

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES**July 17, 2019 Issue**

Pasture Walk Slated for July 30
Coshocton County Women in
Agriculture Dinner Program- Aug 6
First Farm Friday Slated for Aug 2
Sudden Oak Death Confirmed in
Ohio
What is Sudden Oak Death?
Another Hot Week
Farm Animals Need to Keep Cool
During Heat Waves Too
Hay Quality 2019: It's Déjà vu All
Staging Corn Development in 2019
Western Bean Cutworm: Numbers
Starting to Increase
Big Tree Contest Entry Deadline
Nears

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Hello Coshocton County! The “Dog Days of Summer” are upon us. While rain is passing through today, it looks like a heat wave will hit us hard this weekend. Make sure to alter your schedule to avoid heavy tasks during the hottest parts of the day, take frequent breaks, and stay hydrated. I am including in today’s newsletter a nice article from a counterpart in Wisconsin which provides tips on keeping animals comfortable during this stretch of hot weather.

A lot of hay has been made here in July. I highly recommended that you pull a nutritional analysis on your hay (see hay quality article). This will help you better balance diets for livestock this winter. We had some issues with beef cattle during this past winter due to poorer quality hay and expect some challenges again when we feed this year’s hay. A hay test will be money well spent.

Sudden Oak Death has been detected in Ohio and a recall was announced yesterday by the Ohio Department of Agriculture for rhododendrons purchased from Walmart and Rural King this spring. Rhododendrons and lilacs are alternate hosts for this disease, which has the potential to impact our oak trees. Two articles are included to help you learn more about this disease.

Today’s newsletter letter also includes information on some upcoming events. I hope to see you at the Pasture Walk, Women in Ag dinner or at First Farm Friday. All should be great events. Stay cool, stay hydrated and have a great week.

Sincerely,

David Marrison

Coshocton County OSU Extension ANR Educator



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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Pasture Walk Slated for July 30

Area beef producers will want to set aside time on Tuesday evening, July 30 to attend a **Pasture Walk** in the southwest portion of Coshocton County at the Travis and Jenna Gregorich farm located at 17097 State Route 60. This will be a great chance for beef producers to learn how to identify pasture grasses and legumes, how to design grazing paddocks and how to develop springs for water sources. This pasture walk will begin at 6:30 p.m. and directional signs will be posted to help attendees find the farm. Reservations are not required and there is no cost for attendance. This pasture walk is being sponsored by the Coshocton Soil & Water Conservation District, the Natural Resources Conservation Service and OSU Extension. More information about this pasture walk can be obtained by calling the Coshocton Soil & Water Conservation District at 740-622-8087 ext 4 or by emailing samanthapriest@coshoctoncounty.net. Another pasture walk is also being planned for August 27 at the Don Brown farm.

Coshocton County Women in Agriculture Dinner Program – August 6

By Emily Marrison, Extension Educator

Ohio State University Extension Coshocton County will host a Women in Agriculture Dinner on Tuesday, August 6 from 6:00 - 8:00 PM at Raven's Glenn Winery (56183 Co Rd 143, West Lafayette). Interested participants are invited to join other area women for an evening of learning, networking, idea sharing and a delicious meal. The theme for the evening will be **"Managing Agriculture's Topsy-turvy Ride."** Program participants will learn about the current influences on agriculture markets, tools for decision making, and strategies to cope with the stresses of agricultural life. The cost to register is \$20, which includes the meal and program. To register please mail in the registration form that can be found at coshocton.osu.edu or visit the Coshocton County Extension office in the County Services Building. Please register by August 2. For more information on the Ohio Women in Agriculture Program visit u.osu.edu/ohwomeninag.

First Farm Friday Slated for August 2

One great event slated for August is **First Farm Friday** which will be held on Main Street in Coshocton on Friday, August 2 from 5:00 to 7:30 p.m. The goal of First FARM Friday is to be a fun, educational event that helps the general public understand the importance of agriculture in our community and beyond. Visit one of our many displays, climb into farm machinery, and get up close to farm animals. Bring the kids to complete a stamp card and receive a free cup of custard from Whit's Frozen Custard. They will also have fun at the pedal tractor course that winds through some of the farm machinery.

Do you have a question for a local farmer? At First FARM Friday, you can talk to the individuals that have farm machinery or animals at the event. They volunteer their time for this event to help further understanding about this important industry. This event is spearheaded by our friends from the Coshocton Soil & Water Conservation and there will be interactive displays from over 20 different agricultural organizations, agencies and farms.

Sudden Oak Death Confirmed in Ohio

By: Shelby Croft, (614) 752-9817, shelby.croft@agri.ohio.gov

Source: Ohio Department of Agriculture

The Ohio Department of Agriculture (ODA), in coordination with USDA Animal and Plant Health Inspection Service (USDA-APHIS), has detected sudden oak death caused by *Phytophthora ramorum* on rhododendron plants shipped to Walmart and Rural King stores throughout the state. Both retailers have agreed to initiate a voluntary recall of plants from their stores.

It was recently confirmed that Ohio is one of several Midwest states that have received infected plant material. Approximately 1,600 rhododendron plants from the infected nursery were shipped to Ohio retailers. This shipment went to at least 17 other states.

Gardeners and homeowners who have recently purchased a rhododendron from Walmart or Rural King should monitor the plant for signs of disease, including leaf spots and shoot dieback. It is also advised that Ohioans who purchased rhododendrons or lilac plants from these stores between March and May of this year to dispose of them to prevent further spread of the disease. Plants can be destroyed by burning, deep burial or double-bagging the plant, including the root ball, in heavy duty trash bags for disposal into a sanitary landfill (where allowable). Consumers should not compost or dispose of the plant material in municipal yard waste. Garden tools used on any affected plants should be sanitized with bleach or 91% (or higher) alcohol before they are used again.



If you have any questions about *Phytophthora ramorum* you are welcome to contact the Division of Plant Health by email at plantpest@agri.ohio.gov or 614-728-6406. OSU has an excellent factsheet on Sudden Oak Death and it can be obtained by calling the Coshocton County Extension office at 740-622-2265 or at: <https://ohioline.osu.edu/factsheet/plpath-tree-05> This factsheet can also be read in the following article.

What is Sudden Oak Death?

Nathan M. Kleczewski, Dennis Lewandowski, and Pierluigi (Enrico) Bonello, Department of Plant Pathology

Source: <https://ohioline.osu.edu/factsheet/plpath-tree-05>

This article is from the above OSU Extension Factsheet

Sudden Oak Death (aka Ramorum blight) is a disease caused by the oomycete pathogen *Phytophthora ramorum* that was discovered in central-coastal California in 1995. This pathogen had been known to cause disease in nurseries and gardens since 1993, but was largely ignored until the organism was discovered in the United States.

The disease causes extensive mortality on tanoak (*Notholithocarpus densiflorus*), coastal live oak (*Quercus agrifolia*), California black oak (*Quercus kelloggii*), and Shreve oak (*Quercus parvula* var. *shrevei*). On these and other oak species, *P. ramorum* produces cankers that exude reddish liquid and are usually referred to as bleeding cankers. *P. ramorum* also causes non-fatal infections including stem cankers, twig dieback, and leaf blighting on numerous other hosts, including many popular ornamentals (Table 1). These other hosts can serve as major sources of disease spread and long distance transfer of the pathogen.

Contaminated nursery stock from a west coast nursery was distributed throughout the United States in 2004. Since that time, government funded surveys of nurseries that received contaminated stock and nearby forest sites have been carried out in hopes of preventing or detecting outbreaks of this disease into Midwestern forests, which include numerous susceptible oak species and other hosts. In addition, nurseries in California, Oregon, and Washington that ship ornamental stock interstate are required to be inspected and found to be free of *P. ramorum*. Infected individuals are immediately destroyed to eradicate the pathogen and the nursery is placed under quarantine.

Although *P. ramorum* may have the potential to cause widespread oak death in all forests, it is important to note that the pathogen may be limited by other factors such as the environment, and therefore may never be able to become established or persist long enough to cause the disease in Midwestern forests. To date, *P. ramorum* has not been detected in Midwestern or eastern forests, but measures to prevent its spread continue.

Pathogen and Symptoms

Unlike many *Phytophthora* species, which infect hosts through soil and water, *P. ramorum* also infects hosts aerially. Reproduction occurs asexually through the production of sporangia, zoospores, and chlamydospores. Sporangia are oval, papillate, 40–90 µm in length and serve as the source of primary inoculum. Sporangia are

produced from foliar lesions and are wind blown to susceptible hosts, where they infect aboveground portions directly or produce motile zoospores that spread in soil and water. Zoospores also infect foliage given proper environmental conditions. Chlamydospores also are produced on foliar lesions and serve as resting structures for the organism.

Infection of oak stems and trunks may result from the accumulation of infectious propagules in the water or soil, although this has not yet been proven. As the pathogen colonizes the phloem, a sticky, reddish sap exudes from the bark that is characteristic of this disease (Figure 3). Foliar infection of true oaks is not known to occur. *P. ramorum* requires two mating types to produce the sexual reproductive structure, the oospore, which has yet to be observed in the field. Symptoms on other hosts often consist of diffuse, water-soaked leaf lesions (Figure 4). Infected leaves may drop off soon thereafter. Infection usually moves from the petiole down to the twig, and may result in blighting or wilting. Optimal growth for *P. ramorum* occurs in wet environments with mild to moderate temperatures (18°–22°C). Sporangia production occurs during rainy periods.

It is important to note that other *Phytophthora* species and pathogens can infect plants and cause similar symptoms. In addition, abiotic conditions, such as fertilizer burn, sun scorch, and root damage may lead to foliar symptoms that resemble those of *P. ramorum*, particularly in the nursery.



Figure 3. Reddish ooze characteristic of susceptible oaks infected by *P. ramorum*. Photo by Steve Oak.



Figure 4. Water soaked and necrotic lesions on a rhododendron, a major foliar host for *P. ramorum*. Photo by Steve Oak.

Prevention

The most cost effective and practical management strategy for controlling *P. ramorum* in nurseries is to make certain that incoming stock has been certified to be clean of *P. ramorum*. Workers and staff should also be aware of the pathogen, its symptoms, and hosts so that authorities can be alerted if this disease is noticed in the nursery.

Susceptible nursery stock should be checked regularly for symptoms, especially following periods of heavy rain. Personnel should be trained to recognize symptoms of *P. ramorum* and other mimics. Suspect stock should be carefully examined for other possible causes of disease. Scouting of nearby forests should occur if suitable hosts are present. Infected plants should be removed immediately, with the surrounding litter layer and soil being removed during cooler periods when the pathogen is least active or dormant. Nearby hosts should also be destroyed.

Table 1. APHIS list of proven hosts regulated for *P. ramorum* as of March 3, 2008. For an updated list visit: www.aphis.usda.gov/plant_health/plant_pest_info/pram/ (accessed on April 25, 2008)

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer macrophyllum</i>	Bigleaf maple	<i>Lonicera hispidula</i>	California honeysuckle
<i>A. pseudoplatanus</i>	Planetree maple	<i>Laurus nobilis</i>	Bay laurel
<i>Adiantum aleuticum</i>	Western maidenhair fern	<i>Magnolia doltsopa</i>	Michelia
<i>A. jordanii</i>	California maidenhair fern	<i>Maianthemum racemosum</i>	False solomon's seal
<i>Aesculus californica</i>	California buckeye	<i>Parrotia persica</i>	Persian ironwood
<i>A. hippocastanum</i>	Horse chestnut	<i>Photinia fraseri</i>	Red tip photinia
<i>Arbutus menziesii</i>	Madrone	<i>Pieris spp.</i>	Pieris—all species
<i>Arctostaphylos manzanita</i>	Manzanita	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas fir
<i>Calluna vulgaris</i>	Scotch heather	<i>Quercus agrifolia</i>	Coast live oak
<i>Camellia spp.</i>	Camellia—all species	<i>Q. cerris</i>	European turkey oak
<i>Castanea sativa</i>	Sweet chestnut	<i>Q. chrysolepis</i>	Canyon live oak
<i>Fagus sylvatica</i>	European beech	<i>Q. falcata</i>	Southern red oak
<i>Frangula purshiana</i>	Cascara	<i>Q. ilex</i>	Holm oak
<i>Fraxinus excelsior</i>	European ash	<i>Q. kelloggii</i>	California black oak
<i>Griselinia littoralis</i>	Griselinia	<i>Q. parvula</i> var. <i>shrevei</i>	Shreve oak
<i>Hamamelis virginiana</i>	Witch hazel	<i>Rhododendron spp.</i>	Rhododendron—all species
<i>Heteromeles arbutifolia</i>	Toyon	<i>Rosa gymnocarpa</i>	Wood rose
<i>Kalmia spp.</i>	Mountain laurel—all species	<i>Salix caprea</i>	Goat willow
<i>Lithocarpus densiflorus</i>	Tanoak	<i>Sequoia sempervirens</i>	Coast redwood

Cultural Practices

It follows from above that proper sanitation of all equipment, boots, car tires, and tools should be maintained to prevent pathogen spread. Injuries to oaks and other hosts and soil movement should be avoided. Nursery water should be monitored for presence of the pathogen, and excessive watering and overhead irrigation should be avoided. Nursery stock should be positioned away from low-lying areas to limit proliferation and spread of the pathogen in standing water and arranged in a fashion that promotes proper airflow. Fertilization may also favor infection by this pathogen and should be used sparingly. If plants are propagated in the nursery, cuttings should be made from disease-free plants and grown in disinfected pots. Any plant material that may be or has been symptomatic should be collected and either composted or burned to eradicate the pathogen. Boots, tools, and car tires should be washed and disinfected with bleach or Lysol when working in areas known to be infested with *P. ramorum*.

Landscape

Any confirmed infected landscape plants must be immediately isolated and destroyed according to federal regulations. Confirmation of infection can only be performed by federal and state laboratories, or authorized university disease clinics and research laboratories, such as the C. Wayne Ellett Plant and Pest Diagnostic Clinic at The Ohio State University.

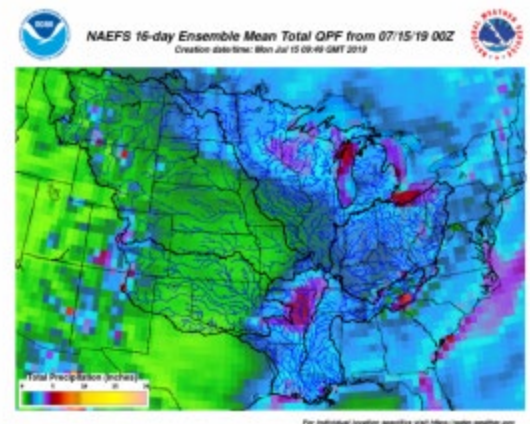
Another Hot Week

By: Jim Noel

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-22/another-hot-week>

Another hot week before a trend toward normal. This week will be marked by hot and humid conditions with rains later Tuesday into Wednesday from the remnants of Barry. Most places will likely see 0.50-1.00 inches but even with Barry going by the rainfall will be highly variable with some areas getting less than 0.50 inches and others getting over 2.00 inches.

It appears the hottest weather this summer will move through starting Thursday through Sunday with highs in the 90s and lows in the 70s. Heat Index values during the upcoming heatwave will top 100 degrees. You can monitor all NOAA/NWS watches, warnings and advisories at <https://www.weather.gov/>



Temperatures are forecast to relax closer to normal starting the last full week in July into the first half of August. Temperatures are forecast to relax to slightly above normal from the end of July into the first half of August due to night-time temperatures staying above normal.

You can see the latest 6-10 day, 8-14 day and week 3/4 outlooks from the NOAA/NWS Climate Prediction Center at <https://www.cpc.ncep.noaa.gov/>

July 16-21 - Temperatures = +6 to +10 (much above)
Rainfall = 0.5-1.0 on average (near normal)
Heat Index = 90-100+ (much above)

July 22-28 - Temperatures = 0 to +2 (near normal)
Rainfall = 0.25-0.75 on average (below)
Heat Index = (normal to below normal)

Week 3-4 - (First Half of August)

Temperatures slightly above normal

<https://www.cpc.ncep.noaa.gov/products/predictions/WK34/gifs/WK34temp.gif>

Rainfall near normal

<https://www.cpc.ncep.noaa.gov/products/predictions/WK34/gifs/WK34prcp.gif>

The 16-day rainfall total is forecast to average 1-2 inches which is normal to slightly drier than normal. Much of the rain in the next two weeks will depend on the remnants of Barry this week.

Farm Animals Need to Keep Cool During Heat Waves Too

Bill Halfman is an agricultural agent for the University of Wisconsin-Extension Monroe County

Source: <https://www.wiscontext.org/farm-animals-need-keep-cool-during-heat-waves-too>

Originally Published: July 22, 2016

Hot weather and a high heat index are a challenge for farmers each summer. During heat waves, farmers need to take precautions for their animals to minimize the risk of injury and sickness from prolonged exposure to high temperatures and humidity.

When it comes to the business of farming, heat stress can lead to a reduction in animal performance and efficiency. Reduced milk production and an increased risk to disease among dairy cows is a good example of this issue. Therefore, farmers implement a variety management practices to reduce the effects of high heat, to help ensure the health of the animals and produce safe, wholesome food for consumers.

Providing shade, air and water are the three most important components for helping keep animals comfortable during hot weather.

Shade is a critical component to helping animals cope with hot, sunny conditions. Some farmers keep their livestock inside well-ventilated buildings during the day and allow the animals to only go outside at night when it is cooler. But buildings are not the only source of shade for animals. Other ways to provide shade include suspending shade cloth and or panels in areas that the animals can access.

Providing adequate ventilation is also key to helping keep animals cool. Newer farm buildings that house livestock are designed to circulate plenty of fresh air through them. Some examples include curtain-sided buildings and higher velocity fans. And improved ventilation systems are commonly retrofitted into older buildings.

Water is the third critical component for reducing heat stress in livestock. In addition to providing plenty of fresh clean water for animals to drink, farmers often use sprinkler systems to wet them down. The idea is to take advantage of evaporative cooling to help keep animals' body temperatures lower.

In addition to the housing, ventilation and water management considerations, farmers can implement additional management practices to help reduce the effects of heat stress on animals. Here are several actions: When livestock need to be hauled during hot weather, farmers commonly do this very early in the morning — around 3 or 4 a.m. — as it is often the coolest part of the day. For example, farmers load the animals in a low stress manner, put fewer animals in the trailer than during cooler weather and get moving as soon as possible. The goal is to do the hauling as efficiently as possible, and reach the destination and unload with reasonable speed. During extreme heat, farmers may choose to wait until cooler weather to haul.

Feeding times or the amount of feed can be adjusted. The idea is to make sure the bigger meals that generate the most body heat during digestion are fed later in the day when temperatures are likely to be cooler. Practices such as veterinary checks, vaccinations and other routine health management can be done early in the morning or delayed until weather conditions are cooler. More frequent check of the animals' well-being is also a common practice during hot weather conditions.

Taking care of people is also important during heat waves, and many of the same principles used to keep animals comfortable apply to the humans caring for them. Re-arranging work schedules to avoid heavy tasks during the hottest parts of the day, taking frequent breaks and staying hydrated are critical to keeping everyone healthy.

Hay Quality 2019: It's Déjà vu All

By: [Stan Smith](#), PA, Fairfield County OSU Extension

Source: <http://u.osu.edu/beef/2019/07/17/hay-quality-2019-its-deja-vu-all-over-again/>

Coming off a year where quality forages for beef cattle were in short supply throughout Ohio, now in mid-2019 we find that inventory remains critically low. With the National Ag Statistics Service (NASS) estimating only 60% of Ohio's first cutting hay harvest was completed by the first of July, it's apparent that Ohio cattlemen will again be faced with finding ways to make "feed" from hay that was harvested way past it's prime.

As an example of the hay quality we're seeing, a recent forage analysis on some Fairfield County mixed grass hay that was mowed on June 25th and baled on June 29 – after also getting lightly rained on once – came back showing 6.85% protein and 38.02% TDN (total digestible nutrients) on a dry matter basis. The ADF (acid detergent fiber) was 51.63% and the NDF (neutral detergent fiber) was 65.51%.



A forage probe for sampling hay might be the most valuable tool you can use in 2019!

I could tell you that's not good, but perhaps a better way is to compare it to wheat straw. When you look up the "book values" for the feed nutrient content of straw you find that for the most part, this hay is little better than typical wheat straw. With so much first cutting hay being made in late June and beyond this year, as Yogi Berra would have said, "it's déjà vu all over again!"

Feed of the quality referenced in the forage sample analysis above and fed as long stem hay, even when offered in unlimited amounts, simply won't satisfy the nutritional requirements of a cow at any time during the year, including during her time of least nutritional need when she's dry during mid-gestation. Without amendment, feeding this quality of forage for very long results in cows with lesser body condition, delayed return to estrus, lower conception rates, and lighter weaning weights. This can result from cows not breeding on first service and/or having lower milk production than if they were on an adequate nutritional plane.

Processing or chopping mature, long stem, grass hay can increase the rate of forage digestion 30%. Considering that a forage supply and quality problem exists across Ohio and extends throughout much of the Midwest, it's not realistic to expect we can replace all the poor-quality hay being made this year with a properly made second or third cutting. While growing additional forages on Prevented Planting corn and soybean acres for harvest this fall may relieve some of the pressure, it's apparent it'll be necessary to find ways to effectively utilize the lesser quality first cutting hay we presently have. There are options available to accomplish just that, and time to create and implement strategies that allows it without cow health suffering.

As you consider alternatives for making feed from late made, low digestible forages, and stretching the supply of any high quality forages that might be in inventory, consider this brief checklist:

- Sample, test and inventory each lot of hay that's made. Similar qualities of hay should be stored together in order that they can be found and fed at the most opportune times during the hay feeding season.
- Can bunk feeding cows during the winter months be made an option? This allows for limited supplementation of extra energy and/or protein in the correct amounts at the correct times.
- Could processing poor quality long stem hay into smaller particle size be made an option? Reducing the large particle size of mature long stem grass hay to two to six inches in length can increase the rate of forage digestion enough that it allows cows to consume 25-30% more forage daily.
- Optimize the quantity and quality of subsequent hay cuttings this year by fertilizing now. At a minimum, applying 35 to 50 units of additional nitrogen will benefit future cuttings this year.

As the summer progresses, in this publication we'll continue to look at forage quality and specific options for supplementing the hay we have in inventory. In the meantime, give serious consideration to how best you can grow additional feed yet this year, and strategically supplement poor quality forages, or process them into feed that's more digestible.

Staging Corn Development in 2019

By: Peter Thomison

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-22/staging-corn-development-2019>

Corn development varies tremendously across Ohio because of planting dates that range from late April to early July. Some corn is tasseling and silking but in many counties, corn stages range from V7-V12. Moreover, it is not unusual to see striking differences in plant height and growth within cornfields.

It is important to understand corn growth and development in order to determine the health and status of the crop for effective use of management practices (e.g. application of post-emergence chemicals) and assessment of stress events (e.g. flooding, drought, hail, etc.).



Staging corn development is usually fairly straightforward. Starting with the first leaf, which has a short rounded leaf tip (sometime characterized as the “indicator” leaf), count the number of leaves with visible leaf collars. The collar is the yellow green band that appears at the junction of the leaf blade and leaf sheath. Counting leaf collars to determine the vegetative stage is feasible until the lower leaves can no longer be identified. At about the V6 (six-leaf collar) stage, increasing stalk and nodal growth combine to tear the smallest lower leaves from the plant. This results in degeneration and eventual loss of lower leaves which makes it difficult to locate the lower leaves (especially the first rounded leaf). Weathering as a result of excessive rainfall, leaf senescence, and chemical applications also contribute to lower leaf deterioration.

You can estimate what leaf stage of development a particular field is at using its planting date and the growing degree days it is accumulated since planting. University research indicates that from VE to V10 (ten leaf collars), leaf emergence occurs for every 82 to 84 GDDs accumulated (Nielsen, 2008; Abendroth et al., 2011). From leaf stage V10 to the final leaf, leaf collar emergence occurs more rapidly at approximately one leaf every 50 GDDs.

The following examples (from Nielsen, 2019) show how to apply this information

“A field was planted on April 28, but you do not know exactly when it emerged. Since planting, approximately 785 GDDs have accumulated. If you assume that the crop emerged in about 120 GDDs, then the estimated leaf stage for the crop would be about V8. This estimate is calculated by first subtracting 120 from 785 to account for the estimated thermal time to emergence, then dividing the result (665) by 82 (equal to V8.1).”

“A field was planted on April 28 and emerged on May 5. Since May 5, approximately 1220 GDDs have accumulated. Your familiarity with these calculations tells you that the crop is likely beyond V10 (equal to 10 x 82 or 820 GDDs since emergence). So, first subtract 820 from 1220 (knowing the crop is at least at V10). Divide the result (400) by 50 to equal 8 additional leaves; for a total estimated leaf stage of V18.”

Growth-limiting stresses and conditions (soil moisture deficits, nutrient deficiencies, compaction, etc.) affect the accuracy of these predictions (Nielsen, 2019). Nevertheless, this method may be useful in timing when plants reach an approximate stage of growth.

Another method for the staging development of older plants (with few or no lower leaves) requires first splitting the stalk neatly down the middle and looking for the first noticeably elongated stalk internode. This internode is usually $\frac{1}{2}$ to $\frac{3}{4}$ inch long. Carefully identify the leaf whose leaf sheath attaches to this node. The fifth leaf is usually attached to the node above this elongated internode. Continue counting the remainder of the leaves with leaf collars to complete leaf stage determination of the plant. Check out a picture showing this in <https://www.agry.purdue.edu/ext/corn/news/timeless/VStageMethods.html> (from Dr. Bob Nielson at Purdue).

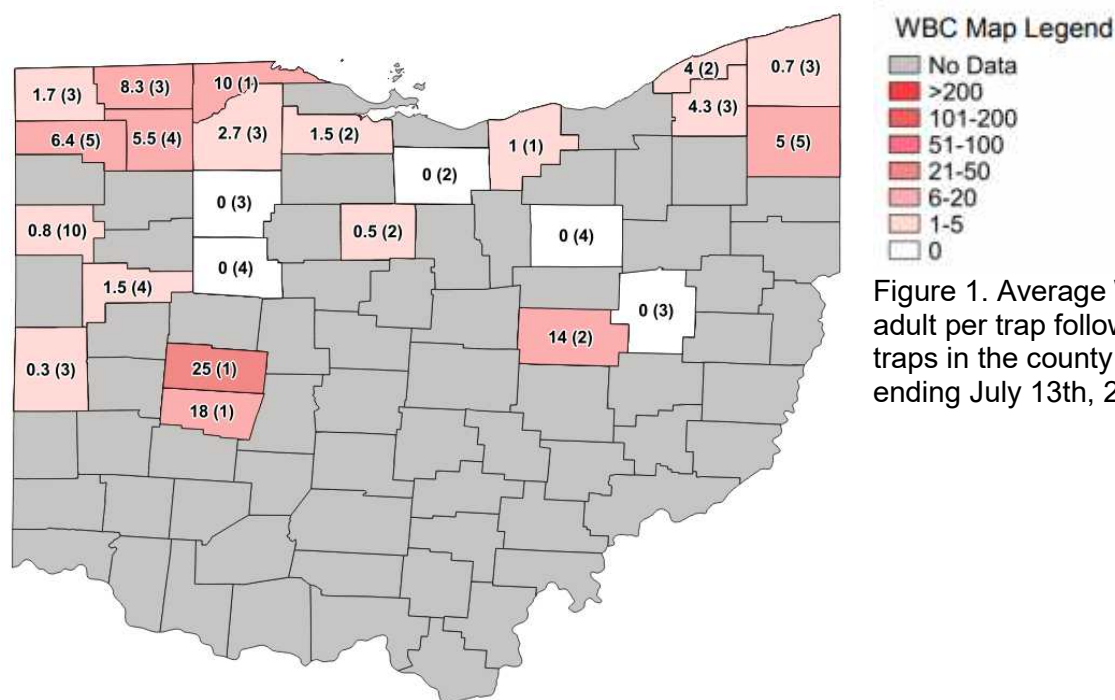
Western Bean Cutworm: Numbers Starting to Increase

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-22/western-bean-cutworm-numbers-starting-increase>

Week three of The Ohio State University Western bean cutworm (WBC) monitoring network has resulted in an increase of moths captured. Last week's trap count included WBC adults captured from July 8 – July 13. A total of 24 counties monitored 75 traps across Ohio. Overall, trap counts increased, resulting in a total of 287 WBC adults (18 total last week) and a statewide average of 3.8 moths/trap (up from 0.3 average last week) (Figure 1).

While it is not likely we are at peak flight for WBC in Ohio just yet, there are counties that reported a trap average that indicates scouting for egg masses should begin. These counties include: Champaign, Clark, Coshocton, Fulton, and Lucas.

WBC traps 7-13-19



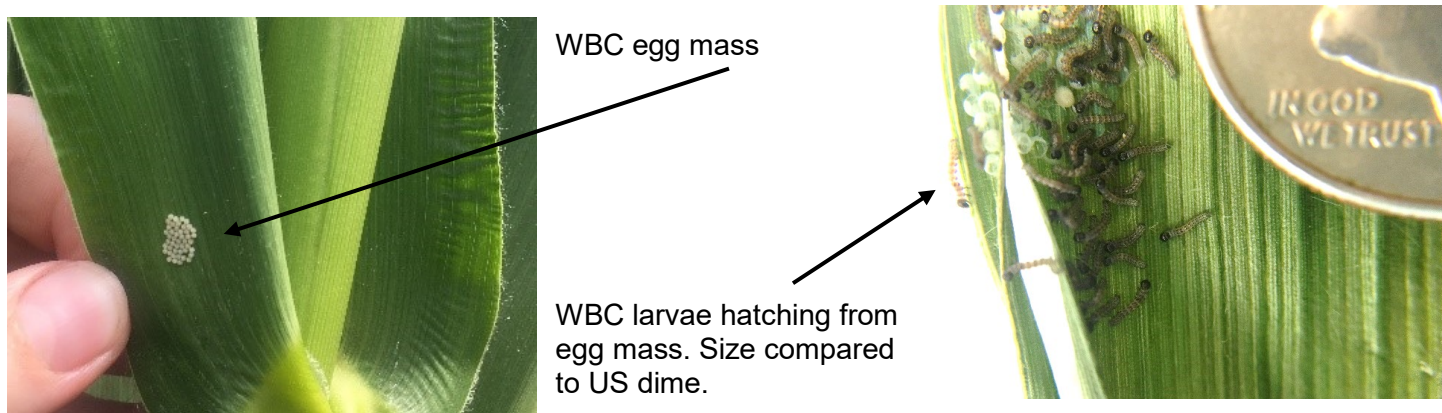
Scouting and management.

- Check pre-tassel corn approaching tassel fields first – females prefer these fields to deposit eggs.
- To scout for eggs or larvae, choose at least 20 consecutive plants in 5 random locations (scout different areas of the field that may be in different growth stages).
- Inspect the uppermost 3–4 leaves.
- Threshold (when to consider treatment):
 - Field corn, if >8% of inspected plants have eggs or larvae.
 - Sweet corn, if >4% of inspected plants have eggs or larvae for the processing market or on >1% of plants for fresh-market.

If infestations exceed threshold, many insecticides are available to adequately control WBC, especially those containing a pyrethroid. However, as with any ear-burrowing caterpillar pest, timing is critical. Insecticide applications must occur after egg hatch, or after tassel emergence, but before caterpillars enter the ear. If eggs have hatched, applications should be made after 95% of the field has tassel. If eggs have not hatched, monitor for the color change. Hatch will occur within 24–48 hours once eggs turn purple. To search for larval injury after it has occurred, search the corn for ears having feeding holes on the outside of the husks.

Life cycle and feeding

Adult moths (what we monitor in the traps) will be making their way into corn fields where females lay eggs on the uppermost portion of the flag leaf. Eggs are laid in unevenly distributed clusters of 5–200, but averaging about 50 per cluster, and hatch within 5–7 days (Figure 2). Eggs first appear white, then tan and then a dark purple. Once eggs turn purple, they will hatch within 24 to 48 hours (Figure 3). In pre-tassel corn, caterpillars will move to the whorl to feed on the flag leaf and unemerged tassel. Once the tassel emerges, larvae then move to the ear, while feeding on corn pollen, leaf tissue, and silks. Later they will enter the ear through the tip, or by chewing through the side of the husk. Damage occurs from both direct feeding and from mold problems at feeding sites.



Big Tree Contest Entry Deadline Nears

Source: Coshocton Soil & Water Conservation District

Entries for the annual Big Tree Contest are now being taken by the Coshocton Soil and Water Conservation District. The contest is open to all species of trees growing on privately owned property in Coshocton County. Property line trees and trees growing on federal, state, or local government owned land are not eligible. Any person can enter any tree that is physically located in Coshocton County whether or not the tree is growing on the nominator's property.

Two winning trees will be chosen this year. The Big Tree Contest is county-wide, while the "Coshocton Is Blooming" category is limited to trees growing within the Coshocton city limits. Coshocton SWCD encourages you to submit as many entries as you like for you or your neighbors. Entries will be measured by a representative from Coshocton SWCD using the national standardized measurement criteria.


The owners of the winning "Big Trees" will each receive a plaque and 2 tickets to Coshocton SWCD's Annual Meeting and Banquet on October 17 at the Lake Park Pavilion. Entry forms should be returned to the district's office which is located in Room 120 in the County Services Building located at 724 S. 7th Street Coshocton. All entries must be received by 4:30 p.m. on Friday, July 26. An entry form can be obtained at:

<https://www.coshoctoncounty.net/swcd/2019/05/02/big-tree-contest/>

CFAES

OHIO STATE UNIVERSITY EXTENSION

Women in Agriculture Dinner

Tuesday, August 6

6:00 - 8:00 PM

Raven's Glenn Winery

56183 Co Rd 143

West Lafayette, OH

Join other area women for an evening of learning, networking, idea sharing, and a delicious meal. The theme for the evening will be **"Managing Agriculture's Topsy-Turvy Ride."** Come learn about the current influences on agriculture markets, tools for decision making, and strategies to cope with the stresses of agricultural life.

REGISTRATION INFORMATION. Registration fee of \$20 includes dinner and program. All alcohol must be purchased on your own separately at the winery. Please mail completed registration form to OSU Extension, 724 South 7th Street, Room 110, Coshocton, Ohio 43812. Please RSVP by August 2.

Name _____

Address _____

Email _____ Phone _____

Total Enclosed \$ _____

Please make checks payable to: OSU Extension. For more information call 740-622-2265.

**THE OHIO STATE UNIVERSITY**COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES**COSHOCTON COUNTY**

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