Hello, Northeast Ohio Counties!

Can you believe that it is the beginning of August? Finally, we received a nice break in our weather. This past weekend was perfect for drying hay. There was a lot of hay fields being baled across the region the past three days. And if they weather will hold for a few more days, even more hay will be made. Of course, it is easy to predict rain for next week as it will be Ashtabula County fair week!

As we are checking our Western Bean Cutworm traps, we have noticed corn rust and are pleased to share a nice update from Pierce Paul on this. Also now is a great time to scout soybeans for stinkbugs and aphids.

Have a great week!

David Marrison
Extension Educator
Ag & Natural Resources
Ashtabula County

Lee Beers
Extension Educator
Ag & Natural Resources
Trumbull County
Managing Corn Rust with Fungicides
By: Pierce Paul
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2017-24/managing-corn-rust-fungicides

Both southern and common rust have been confirmed in multiple corn fields across the state, but as is usually the case in Ohio, the latter is much more wide-spread than the former, and most of the affected fields are in the southern half of the state. Southern rust is characterized by the presence of small, circular, light orangish pustules predominantly on the upper surface of the leaves, whereas common rust produces larger, more elongated, and darker (cinnamon-brown) pustules on both leaf surfaces.

Most of the fields that were planted early are now between R1 (silk emergence) and late-R2 (brown silk), and as such, are less likely to be heavily impacted by rust. Common rust in particular tends to become less severe as the season progresses as it prefers cooler conditions. By contrast, late-planted fields, most of which are still between V10 and V18, are at greater risk for yield reduction due to rust. Southern rust can be very damaging if the hybrid is susceptible, symptoms develop early (before tassel), and the weather stays warm and wet during pollination and grain fill.

Under favorable conditions rust can spread very quickly on a leaf, from one leaf to another, and from one plant to the next. The rate at which it spreads is heavily dependent on the amount of spores available (blowing in from the south or from a nearby affected field) and how long it takes for each set of new pustules to produce new spores. If it stays wet and warm over the next week or so as late-planted fields approach R1, several new crops of spores will be produced, new infections will occur, and more leaves will become damaged before grain fill is complete.

Several of the commonly used foliar fungicides will provide good to excellent control of both rust diseases. However, timing is extremely important. The best results are often seen when applications are made as soon as the first few pustules are observed. This helps to reduce the rate of disease development and spread by preventing new pustules from developing and reducing the number of spores available to infect healthy leaves. Give priority to protecting the latest-planted fields as they are at the greatest risk for damage and yield loss.
Ashtabula and Trumbull Counties

Stink Bugs in Soybean
By: Kelley Tilmon & Andy Michel

As our beans start to put on pods, it’s time to start scouting for stink bugs. In 2016 a number of farmers had significant stink bug damage but didn’t realize it until harvest, when they discovered shriveled, blasted seeds. Seed damage can be prevented by scouting and treatment at appropriate threshold levels.

Northeast Ohio Agriculture

Management of Corn Diseases
Fungicide Efficacy for Control of Corn Diseases—January 2017
The Corn Disease Working Group (CDWG) has developed the following information on fungicide efficacy for control of major corn diseases in the United States. Efficacy ratings for each fungicide listed in the table were determined by field testing the materials over multiple years and locations by the members of the committee. Efficacy ratings are based upon level of disease control achieved by product, and are not necessarily reflective of yield increases obtained from product application. Efficacy depends upon proper application timing, rate, and application method to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicides were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table. Table includes systemic fungicides available that have been tested over multiple years and locations. The table is not intended to be a list of all labeled products. Efficacy categories: NR = Not Recommended, P = Poor, F = Fair, G = Good, VG = Very Good, E = Excellent, NL = Not Labeled for use against this disease; U = Unknown efficacy or insufficient data to rank product.

<table>
<thead>
<tr>
<th>Fungicide(s)</th>
<th>Class</th>
<th>Active ingredient (%)</th>
<th>Product/Trade name</th>
<th>Rate/A (fl oz)</th>
<th>Anthracnose leaf blight</th>
<th>Common rust</th>
<th>Bacterial leaf blight</th>
<th>Stem rot</th>
<th>Northern leaf spot</th>
<th>Southern rust</th>
<th>Harvest Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>QoI Streptomycin Group 1</td>
<td>Azoxystrobin 22.5%</td>
<td>Quadris 2.68 SC Multiple Generics</td>
<td>6.0 - 15.5</td>
<td>VG</td>
<td>E</td>
<td>VG</td>
<td>E</td>
<td>G</td>
<td>G</td>
<td>7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pyraclostrobin 23.6%</td>
<td>Headline 2.09 EC/SC</td>
<td>6.0 - 12.0</td>
<td>VG</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>VG</td>
<td>VG</td>
<td>7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Picloram 22.5%</td>
<td>Aproach 2.08 SC</td>
<td>3.0 - 12.0</td>
<td>VG</td>
<td>VG</td>
<td>E</td>
<td>VG</td>
<td>F-VG</td>
<td>VG</td>
<td>G</td>
<td>7 days</td>
</tr>
<tr>
<td>DMI Triazoles Group 3</td>
<td>Propiconazole 41.8%</td>
<td>Tilt 3.6 EC Multiple Generics</td>
<td>2.0 - 4.0</td>
<td>NL</td>
<td>VG</td>
<td>E</td>
<td>G</td>
<td>G</td>
<td>F-G</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prothiolane 41.0%</td>
<td>Pristine 400 SC</td>
<td>5.7</td>
<td>U</td>
<td>VG</td>
<td>E</td>
<td>U</td>
<td>VG</td>
<td>G</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tebuconazole 38.7%</td>
<td>Folicur 34.6 F Multiple Generics</td>
<td>4.0 - 6.0</td>
<td>NL</td>
<td>U</td>
<td>NL</td>
<td>U</td>
<td>VG</td>
<td>F-G</td>
<td>36 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tetraconazole 20.5%</td>
<td>Donfall 260 ME</td>
<td>4.0 - 6.0</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>E</td>
<td>U</td>
<td>G</td>
<td>R3 (milk)</td>
<td></td>
</tr>
<tr>
<td>DHN Quinone Group</td>
<td>Azoxystrobin 13.5%</td>
<td>Qual Xact 2.25 SE Multiple Generics</td>
<td>10.5 - 14.0</td>
<td>VG</td>
<td>VG-E</td>
<td>VG-E</td>
<td>E</td>
<td>VG</td>
<td>VG</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td>Benzimidazole 18.0%</td>
<td>Aspeedy 12.5%</td>
<td>Proline 11.2%</td>
<td>18.0</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG</td>
<td>E</td>
<td>7 days (A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Propiconazole 11.2%</td>
<td>Triavor A 9.83</td>
<td>11.2</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG</td>
<td>E</td>
<td>30 days (B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prothiolane 17.7%</td>
<td>Triavor B 2.2 SE</td>
<td>17.7</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Propiconazole 18.4%</td>
<td>Foltox 3.2 SC</td>
<td>18.4</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>30 days</td>
</tr>
<tr>
<td></td>
<td>Fludioxonil 16.3%</td>
<td>Preempt 3.25 SC</td>
<td>16.3</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pyraclostrobin 26.5%</td>
<td>Primo 4.17 SC</td>
<td>26.5</td>
<td>U</td>
<td>VG</td>
<td>U</td>
<td>VG</td>
<td>U</td>
<td>G</td>
<td>21 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Difenoconazole 4.5%</td>
<td>Brisk 1.02 SC</td>
<td>4.5</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>20 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tebuconazole 13.6%</td>
<td>Headline AMP 1.6 SC</td>
<td>13.6</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maxim 35 DF</td>
<td>10.0 - 14.0</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>E</td>
<td>VG-E</td>
<td>VG</td>
<td>7 days</td>
</tr>
</tbody>
</table>

1Additional fungicides are labeled for disease on corn, including contact fungicides such as chlorothalonil. Certain fungicides may be available for diseases not listed in the table, including Gibberella, Fusarium ear rot.
2Harvest restrictions are listed for field corn harvested for grain. Restrictions may vary for other types of corn (sweet, seed or popcorn, etc.), and corn for other uses such as forage or fodder. Many products have specific use restrictions about the amount of active ingredient that can be applied within a period of time or the amount of sequential applications that can occur. Please read and follow all specific use restrictions prior to fungicide use. This information is provided only as a guide. It is the responsibility of the pesticide applicator by law to read and follow all current label directions. Reference to products in this publication is not intended to be an endorsement to the exclusion of others that may be similar. Persons using such products assume responsibility for their use in accordance with current directions of the manufacturer. Members or participants in the CDWG assume no liability resulting from the use of these products.

Stink bugs: Stink bugs commonly encountered in soybean; green stink bug, Acrosternum hilare [adult and nymph, first two from left], brown stink bug, Euschistus servus [adult and nymph, 3rd and 4th from left, respectively], spined soldier bug, Podisus maculiventris [adult, last one from left]. Not to scale. (Photos Marlin E. Rodie)

Northeast Ohio Agriculture

Ohio State University Extension
Ashtabula and Trumbull Counties
There are several species of stink bugs that can be found in soybean, even beneficials. These include the green, the brown, the red shouldered and the brown marmorated stink bug. The spined soldier bug looks similar to the brown stink bug, but has sharper points on its shoulders, and is more brown on the underside (the brown stink bug is actually more green underneath). Both nymphs (immatures) and adults feed on the developing seed by using their piercing/sucking mouthparts to poke through the pod. Seed that is fed upon will take a flat or shriveled appearance.

Often this damage is not seen until harvest time, because the pod usually retains its shape, despite the smaller seed. Therefore it is important to scout early and control if necessary. Most insecticides labeled for soybean include stink bugs on the label, and most are adequately effective. Keep in mind it is easier to kill immatures than adults. To sample for stink bugs, take multiple 10-sweep samples with a sweep net in multiple locations throughout the field. Average the number of stink bugs in the 10-sweep samples. The threshold to treat is 4 or more stink bugs (adults and nymphs combined). If soybeans are being grown for seed, the threshold can be dropped to 2 or more stink bugs.

**Mahoning County Farm Management and Technology Field Day**

Join us August 9 for a Farm Management and Technology Field day!

Speakers Eric Romich and Clif Little, OSU Extension, will focus on topics such as solar and wind technology, along with current practices in energy efficiency. They will cover the financial side of things as well, and will show how technology can be beneficial to both small and large farms. Farm management plans will also be a topic of discussion. Eric Romich will demonstrate the Mobile Solar Unit. The unit consists of a 140 watt Photovoltaic (PV) solar panel, charge controller, battery back-up system, 2000 watt inverter and safety disconnects. All of the components are built into a four-wheeled cart (about the size of a grocery cart).

This field day will be held August 9 at the Ward Campbell Farm, located at 11440 Palmyra Road, North Jackson, OH. We'll begin with registration at 9:30am and finish by 1:30pm with lunch provided. Registration is $5 per person, which covers the cost of lunch and handouts.

**FLYER & DETAILS:** [http://go.osu.edu/farmtechnology](http://go.osu.edu/farmtechnology)
Register by calling the Mahoning County Extension Office at 330-533-5538.

We hope to see you there!
The Dicamba Situation – Assessment and Some Action Items

By: Mark Loux
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2017-24/dicamba-situation-%E2%80%93-assessment-and-some-action-items

We have had the opportunity to walk additional Ohio fields where soybeans were damaged by off-target movement of dicamba since our last C.O.R.N. newsletter article on this subject (see link below), and we continue to hear about even more affected fields. This situation continues to develop across the Midwest and South, and everyone involved is trying to assess causes and what these mean for future use. A couple of action items here for anyone associated with an off-target dicamba movement and injury situation:

- Take the time to report the problem to Monsanto (XtendiMax), BASF (Engenia), or DuPont FeXapan) so that they create a record of it. The compilation of these records has to be reported by companies back to regulatory agencies, which provides the agencies with information on how extensive the issues are. Reporting to the companies does not result in specific information being provided to ODA, or any further regulatory action or investigation by ODA. This also allows the three companies to investigate and get an assessment of causes of off-target movement. While affected growers may not receive the desired resolution or satisfaction from company investigations, there is still value in reporting with regard to broader resolution of the issue.

- Where possible, we would encourage reporting off-target dicamba situations to ODA also. This provides ODA with needed information on how extensive any problems are and what possible causes are. This is the basis for an official record specific to Ohio, that allows ODA to follow up with companies and/or EPA to determine whether revisions to labels, registrations, etc are needed here. Our experience is that affected parties do not necessarily want to subject their neighbors to investigation, especially given that problems may have occurred even where labels were followed. But this would be helpful in the end. Legally, applicators are required to notify ODA if anyone informs them that their application caused damage in excess of $500.00.

What follows is a rough assessment of dicamba issues here in Ohio, based on a limited number of farm visits and reports from people around the state, and a few things to think about as seed orders are placed and weed control programs for next year are planned.

1. No one wants a repeat of this year’s problems next year, and we have to assume that there will be some modifications of dicamba product labels and restrictions prior to the 2018 growing season. Purchasing Xtend seed with an assumption that the approved dicamba products can be applied in 2018 per the 2017 labels may be an erroneous conclusion. We have no idea what will happen here – just be aware of this. In our recent field investigations of dicamba problems, one message we received from the affected parties was along these lines – “while we realize that there can be hiccups with new technology, please pass on to the appropriate regulatory agencies that this is not an acceptable situation (and also implied I think was – “we expect it to
be resolved before next year"). Message received and sent on. Monsanto, BASF, and DuPont – consider yourselves notified also.

2. As far as we know, off-target issues in Ohio have occurred only for postemergence applications of dicamba, in spite of a fair amount of preplant/preemergence use. We have to assume also that the lower number of official complaints in Ohio compared with states to the west and south of us is due at least in part to less frequent postemergence use here. Among other reasons for less risk when used preplant vs postemergence, including possibly lower temperatures and less frequent inversions, there is simply not as much emerged sensitive vegetation early in the season to damage should dicamba move off-target. While off-target movement this year seems to be causing injury only to non Xtend soybeans so far, there is certainly potential for damage to any other sensitive vegetation that is close enough – gardens, vineyards, orchards, etc. The apparent unpredictability of off-target movement this year for postemergence applications indicates to us the probability of damage in the future to something with way more value per acre than soybeans. We state this really just to reiterate that there is less risk to using dicamba early in the season, where it does have substantial value still for burndown of glyphosate-resistant marestail and ragweeds.

3. The “elephant in the room” for this entire situation has to do with the causes of off-target movement and injury, and the role of volatility. Causes of injury can include contaminated spray equipment from a previous application, addition of the wrong product during mixing, spray particle drift from an adjacent field due to wind during application, movement from a nearby treated field due to application during an inversion, or volatilization of dicamba from a nearby treated field sometime following application. Differences in patterns between particle drift and volatility were covered in the previous C.O.R.N. article linked below. It’s likely that there are examples of every one of these somewhere across the region. Based on the distances of dicamba movement and patterns of injury, weed scientists are concluding that post-application volatilization of approved dicamba products is likely one of the major causes, and our experience here in Ohio would support this conclusion (and some of this volatility could be due to use of unapproved dicamba of course). Applicators should be aware that current label guidelines address only controllable application parameters, and weather conditions the day of application, but do not address conditions that could affect the risk of volatility following application. Volatility is much less predictable and less controllable than the other causes listed here anyway. We should also mention that so far there is apparently no recognition of the probable role of volatility by the companies selling approved dicamba products – something good to know in the event you report a problem and have a conversation with them.

4. During farm visits in northwest Ohio last week, it appeared that dicamba seems to be moving from treated fields with runoff water also, and causing injury to sensitive soybeans at the destination of that runoff. We observed this on a small scale – water moving/ponding between two adjacent fields (one Xtend soybeans and one not). We also observed it on a larger scale, where a field next to a drainage ditch that drained several miles of cropland was flooded from that ditch and then developed dicamba injury. In the latter case one could probably conclude that there were multiple dicamba-treated fields upstream, which contributed runoff water to the
ditch. It may be a wetter than average year in northwest Ohio, but the nature of the soils and drainage there would lead one to predict future occurrences.

Some links that may be of interest:


https://www.bna.com/scientists-say-left-n73014462267/?amp=true


https://agcrops.osu.edu/newsletter/corn-newsletter/2017-21/it's-beginning-look-lot---target-dicamba-movement-----our-favorite

2017 Ohio Wheat Performance Test Data Available
By: Author(s): Laura Lindsey & Matthew Hankinson
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2017-24/2017-ohio-wheat-performance-test-data-available

The 2017 Ohio Wheat Performance Test data are now available online as sortable tables at: http://www.oardc.ohio-state.edu/wheattrials/ and as a printable pdf.

The purpose of the Ohio Wheat Performance Test is to evaluate wheat varieties, blends, brands, and breeding lines for yield, grain quality, and other important performance characteristics. This information gives wheat producers comparative information for selecting the varieties best suited for their production system and market. Varieties differ in yield potential, winter hardiness, maturity, standability, disease and insect resistance, and other agronomic characteristics. Selection should be based on performance from multiple test sites and years.

In fall 2016, wheat was planted at three out of the five locations within two weeks of the fly-free date. Wheat was planted 17 and 15 days after the fly-free date at the Wood County and Wayne County locations, respectively, due to 1.3-1.4 inch of rainfall between September 26 and October 3. Slightly above average temperatures through December promoted early growth, and wheat entered dormancy in good to excellent condition. Wheat growth and development were a week to ten days earlier than normal due to above average temperatures in March and April. Generally, harvest conditions were favorable and earlier than normal. Overall, grain test weight averaged 56.0 lb/bu (compared to an average test weight of 58.4 lb/bu in 2016). Grain yield averaged between 87.1 and 109.1 bu/acre at the five locations.
Farm Science Review Tickets Available
OSU Extension is pleased to announce that Advance tickets for the Farm Science Review are available at all Ohio State University Extension county offices for $7. This year’s Farm Science Review will be held at the Molly Caren Agricultural Center in London, Ohio on September 19-21, 2017. Tickets are $10 at the gate; however presale tickets can be purchased at your local OSU Extension for $7 per ticket through Monday, September 18, 2017. Children 5 and under are admitted free. The review hours are 8:00 a.m. to 5:00 p.m. on September 19 & 20 and from 8:00 a.m. to 4:00 p.m. on September 21.

Farm Science Review is known as Ohio’s premier agricultural event and typically draws more than 130,000 farmers, growers, producers and agricultural enthusiasts from across the U.S. and Canada annually. Participants are able to peruse 4,000 product lines from roughly 620 commercial exhibitors and engage in over 180 educational workshops, presentations and demonstrations delivered by experts from OSU Extension and the Ohio Agricultural Research and Development Center. More information about the Farm Science Review is at http://fsr.osu.edu

Western Bean Cutworm Trap Update for Northeast Ohio

The number of Western Bean Cutworm moths caught across the region spiked back up this week in Ashtabula and Trumbull counties. We will continue to update you weekly on the trap counts we are finding in our corn fields here in the newsletter.

<table>
<thead>
<tr>
<th>Location</th>
<th>Corn Stage</th>
<th>Weekly Count</th>
<th>Season Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conneaut, OH</td>
<td>R1</td>
<td>22</td>
<td>193</td>
</tr>
<tr>
<td>Kingsville, OH</td>
<td>V4-V5</td>
<td>46</td>
<td>100</td>
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<tr>
<td>Saybrook, OH</td>
<td>R1</td>
<td>145</td>
<td>478</td>
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<tr>
<td>New Lyme, OH</td>
<td>R1</td>
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<td>48</td>
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<td>Burton</td>
<td>VT</td>
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<tr>
<td>Huntsburg</td>
<td>R1</td>
<td>40</td>
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<tr>
<td>Montville</td>
<td>R3</td>
<td>39</td>
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<tr>
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<tr>
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<td>Fowler</td>
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<td>8</td>
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<tr>
<td>Kinsman</td>
<td>R1</td>
<td>32</td>
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Robert Spellman Memorial Program Applications Being Taken

This program is to help a hardworking 4-H youth or FFA member whom shows strong leadership and pride with their steer project that will be exhibited at the 2018 Ashtabula County Fair. The family of Robert Spellman is sponsoring the program in memory of his strong passion for supporting the beef industry. He served as the chairman of the Beef Cattle Department for 25 years and he worked diligently to attract open class beef exhibitors to participate in the fair. Bob Spellman dedicated his life to helping others and will always be remembered for his hard work and love for the Ashtabula County Fair. He actively served for 28 years as a director. Bob Spellman passed away on October 5, 2015 and he will be long remembered and greatly missed.

The $400 award can be used by the youth to help purchase their calf or for equipment needed for their steer project. Anyone enrolled in an approved Ashtabula County 4-H Club or is a member of a FFA Chapter in Ashtabula County is eligible to apply. The calf must be exhibited at the fair (not Carcass show). If the youth does not exhibit a steer at the 2018 Ashtabula County Junior Fair show, they agree to pay the $400 back to the program fund. Interested youths should have their completed application returned to Robert and Kristen Brown at 5214 Hall Road, Dorset, Ohio 44032 by Monday August 7th. Any questions regarding the application can be directed to Kristen Brown (440) 645-9081. The recipient will be announced during the Steer Show at the Ashtabula County Fair. Applications can be obtained by calling the Ashtabula County Extension office or accessed at: http://go.osu.edu/ne-events

David’s Weekly News Column

Hello, Ashtabula County! We are one week from the county fair! This is the time of year that our office phones explode with home gardening questions and fair questions alike! During the past week, we received a number of calls on squash plant troubles. Today, I would like to share details on two of these issues, the squash bug and powdery mildew.

Squash, pumpkin, and cucumber growers may be seeing a spike in powdery mildew infection on their plants. In fact, as I was rummaging to pick a zucchini last Friday, I noticed the tell-tale signs of mildew showing up in my garden. Powdery mildew infects all cucurbits, including muskmelons, squash, cucumbers, gourds, watermelons, and pumpkins. In severe cases, powdery mildew can cause the premature death of leaves and reduce yield and fruit quality.

Our vegetable disease specialist, Dr. Sally Miller reports the fungus that causes cucurbit powdery

Northeast Ohio Agriculture

OHIO STATE UNIVERSITY EXTENSION
Ashtabula and Trumbull Counties
mildew does not overwinter in Ohio, so the disease does not appear until spores arrive on wind currents from warmer growing areas. Powdery mildew infections are favored by humid conditions with temperatures around 68-81F.

So what should I look for? Signs of infection are small circular powdery growths (mycelium and spores of the pathogen) on either side of the leaf. These spots enlarge and can eventually cover most of the leaf surface and kill the leaves. When the majority of the foliage is infected, the plant is weakened and the fruit ripens prematurely.

So how can I control it? Scouting is the main way! Don’t wait until the plants are dead to look at them! It is recommended that at least once a week examine 5 mature leaves for powdery mildew infection. Powdery mildew is primarily managed by using fungicides. Home gardeners can apply sulfur products to both the upper and lower surface of the leaves. It is important to apply fungicides when the disease first appears and incidence is low.

Gardeners should also select cultivars which have complete or partial resistance to powdery mildew. Provide good air movement around plants through proper spacing, stake of plants and keep weeds under control. Gardeners should also pull up and remove all plant debris at the end of the season. Our friends at the University of Minnesota have an excellent fact sheet on this disease and it can be found at: http://www.extension.umn.edu/garden/yard-garden/vegetables/diseases-of-cucurbits/powdery-mildew/

Keith Palmer from Cherry Valley also alerted me last week to an insect problem that gardeners should also be on the watch for. Keith sent me pictures of brown eggs he found on his squash. These eggs were of the Squash Bug.

Squash bugs overwinter as adults under plant debris, soil clods, rocks, log piles, and buildings. Adults are sneaky and they love hiding on plants or in mulch. The adults lay numerous egg clusters primarily on the underside of the leaves.

Young nymphs in dense clusters will be easily detectable because of vivid red legs. These nymphs usually feed on shaded undersides of plants. They suck plant sap while secreting highly toxic saliva into the leaves, stems, or fruit. Feeding on leaves produces small white dots, or stiples, and leaves will eventually appear tattered. Large numbers of squash bugs will cause leaves to yellow and die. In mid-summer it is common to see eggs, nymphs, and adults all at the same time.

Excessive damage can affect plant growth and yield can be significantly reduced. So what can I do? Neem, horticultural oil, and insecticidal soaps are effective when sprayed directly on nymphs. The adults may be difficult to kill as they hide. But gardeners can trap them by placing boards near host plants under which they will hide. Lift boards and destroy bugs in the morning.
Gardeners should also remove all plant debris at the end of the growing season. Also, it is recommended that gardeners select cultivars of summer and winter squash that are resistant to squash bugs.

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For gardeners looking for help on their gardening diagnostics, the Master Gardeners are conducting their hotline on Monday afternoons from 1:00 to 4:00 p.m. and on Thursdays from 9:00 a.m. to 12:00 noon. They are glad to help you with your gardening problems! Our office will be closed during the Ashtabula County fair but you can talk to the Master Gardeners in Floral Building at the fair as they assist with the floral show.

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To close, I would like to share a quote from the English Poet, Alfred Austin, who stated, “There is no gardening without humility. Nature is constantly sending even its oldest scholars to the bottom of the class for some egregious blunder.” Have a good and safe day.

**Upcoming Extension Program Dates**

The following programs have been scheduled for Northeast Ohio farmers. Complete registration flyers can be found at: [http://ashtabula.osu.edu/program-areas/agriculture-and-natural-resources/upcoming-educational-programs-deadlines](http://ashtabula.osu.edu/program-areas/agriculture-and-natural-resources/upcoming-educational-programs-deadlines)

**Fertilizer Certification Sessions**
August 17 at Trumbull County Extension Office from 6:00 to 9:00 p.m.
September 14 at Geauga County Extension Office from 1:00 to 4:00 p.m.

**2017 Ashtabula County Beef Banquet**
Saturday, November 11, 2017

**Private Pesticide Applicator Recertification Sessions**
November 16, 2017 from 1:00 to 4:00 p.m. in Lake County
January 12, 2018 from 9:00 to 12:00 noon in Ashtabula County
February 2, 2018 from 1:00 to 4:00 p.m. in Geauga County
February 9, 2018 from 9:00 to 12:00 noon in Portage County
March 9, 2018 from 9:00 to 12:00 noon in Trumbull County

**2018 Northeast Ohio Winter Agronomy School**
Wednesday February 21, 2018

**21st Annual Joe Bodnar Memorial Northern Classic Steer & Heifer Show**
Saturday, April 21, 2018
David Marrison
Ashtabula County Extension Office
39 Wall Street
Jefferson, OH 44047
440-576-9008
marrison.2@osu.edu
ashtabula.osu.edu

Lee Beers
Trumbull County Extension Office
520 West Main Street
Cortland, OH 44410
330-638-6783
beers.66@osu.edu
trumbull.osu.edu
Farm Management and Technology

Have you ever wondered how you could integrate technology into your farm? Or maybe how you could best manage your farm? If you answered yes, or are curious about new technologies and practices, this field day is for you!

Speakers: Eric Romich, OSU Extension
Clif Little, OSU Extension

Wednesday, August 9
10 a.m. – 1:30 p.m.

Hosted By: Ward Campbell Farm
11440 Palmyra Rd., North Jackson
OH 44451

Cost: $5/person
Contact: 330-533-5538

REGISTRATION INFORMATION. Registration includes the program, lunch, and handouts. Please mail to 490 S. Broad St. Canfield, OH 44406, fax (330-533-2424), or drop off the registration to the OSU Extension Office.

Name: ___________________________________________
Address: _________________________________________
Email: ___________________________________________ Phone: ________________________________
Number Attending (x $5): ___________________________ Amount Enclosed: _______________________

mahoning.osu.edu