topics:

- Steps in the organic certification process, plus Midwest certification agencies.
- Seed, land use, planting stock, crop rotation and harvesting/handling standards.
- Pest, weed, disease, crop nutrient and soil fertility management standards.
- Exemptions, exclusions, record keeping, and allowed and prohibited substances.

To get a copy — \$15 each, with checks made payable to OSU/OFFER — write to OFFER Program, 201 Thorne Hall, OSU/OARDC, 1680 Madison Ave., Wooster, OH 44691. Or call (330) 202-3528.

“Container on Barge” Study

<http://www.ilsoy.org/inc/Illinois%20COB.pdf>

Located on the Illinois Soybean Association (ISA) web site, the study reports that the Burlington Northern Santa Fe railroad has relaxed their weight restrictions for containers. This is important since grain containers are heavier than other containers.

INTERNET RESOURCES

Fungicides Grouped by Mode of Action and Relative Risk for Developing Resistance Problems

<http://www.pesticidesafety.uiuc.edu/newsletter/html/200802ctable.pdf>

This table helps you chose the best fungicide.

2008 Machinery Cost Estimates

<http://www.farmdoc.uiuc.edu/manage/>

These are often used to set custom hire rates for machinery operations in Illinois.

- Field operations www.farmdoc.uiuc.edu/manage/machinery/machinery_field_operations.html
- Harvest operations www.farmdoc.uiuc.edu/manage/machinery/machinery_harvest.html
- Tractors www.farmdoc.uiuc.edu/manage/machinery/machinery_tractors.html

- Forage field operations www.farmdoc.uiuc.edu/manage/machinery/machinery_forage.html
- Summary www.farmdoc.uiuc.edu/manage/machinery/machinery_summary.html

Illinois Agritourism Webpage

web.extension.uiuc.edu/agritourism

Developed by John Pike, a U of I Extension, Community and Economic Development Educator, this website has a wealth of information thinking about including agritourism as part of their operation.

Plant Information On-line, the University of Minnesota

<http://plantinfo.umn.edu>

Looking for a specialty crop to grow? Here's how to find the seed. This site lists 1,000 retail and wholesale nurseries from North America where plants and seeds of all types (>100,000) can be purchased. It also has contact info and links for over 2,000 North American retail and wholesale seed and nursery firms as well as bibliographic details for more than 350,000 images of wild and cultivated plants from around the world.

Understanding and Responding to Climate Change

<http://dels.nas.edu/basc/climate-change>

National Academies of Science new report on climate change is now available.

Breath of a Nation - Animated CO2 Map

<http://news.uns.purdue.edu/x/2008a/080407GurneyVulcan.html>

Kevin Gurney atmospheric scientist and others at Purdue Scientists now track and map daily and local patterns of carbon dioxide emissions from the burning of fossil fuels by power plants, factories, and vehicle traffic.

EDUCATIONAL OPPORTUNITIES

University of Illinois Agriculture Events

New programs are being confirmed every day. Keep in touch with your Extension Office for programs addressing the topics that interest you and are offered in your County. To find your counties website go to: <http://web.extension.uiuc.edu/state/findoffice.html>

Statewide University of Illinois Extension Calendar Website

<http://web.extension.uiuc.edu/state/calendar.cfm>

To search for programs throughout the state, check out Extension's searchable calendar. Search by location, topic or date to find a program of you interest.

AG FACTS

Organic crop prices vs. conventional crops are listed at The New Farm Organic Price Report, for example, listed prices for June:

- #2 yellow corn in Chicago, \$11 a bushel for organic versus \$6.94 for conventional.
- Strawberries in Philadelphia, \$28.00 a pound for organic versus \$20 for conventional.
- Broccoli in Philadelphia, \$25.75 per 14 count versus \$15 for conventional.

Source: www.newfarm.org/opx/market1_choose.php

About the Ag Update Newsletter

The Ag Update Newsletter is a bi-monthly newsletter providing education and research support to the agricultural industry. Current and past issues may be found at the following website <http://www.urbanext.uiuc.edu/agupdate/index.html>

Contact your county Extension office and request to be put on their agricultural mailing list to receive the local agricultural newsletter and notices about upcoming agricultural events near you. To find your counties location, phone and website go to: <http://web.aces.uiuc.edu/ve/>

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