OHIO STATE UNIVERSITY EXTENSION

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for November 6, 2018
Ashtabula and Trumbull Counties

Hello Northeast Ohio Counties!

We might need pontoons to finish harvest this year. The weather has certainly not cooperated with providing dry weather to get the remaining crops off this year, and the forecast doesn’t look any better.

Now is a great time to sample your fields for soybean cyst nematode (SCN). If you need assistance with the sampling process give us a call and we would be happy to come out to lend a hand.

Stay safe and hopefully dry!

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Lee Beers
Trumbull County Extension Educator

Andrew Holden
Ashtabula County Extension Educator
Sampling for Soybean Cyst Nematode – Fall is the time!
By Anne Dorrance
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2018-38/sampling-soybean-cyst-nematode----fall-time

As we wait another week for the fields to dry out, this provides some time to sample soil for the SCN populations. The SCN Coalition theme for the next few years is What’s your number? Do you know where SCN is in your fields and what the current population is sitting at? If its high, then there is a second number – what is the SCN type? Which addresses the bigger question can it reproduce on the SCN resistance source PI 88788 or Peking. All of these numbers can impact management of this root pathogen and future losses.

The situation in Ohio: We know that the state is now “polluted” with SCN, fortunately most of those fields are at very low levels – which is where they should be kept.

From samples received to date as part of an initial survey for Ohio of 33 counties as part of the SCN Coalition sampling. Our first round is from members of the American Soybean Association sponsored by Ohio Soybean Council.

<table>
<thead>
<tr>
<th>SCN Population Level</th>
<th>Total fields</th>
<th>% processed</th>
</tr>
</thead>
<tbody>
<tr>
<td>None Detected</td>
<td>67</td>
<td>37.4</td>
</tr>
<tr>
<td>Trace (40-200)</td>
<td>51</td>
<td>28.5</td>
</tr>
<tr>
<td>Low (200-2000)</td>
<td>43</td>
<td>24.0</td>
</tr>
<tr>
<td>Moderate (2000-5000)</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>High (5000 +)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
<td></td>
</tr>
</tbody>
</table>
However, there are some surprising locations where individual fields are getting or have gotten into trouble with very high populations (>5,000). So let’s review the loss levels for SCN for the majority of soil types here.

Levels of SCN and concerns

<table>
<thead>
<tr>
<th>SCN egg Count/100 cc</th>
<th>Cyst count</th>
<th>Population Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-40</td>
<td>0</td>
<td>not detected</td>
</tr>
<tr>
<td>40-200</td>
<td>1</td>
<td>trace</td>
</tr>
<tr>
<td>200-2000</td>
<td>1-4</td>
<td>low</td>
</tr>
<tr>
<td>2000-5000</td>
<td>3-20</td>
<td>moderate</td>
</tr>
<tr>
<td>5000 &amp; over</td>
<td>15-20</td>
<td>high</td>
</tr>
</tbody>
</table>

If your SCN report in the past has come back as:

**Not detected**: this is not surprising. Remember that SCN sits in pockets and can we quite variable (Figure 1). Continue to monitor your fields.

**Trace**: May begin to measure some yield loss on susceptible varieties, especially on lighter soils.

**Low**: Plant SCN resistant varieties or rotate to a non-host crop (corn or wheat).

**Moderate**: Rotate to a non-host crop and follow with SCN resistant varieties the following year. We have planted susceptible varieties in fields with this level of SCN and have recorded 20 to 50% yield loss.

**High**: rotate to a non-host crop for two to three years, then sample SCN to determine if populations have declined to a level where soybeans can be planted again.

SCN is picky about what it feeds and reproduces on but it does like a few weed hosts and cover crops as well as soybean. If you have SCN in your fields, it is important to also control winter annuals such as purple deadnettle, but also avoid cover crops such as several of the clover’s, cowpea and common & hairy vetch.

So it is time to sample! We recommend sampling in the fall – because in most cases this is what the population will be in the spring. With the warmer weather this year and hopefully no frozen ground should give ample time to collect and process the samples in plenty of time for spring planting. Processing of samples does cost time and money, so here are a few thoughts on how to sample or how to target your sampling to get the best information for your money.
Updated information on where to send the samples for processing for a fee:

OSU C. Wayne Ellett Plant and Pest Diagnostic Clinic
8995 E. Main St. Bldg 23
Reynoldsburg, OH 43068
Phone: 614-292-5006
www.ppdc.osu.edu - follow this link to download forms to go along with the samples

Brookside Laboratory Inc.
200 White Mountain Dr.
New Bremen, OH 45869
417-977-2766, info@blinc.com
www.blinc.com

Spectrum Analytic Inc.
1087 Jamison Rd. NW
Washington Court House, OH 43160
740-335-1562
www.spectrumanalytic.com

For some additional information on Management of SCN – always check Ohio’s SCN fact sheet and several other resources as well: https://u.osu.edu/ohscn/

http://soybeanresearchinfo.com/- link to the 5th edition of the SCN guide developed through the North Central Soybean Research Program.
Link to recent findings and sampling protocol for SCN: https://www.youtube.com/watch?v=FQgg-UPQdcs&feature=youtu.be

EPA Announces Changes to Dicamba
Source: https://www.epa.gov/newsreleases/epa-announces-changes-dicamba-registration

WASHINGTON – Today, U.S. Environmental Protection Agency (EPA) announced that it is extending the registration of dicamba for two years for “over-the-top” use (application to growing plants) to control weeds in fields for cotton and soybean plants genetically engineered to resist dicamba. This action was informed by input from and extensive collaboration between EPA, state regulators, farmers, academic researchers, pesticide manufacturers, and other stakeholders.
“EPA understands that dicamba is a valuable pest control tool for America’s farmers,” said EPA Acting Administrator Andrew Wheeler. “By extending the registration for another two years with important new label updates that place additional restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season.”

The following label changes were made to ensure that these products can continue to be used effectively while addressing potential concerns to surrounding crops and plants:

**Dicamba registration decisions for 2019-2020 growing season**

- Two-year registration (until December 20, 2020)
- Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting
- For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 OTT applications)
- Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset
- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a **new 57-foot buffer** around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)
- Clarify training period for 2019 and beyond, ensuring consistency across all three products
- Enhanced tank clean out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH’s on the potential volatility of dicamba
- Label clean up and consistency to improve compliance and enforceability

The registration for all dicamba products will automatically expire on December 20, 2020, unless EPA further extends it.

EPA has reviewed substantial amounts of new information and concluded that the continued registration of these dicamba products meets FIFRA’s registration standards. The Agency has also determined that extending these registrations with the new safety measures will not affect endangered species.

Fertilizers’ impact on soil health compared
By Penelope Hillemann
Source: https://www.agronomy.org/science-news/fertilizers-impact-soil-health-compared

In a newly published study, researchers dug into how fertilizing with manure affects soil quality, compared with inorganic fertilizer.

Ekrem Ozlu of the University of Wisconsin-Madison and his team studied two fields in South Dakota. From 2003 to 2015, the research team applied either manure or inorganic fertilizer to field plots growing corn and soybeans. They used low, medium, and high manure levels, and medium and high inorganic fertilizer levels. They also had a control treatment of no soil additives to provide a comparison.

In the summer of 2015, they collected soil samples at a variety of depths using a push probe auger. Then they analyzed the samples.

- Manure helped keep soil pH—a measure of acidity or alkalinity—in a healthy range for crops. Inorganic fertilizer made the soil more acidic.
- Manure increased soil organic carbon for all the measured soil depths compared to inorganic fertilizer and control treatments. More carbon means better soil structure.
- Manure significantly increased total nitrogen compared to fertilizer treatments. Nitrogen is key to plant growth.
- Manure increased water-stable aggregates. These are groups of soil particles that stick to each other. Increased water-stable aggregates help soil resist water erosion. Inorganic fertilizer application decreased these aggregates.
- Manure increased soil electrical conductivity at all soil depths in comparison to inorganic fertilizer and control treatments. Higher soil electrical conductivity means higher salt levels in the soil.

Northeast Ohio Agriculture

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Ozlu and his team concluded that long-term annual application of manure improved most soil quality properties compared to inorganic fertilizer. “Increased electrical conductivity is one of the few negative impacts of manure,” Ozlu said.

Sampling soil greenhouse gas, soil moisture, and soil temperature in the field with the static chamber method. Photo credit Sandeep Kumar and team. The team also measured the effects of larger and smaller doses of each treatment at different soil depths. This will provide useful guidance to growers.

So, what could a backyard gardener learn from this study? Ozlu said, “I recommend gardeners use composted manure, especially in solid form, because manure is the fertilizer that supports better soil quality by improving almost all soil properties. Inorganic fertilizer is better in terms of electrical conductivity, but it does not improve other soil properties and crop yields better than manure.” Ozlu concluded, “If you think of soil as a heart, manure is the lifeblood going through it.” This is a poetic view of manure, to be sure. But perhaps this humble yet enormously useful substance deserves a little poetry.

The research is published in Soil Science Society of America Journal. This research work was partially supported by the Agricultural Experiment Station (AES) of South Dakota State University (SDSU), and the General Directorate of Agricultural Research and Policies, Ministry of Food, Agriculture, and Livestock, Republic of Turkey.

**Turning marginal farmlands into a win for farmers and ecosystems**


Many farms have areas where the ground either floods or does not retain enough water or fertilizer for crops to thrive. Such marginal lands could become useful and potentially profitable if
they are planted with perennial bioenergy crops such as shrub willow and switchgrass, report researchers this week at the annual meeting of The Geological Society of America in Indianapolis.

In a project that's been underway since 2011, researchers at Argonne National Laboratory have been studying how shrub willow and switchgrass in sandier, easily dried-out patches of land can not only control erosion, but also suck up excess fertilizer chemicals that could otherwise contaminate surface water and groundwater. Excess fertilizer nutrients can lead to a host of downstream problems including toxic algal blooms, increased costs for water treatment facilities, and the growth of the hypoxic "dead" zone in the Gulf of Mexico.

"The focus is on improving water quality," said John Quinn, a researcher at Argonne National Laboratory in Lemont, Illinois. But along the way they have found that shrub willow and grasses have other potential benefits as well, including being a source of biomass for biofuel, a resource for pollinators and other wildlife, and by providing other ecosystem services.

To conduct their study, the team, led by Cristina Negri, located marginal areas on their 6.5-hectare research farmland in east-central Illinois, using corn yield maps, GIS, and publicly available data on soil and topography to identify low productivity, high nitrate-leaching, and erosion-prone areas, explained Jules Cacho, also of Argonne National Laboratory.

They planted shrub willow as a bioenergy crop in marginal areas and then monitored their effects on soil, soil water, groundwater, and vegetation to determine how nutrients applied to the corn and soybean fields were lost to the soil water or taken up by the plants. They also kept track of changes in greenhouse gases, the diversity of insects, and the total mass of vegetation.

Their results show that since the willows were planted in 2013, the trees have significantly reduced concentrations of fertilizer nitrate in the soil water compared to the soil water in the adjacent cornfields.

"What's important about perennial crops is their deep-rooting capability," said Quinn. "They can intercept excess nitrates from corn crops. The energy grasses in particular have deep and fibrous root systems."

"What is attractive by implementing this landscape approach is that it has the potential to address multiple societal needs at once, thus beneficially intensifying land use," said Negri.

If the benefits of nitrate removal and potential bioenergy generation (from harvesting and digesting willows and grasses) are factored in, the cost of implementing the grass and shrub willows could be at least partially offset.
"It's not competing with corn," Cacho said. "If there is a local market for biomass there is economic benefit. You are not displacing any agricultural lands. You are identifying land that is not good for corn and soybeans. You are not wasting fertilizer."

The team is working with the USDA Natural Resources Conservation Service with the aim of making their integrated land management with willows and grasses an official "best management practice," which could create additional financial incentives for farmers.

Quinn will be presenting results from the project on Tuesday, 6 Nov., in a talk titled "Integrated Landscape Management for Improving Water Quality in the Midwest." The project is funded by the U.S. Department of Energy, Bioenergy Technologies Office.

**Livestock Mortality Composting Program Scheduled for December 14 in Canfield, OH**

While it’s likely not the most popular dinner table topic, a plan for dealing with mortality is something that needs addressed if you raise livestock. Composting is a viable option for various types of farms, and actually allows producers to recycle on-farm nutrients. While livestock mortality composting is similar in goal to backyard composting, it follows a different methodology and requires a more specific approach. These differences, along with facility design, area selection, operation and management will be covered in class. In Ohio, certification is required to compost livestock mortalities legally.

OSU Extension Mahoning County will be hosting Rory Lewandowski on December 14, 208 from 12P.M. to 2P.M. at the Extension office in Canfield, OH to lead the discussion. Upon completion of the program, all participants will be certified in livestock mortality composting. Cost for this program is $25/person, and registration includes lunch, LMC Book, handouts, and other materials. To register see flyer at the end of the newsletter. For more information, call 330-533-5538.

**Become certified! Certified Crop Adviser (CCA) exam registration now open**

The Certified Crop Adviser (CCA) and Certified Professional Agronomist (CPAg) programs of the American Society of Agronomy are the benchmarks of professionalism. When you become certified, you join more than 13,000 of your peers in the largest, most recognized agriculturally-oriented certification program in North America. This program’s professional standards are widely respected by industry, academia, and government and are referenced in statutes. Get
the recognition, opportunities, and respect you deserve. Exam registration is now open for the February 1, 2019 exam.

**Upcoming Events**

**Trumbull County Farmer Lunch**  
December 4, 2018 – Farm Tax Update  
January 8, 2019 – Beef Quality Assurance  
March 5, 2019 – Climate Impacts for Ohio Agriculture  
April 4, 2019 – Tillage and Soil Health

**Ashtabula County Dairy Banquet**  
March 26, 2019

**Pesticide Applicator Training Dates**  
Lake County “Early Bird” – November 8, 2018  
Trumbull County – January 16, 2019  
Geauga County – February 1, 2019  
Ashtabula County – February 28, 2019  
Geauga County “Last Chance” – March 28, 2019
To register for the Trumbull Farmer Lunch program on December 4, 2018, please complete the form below and mail with payment to OSU Extension Trumbull County, 520 West Main St, Cortland, OH 44410. Please make checks out to OSU Extension. For questions or more information call 330-638-6783, or email beers.66@osu.edu.

Recent changes to the tax code could mean big changes to your tax bill. David Marrison, OSU Extension Coshocton County, will talk about the new updates and what that means in practical terms for your farm. David will discuss the economics of crop production and financial management in times of low crop prices. Pre-registration fee is $7 if received by Dec. 1, 2018. Cost is $10 at the door. Catered hot lunch, handouts, and other materials are included in the cost. We would like to thank Farm Credit Mid-America for their sponsorship of this program.

To register for the Trumbull Farmer Lunch program on December 4, 2018, please complete the form below and mail with payment to OSU Extension Trumbull County, 520 West Main St, Cortland, OH 44410. Please make checks out to OSU Extension. For questions or more information call 330-638-6783, or email beers.66@osu.edu.

Name: ________________________________
Address: __________________________________________________________________________
City and State: _____________________ Zip Code: __________________________
Phone: ___________________________ Email: ________________________________

Number of Attendees: ______________ x $7 each = Total Enclosed _____________
Show the Extension office your Farm Bureau membership card to get your FREE test!

ONE FREE fall soil test*
OCTOBER 25 TO NOVEMBER 30, 2018

WHO SHOULD SOIL TEST
Anyone applying lime and/or fertilizer to gardens, yards, pastures, hay and crop fields, etc

WHY SHOULD YOU FALL SOIL TEST
According to OSU Extension fall is an ideal time to sample soil for several reasons:
1. Soils often have an ideal moisture range that makes sampling easy
2. It gives producers ample time to apply fertilizer or lime before the next crop
3. It helps ensure spring planting will not be delayed.

Soil testing can save you time and money but also plays an important part in water and environmental quality.

WHEN CAN YOU GET YOUR FREE TEST
October 25-November 30- During your county OSU Extension office's regular business hours

HOW DO YOU OBTAIN YOUR FREE TEST
Go to your county OSU Extension office (see front for addresses)
Show your Farm Bureau membership card (Call us for your ID number if you don't have a card)
Pick up your FREE soil test
Have Extension analyze your results if needed

QUESTIONS
Call Farm Bureau at 440.426.2195 or email us at nefarmbue@ofbf.org

PICK YOUR FREE SOIL TEST UP AT YOUR COUNTY EXTENSION OFFICE
ASHTABULA: 30 Wall Street, Jefferson, OH
GEAUGA: 14269 Claridon-Troy Road, Burton, OH
LAKE: 99 E Erie Street, Painesville, OH
TRUMBULL: 520 W Main Street, Cortland, OH
OSU Good Agricultural Practices (GAPs) Class

Thursday, November 15th
1 P.M.- 4:00 P.M.

Portage County OSU Extension
705 Oakwood St., Suite 101
Ravenna, OH 44266

An educational course that covers good agricultural practices or ‘GAPs’, which help reduce the risk of on-farm produce contamination

Topics Include:
• Water Quality
• Worker Training, Health & Hygiene
• Manure and Compost Handling
• Domestic and Wild Animals
• And More

Instructors:
• Ashley Kulhanek, OSU Extension Educator,
OSU Fruit and Vegetable Team Member
• Jacqueline Kowalski, OSU Extension Educator,
OSU Fruit and Vegetable Team Member

Sponsors:
• Ohio Agricultural Research and Development Center
• Ohio State University Extension
• Ohio State Portage County Extension

Attending the OSU GAPs class does not equate to being ‘GAPS Certified’ or fulfill the FSMA 7-hour training requirement. The class gives you the skills and knowledge to reduce on-farm food safety risks.

Preregistration is required by November 5th, 2018. Registration fee is $25/person. There must be 10 people registered in order to proceed with the training. Make checks payable to OSU Extension, and mail to Portage County OSU Extension office, 705 Oakwood St., Suite 103, Ravenna, OH 44266. If you have any questions, please call Robin Christensen at 330-296-6432 or email christensen.227@osu.edu.

Name_____________________________________ Phone:_________________________
Address: ________________________________ City/State: ___________ Zip code: ___________
County: _________________________ Email: __________________________