What a beautiful weekend we just enjoyed. The weather was perfect for people to visit the Ashtabula County Covered Bridge Festival and to participate in in the Trumbull County Fall Foliage Tour. Harvest is moving along nicely, much further ahead this year than last. Today, is my daughter Analese’s 16th birthday. It seems like yesterday that she was born! Make sure to take time with your kids and grandchildren as they grow up fast. Hope you have a great week.

David Marrison, AG Educator

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Managing our Pastures Will Improve Cattle Performance

By Chris Penrose, OSU Extension Educator, Morgan County

As we strive to improve the performance of our beef operation, there are some simple things we can do to improve how our cattle perform by managing our pastures. Many of us mow our pastures to remove weeds and make the pasture look better, but there are more benefits. When we mow the weeds early in the season, we also remove seed heads from the grass which will encourage new growth. Early in the season, the grass is in the reproductive stage, focusing more on seed development, but once this is accomplished and the seed heads are removed, the plant moves on to the vegetative stage, encouraging more leaf growth, improving quality and quantity. In addition, removal of the weeds will reduce irritation to the eyes of cattle, decreasing the chances of pinkeye. If needed, an additional clipping of weeds later in the summer will also keep the pastures clean, weaken the root reserves of perennial weeds and possibly kill late summer annual weeds before seeds mature.

If we can divide the pasture, we will give the grasses and legumes a chance to rest. Once grass is grazed too close, it will have to produce new leaf growth from the root reserves and slow new growth. Also, when we have multiple pastures to graze, desirable forages will a chance to regrow and not be as likely to be eliminated from over grazing. This is the reason why we recommend the “take half and leave half” principle of grazing.

One problem that many of us face is that undesirable forages may keep on growing. One of the grasses that many of us do not particularly care for is fescue. The reason we do not like it is that it has an endophyte in it that causes elevated body temperatures in cattle and it is not very palatable, resulting in poor performance. However, we can do something to reduce the problem and still benefit our cattle. Simply graze it in the late fall and in the winter. Once we have several killing frosts, the sugar content rises and palatability increases. In addition, endophyte levels start to decrease, reducing problems to our cattle. If we can graze it close in the winter (without causing any erosion problems), other desirable forages will have a better chance to compete when growth initiates in the spring. If we want to take this a step farther, adding 50 pounds of nitrogen in late summer to early fall (even now) can increase
quality and quantity of the fescue, making an ideal late fall and winter stockpiled feed. We can increase the protein content of the grass by two percentage points and increase yields by a ton per acre. In most instances, the quality of the stockpiled fescue will be higher than most first cutting mixed hay.

There are also a couple other ways we can improve forage utilization in our pastures. One is the strategic location of our source of water. For many of us, this may not be an option, but having the source within 800 feet of the fence will improve forage utilization. The thought behind this is that at distances less than 800 feet, cattle tend to walk to the water as needed. At distances greater, they tend to arrive as a group.

The placement of the mineral feeder can have an impact on animal movement as well. Placing a mineral feeder at a location that may be less grazed, may encourage more activity in that area. One of the worst things we can do for forage utilization is to have water, shade and the mineral feeder close to each other. Not only will grazing be less even, but over time, there will be a noticeable change in manure distribution and fertility in the field. Which brings me to my final point (which has been an internal debate for me during my career as an Extension Educator and a cow-calf operator): to lime and fertilize or not. Factors to consider include your financial situation and the amount of forages you have access to. However, I have one additional thought. While I was at a farm visit the first of August at a cow-calf operation in Morgan County, the producer wondered why his cattle was not grazing part of the field and after some investigation, the grass that appeared to be at an ideal growth stage was poverty grass or broomsedge (Andropogon virginicus L.) which cattle do not like to graze. This is a clear indicator of poor fertility which usually means the p.H. and phosphorus levels are low. In order to get a better utilization of his field, he needed to take a soil test, then lime and fertilize, which will encourage growth of more desirable forages. From a personal observation, I have noticed that my cows are much more anxious to move to my paddock that has the highest (which by most standards are low) fertility than to my other paddocks. I wonder if the grass is more palatable?

So as we go through the fall, these tips are some examples of things we can do to improve our utilization of our pastures and hopefully increase the performance of our cattle. As I try to prioritize which things I should do, I will at times divide them into no cost; low cost; and high cost to help me make decisions.

Higher Western Bean Cutworm Feeding May Lead to Mycotoxins
By Andy Michel & Pierce Paul

Although western bean cutworm (WBC) flight counts have been relatively stable compared to last year, several growers and extension educators have sent in pictures of western bean cutworm infestations and damage in corn. Obviously it is much too late to do much at this point, as the larvae are either still protected, or more likely, have dropped to the ground to overwinter. However, the holes and damage that remain could lead to secondary infestations from mold and fungi, and some of these infestations may also be a source for mycotoxins, including fumonisins and deoxynivalenol, AKA vomitoxin.

In some cases, damaged kernels will likely be colonized by opportunistic molds, meaning that the mold-causing fungi are just there because they gain easy access to the grain. However, in other cases, damaged ears may be colonized by fungi such as Fusarium, Gibberella and Aspergillus that produce harmful mycotoxins. Some molds that are associated with mycotoxins are easy to detect based on the color of the damaged areas. For instance reddish or pinkish molds are often cause by Gibberella zeae, a fungus know to be associated with several toxins, including vomitoxin. On the other hand, greenish molds may be caused by Aspergillus, which is known to be associated with aflatoxins, but not all green molds are caused by Aspergillus. The same can be said for whitish mold growth, some, but not all are caused by mycotoxin-producing fungi.
So, since it is not always easy to tell which mold is associated with which fungus or which fungus produces mycotoxins, the safe thing to do is to avoid feeding moldy grain to livestock. Mycotoxins are harmful to animals — some animals are more sensitive to vomitoxin while others are more sensitive to fumonisins, but it is quite possible that multiple toxins are present in those damaged ears. Mycotoxin-producing fungi are also opportunistic. If you have damaged ears and moldy grain, get it tested for mycotoxins before feeding to livestock, and if you absolutely have to use moldy grain, make sure it does not make up more than the recommended limit for the toxin detected and the animal being fed. This link provides more information on ear molds and mycotoxin contamination:

http://www.oardc.ohio-state.edu/ohiofieldcropdisease/t01_pageview2/Mycotoxin_Sampling_Laboratories_.htm

**Sampling for Soybean Cyst Nematode – It’s time!**
By Anne Dorrance, Terry Niblack, and Horacio Lopez-Nicora

This year’s early harvest provides the perfect opportunity to take a look at the SCN populations in your fields. 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. However, there are some surprising locations where individual fields are getting or have gotten into trouble with very high populations. 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:
1. Not detected: this is not surprising. Remember that SCN sits in pockets and can be quite variable (Figure 1). Continue to monitor your fields.
2. Trace: May begin to measure some yield loss on susceptible varieties, especially on lighter soils.
3. Low: Plant SCN resistant varieties or rotate to a non-host crop (corn or wheat).
4. 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.
5. 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. Through funds from the soybean check-off, we have completed several targeted surveys over the past 5 years. My group tended to target those fields where yields were stuck or below 30 bu/A. Or when we sampled we hit those pockets in the field where the soybeans tended to be shorter or where they matured earlier and always
yielded less that the rest of the field. We were able to detect SCN in almost all of these situations, so these are the ones that should have the top priority for sampling.

Updated information on where to send the samples:

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
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: 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

Precautions for Harvesting Forages After a Frost
By Mark Sulc

Several forage species can be extremely toxic soon after a frost because they contain compounds called cyanogenic glucosides that are converted quickly to prussic acid (i.e. hydrogen cyanide) in freeze-damaged plant tissues. Others species have an increased risk of causing bloat when grazed after a frost, those are discussed at the end of this article.

Species that can develop toxic levels of prussic acid after frost include annual grasses in the sorghum family, Johnsongrass, shattercane, chokecherry, black cherry, indiangrass, and elderberry. It is always a good idea to check areas where wild cherry trees grow after a storm and pick up and discard any fallen limbs to prevent animals from grazing on the leaves and twigs.

The potential toxicity after frost varies by species as follows:

- Sudangrass varieties = low to intermediate in cyanide poisoning potential
- Sudangrass hybrids = intermediate potential
- Sorghum-sudangrass hybrids and forage sorghums = intermediate to high
- Grain sorghum = high to very high
- Piper sudangrass = low prussic acid poisoning potential
- Pearl millet and foxtail millet = rarely cause toxicity
Animals can die within minutes if they consume forage with high concentrations of prussic acid. Prussic acid interferes with oxygen transfer in the blood stream of the animal, causing it to die of asphyxiation. Before death, symptoms include excess salivation, difficult breathing, staggering, convulsions, and collapse.

Ruminants are more susceptible to prussic acid poisoning than horses or swine because cud chewing and rumen bacteria help release the cyanide from plant tissue.

Plants growing under high nitrogen levels or in soils deficient in phosphorus or potassium will be more likely to have high prussic acid poisoning potential. After frost damage, cyanide levels will likely be higher in fresh forage as compared with silage or hay. This is because cyanide is a gas and dissipates as the forage is wilted and dried for making silage or dry hay.

Young, rapidly growing plants of species that contain cyanogenic glucosides will have the highest levels of prussic acid. After a frost, cyanide is more concentrated in young leaves and tillers than in older leaves or stems. New growth of sorghum species following a non-killing frost is dangerously high in cyanide. Pure stands of indiangrass can have lethal levels of cyanide if they are grazed when the plants are less than 8 inches tall.

**Grazing Precautions**

The following guidelines will help you avoid danger to your livestock this fall when feeding species with prussic acid poisoning potential:

- Do not graze on nights when frost is likely. High levels of toxic compounds are produced within hours after a frost, even if it was a light frost.
- Do not graze after a killing frost until plants are dry, which usually takes 5 to 7 days.
- After a non-killing frost, do not allow animals to graze for two weeks because the plants usually contain high concentrations of toxic compounds.
- New growth may appear at the base of the plant after a non-killing frost. If this occurs, wait for a hard, killing freeze, then wait another 10 to 14 days before grazing the new growth.
- Don’t allow hungry or stressed animals to graze young growth of species with prussic acid potential. To reduce the risk, feed ground cereal grains to animals before turning them out to graze.
- Use heavy stocking rates (4-6 head of cattle/acre) and rotational grazing to reduce the risk of animals selectively grazing leaves that can contain high levels of prussic acid.
- Never graze immature growth or short regrowth following a harvest or grazing (at any time of the year). Graze or greenchop sudangrass only after it is 15 to 18 inches tall. Sorghum-sudangrass should be 24 to 30 inches tall before grazing.
- Do not graze wilted plants or plants with young tillers.
- Greenchop

Green-chopping frost-damaged plants will lower the risk compared with grazing directly, because animals are less likely to selectively graze damaged tissue. Stems in the forage dilute the high prussic acid content that can occur in leaves. However, the forage can still be toxic, so feed greenchop with great caution after a frost. Also, always feed greenchopped forage of species containing cyanogenic glucosides within a few hours, and don’t leave greenchopped forage in wagons or feedbunks overnight.

**Hay and silage are safer**

Prussic acid content in the plant decreases dramatically during the hay drying process and the forage should be safe once baled as dry hay. The forage can be mowed anytime after a frost if you are making hay. It is very rare for dry hay to contain toxic levels of prussic acid. However, if the hay was not properly cured and dried before baling, it should be tested for prussic acid content before feeding to livestock.
Forage with prussic acid potential that is stored as silage is generally safe to feed. To be extra cautious, wait 5 to 7 days after a frost before chopping for silage. If the plants appear to be drying down quickly after a killing frost, it is safe to ensile sooner.

Delay feeding silage for 8 weeks after ensiling. If the forage likely contained high levels of cyanide at the time of chopping, hazardous levels of cyanide might remain and the silage should be analyzed before feeding.

Freezing also slows down metabolism in all plants that might result in nitrate accumulation in plants that are still growing, especially grasses like oats, millet, and sudangrass. This build-up usually isn't hazardous to grazing animals, but green chop or hay cut right after a freeze can be more dangerous.

Species That Can Cause Bloat
Forage legumes such as alfalfa and clovers have an increased risk of bloat when grazed one or two days after a hard frost. The bloat risk is highest when grazing pure legume stands, and least when grazing stands having mostly grass. The safest management is to wait a few days after a killing frost before grazing pure legume stands – wait until the forage begins to dry from the frost damage. It is also a good idea to make sure animals have some dry hay before being introduced to lush fall pastures that contain significant amounts of legumes. You can also swath your legume-rich pasture ahead of grazing and let animals graze dry hay in the swath. Bloat protectants like poloxalene can be fed as blocks or mixed with grain. While this an expensive supplement, it does work well when animals eat a uniform amount each day.

26th Annual Beef Banquet to be held on Saturday, November 14 in Lenox, Ohio.
OSU Extension and the Ashtabula County Cattlemen’s Association will be holding their 26th annual banquet on Saturday, November 14 at the Lenox Community Center beginning at 7:00 p.m. This banquet has grown over the years with nearly 150 beef producers and industry supporters attending last year. This is most likely due to the huge chunk of Prime Rib which attendees get to dine on. I can honestly say that I have never eaten anything better than this meal! The prime rib catered by Cherry Valley Processing is outstanding!

During the banquet, our Cattlemen’s Association will provide a recap on the activities of the Cattlemen’s Association for the past year and elect a member to the Ashtabula County Cattlemen’s board of directors. We are also excited to have Kenny Acord, lead singer for the local band Wildride for this year’s banquet entertainment. Tickets for the banquet can be purchased from the Directors of the Cattlemen’s Association. Directors are: Bob & Tyler Brown, Dorset Township; Dr. Bryan Elliott, Andover Township, Bart Kanicki, Pierpont Township and Zach Ward, Austin Township. Tickets are $25 per person. Tickets can also be purchased at the Ashtabula County Extension office in Jefferson, Ohio. Pre-reservations should be made by November 6, 2015. Additional information about the banquet can be obtained by calling the Ashtabula County Extension office at 440-576-9008 or by accessing http://go.osu.edu/ne-events

Northeast Ohio “Snow Bird” Private Pesticide Applicator Re-Certification Session & Commercial Fertilizer Application Certification to be held on Tuesday, November 24 in Burton, Ohio

Do you head south for the winter? Does your Private Pesticide Applicator’s License expire on March 31, 2016? If so, OSU Extension in Northeast Ohio has planned his session with you in mind! This workshop will be held on Tuesday, November 24, 2015 at Geauga County Extension Office, 14269 Claridon-Troy Road, Burton, Ohio 44021

This workshop will offer 3 credits for re-certification for CORE and All Categories (1-7). Private Pesticide Applicators from any county in Northeast, Ohio are welcomed to attend this session. This session will be held from 9:00 to 12:00 noon.
A special afternoon session will be held from 1:00 to 4:00 p.m. for private pesticide applicators and area farmers who would like to complete their Commercial Fertilizer Application Certification. Due to Ohio’s new legislation, any producer who applies commercial fertilizer to 50 or more acres must be certified by no later than September 30, 2017. Attend this session to complete your certification.

The registration fee is $35/per person for the morning private pesticide applicator re-certification. There is no fee for the afternoon fertilizer certification session. Lunch will be provided for those who are staying for the afternoon session for $10/person. Pre-registration is required by November 16, 2015. An additional late registration fee of $25 per person will be added for any registration received after November 16, 2015. Make checks payable to OSU Extension and mail to OSU Extension-Geauga County, PO Box 387, Burton, Ohio 44021. More information can be obtained by calling the Geauga County Extension office 440-834-4656. Additional private pesticide re-certification and commercial fertilizer certification sessions will be held in 2016 on January 15 (Williamsfield), January 29 (Burton), February 10 (Cortland) and February 25 (Perry). A registration can be found at: http://go.osu.edu/ne-events

**FSA Reminds Producers of Approaching NAP Deadlines for 2016 Crops**

The USDA Ohio Farm Service Agency (FSA) reminds producers who are interested in the 2016 Noninsured Crop Disaster Assistance Program (NAP), of the need to apply for coverage by the following crop deadline dates.

- **October 1, 2015** is the deadline for 2016 NAP coverage on winter wheat, rye, barley and speltz.
- **November 20, 2015** is the deadline for 2016 NAP coverage on apples, asparagus, blueberries, caneberries, cherries, chestnuts, forage for hay and pasture, grapes, nectarines, peaches, pears, plums, strawberries, honey, maple sap and hops. NOTE: Hops is a perennial crop and the application deadline moved from spring to fall for coverage.
- **March 15, 2016** is the deadline for 2016 NAP coverage on forage sorghum, oats, potatoes, Soybeans, Sunflowers and all spring planted specialty crops grown for food.

The 2014 Farm Bill provides greater coverage for losses when natural disasters affect specialty crops. Previously, the program offered coverage at 55 percent of the average market price for crop losses that exceed 50 percent of expected production. Producers can now choose higher levels of coverage, up to 65 percent of their expected production at 100 percent of the average market price. The expanded protection is especially helpful to beginning and socially disadvantaged producers, as well as farmers with limited resources, who will receive fee waivers and premium reductions for expanded coverage.

Eligible producers can apply for 2016 NAP coverage at their local FSA Office using form CCC-471, Application for Coverage. The service fee for basic NAP coverage is the lesser of $250 per crop or $750 per producer per administrative county, not to exceed a total of $1,875 for a producer with farming interest in multiple counties. Producers interested in buy-up coverage must pay a premium, in addition to the service fee. The maximum premium will be $6,564.

Producer meeting the definition of a socially disadvantaged farmer, beginning farmer or limited resource farmer will have service fees waived. Producers meeting this definition that choose to purchase buy-up coverage will also have service fees waived and the premium will be capped at $3,282. To help producers learn more about the NAP program and how it can help them, USDA, offers an online Web tool at www.fsa.usda.gov/nap. The webtool allows producers to determine whether their crops are eligible for coverage and gives producers an opportunity to explore a variety of options and levels to determine the best protection level for their operation. For more information on NAP coverage or obtain coverage, please contact your **FSA County office**
Vegetable of the Week- Garlic (Allium sativum)
Author: Denise M. Johnson; johson.2924@osu.edu

October is the time to plant garlic for next year's harvest. Garlic, a perennial bulb, is in the lily family (Alliaceae) along with onions, chives and leeks. The BYGL 2015-10 (June 11, 2015) discussed the bonus of garlic scapes; cloves were harvested mid-July to August and now, planting begins.

Care should be taken in preparing your garden bed for planting garlic. A sunny, well drained and weed-free area is essential for healthy clove production. Soil should be loamy, well drained with organic matter added. A soil pH of 6.5 to 7.0 is preferred but garlic tolerates other levels. Fertilize prior to planting, based on your soil test results. Separate individual cloves from the main bulb and plant each 1 - 2" below the soil and 4 - 6" apart; rows should be 12 - 18" apart. Water well. Provide a good cover of mulch to protect from freezing; remove mulch in the spring. Cloves planted in the fall have time to develop roots before the ground freezes. They obtain the required chilling process in the soil and are in place in early spring to continue developing vegetation and larger bulbs.

Garlic is divided into two categories - hardneck and softneck. Softneck varieties which have a longer storage life are generally grown in warmer climates such as California. They may develop a bitter taste when grown in our region. The hardneck varieties are better suited for cold winters and have a milder flavor and a shorter storage life. In Michigan State University trials the hardneck varieties German White and Music provided good yields. In this same trial, the Polish Softneck garlic had good production, excellent storage life and a hot flavor. Be sure to research what varieties grow best in your area and purchase cloves from reputable dealers; inspect them for damage and disease prior to planting.

Although garlic has few problems, it is susceptible to the same pests as onions - onion thrips, onion maggot and bulb mites. They are susceptible to diseases such as - basal rot, white rot, downy mildew, botrytis rot and pink rot. Rotating crops and providing good air movement and well-drained soil will help avoid these issues.

Garlic can be planted in the spring, if bulbs are properly stored, but yields will be smaller.

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PLEASE SHARE...this newsletter with farmers or others who are interested in agricultural topics in Ashtabula & Trumbull Counties. Past issues can be located at: https://go.osu.edu/ag-news. Please tell your friends and neighbors to sign up for the list. CONTACT: marrison.2@osu.edu
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