CFAES OHIO STATE UNIVERSITY EXTENSION

Morrow County SCARLET & GRAY News

Volume 16 Issue 2 • November/December 2020

Food Preservation Office Hours Recordings – Ready for You to View

In case you missed our live Food Preservation Team Office Hours we have them recorded and housed at our fcs.osu.edu state website.

There are Summer 2020 and Fall 2020 recordings making a total of 12 food preservation topics for you to view in the months to come.

Topics include: Preserving Fall Vegetables; Preserving Apples; Canning Soup; Canning Meat, Poultry and Game; Making Jerky, Making Sauerkraut; Jam and Jallies; Canning and Freezing Vegetables; Pickles; Salsa; and more!

- Recordings can be found at

https://fcs.osu.edu/programs/major-program-areas/healthy-people/food-preservation/office-hours-recordings

Contact Candace Heer, FCS Educator, if you need assistance locating the office hours recordings at 419-947-1070 or heer.7@osu.edu.

We are here for you!

During Covid-19 the OSU Extension – Morrow County Office staff are always available to answer your phone call Monday – Friday 8 AM to 4:30 PM! But in accordance with The Ohio State University COVID-19 protocols, our office has limited public hours. Walk-ins are welcome Monday through Friday, 9 AM to 1 PM **AND** by appointment.

To schedule an appointment, please call or e-mail us. When not in the office, we are teleworking and doing creative programming to meet the needs of clientele during this crisis.

Please let us know how we can help you or if you have a great idea!

Thank you OSUE Volunteers!

We know it's been a crazy year! Thank you for trying new things and beating odds to help make a difference in Morrow County!

Zoom meetings, google hangouts, reminds, social distancing, mask wearing, meeting outside, and going above and beyond to make sure a 4-H member got a project book are just some of the many ways that got us through 2020! We thank you for believing in the great educational benefits Extension provides and we couldn't do it without our community team of Extension Volunteers!

Thank you!

OSU Extension - Morrow County's

Walk-in Office Hours

Open Mon.-Fri., 9 a.m. -1 p.m.

Please note:

- Masks must be worn in order to enter the office.
- We are also available by appointment outside our walk-in office hours.
- Need to pick up something? We would be happy to bring it to your car for pick up. Just call our office ahead of time to make arrangements: 419-947-1070.

We look forward to seeing you!

Current Resident or

The Ohio State University
COLLEGE OF FOOD, AGRICULTURAL AND ENVIRONMENTAL SCIENCES

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CFAES OHIO STATE UNIVERSITY EXTENSION

2020 Ohio 4-H Awards Recognition Event

Tuesday, December 1, 2020
7:00 p.m., held virtually

Register by November 28 at
go.osu.edu/Ohio4-HAwards

Join us to honor the 2020 Volunteer Awards, Hall of Fame inductees, Tenure Milestones, and Teen of the Year and the Teen Hall of Fame inductees we were unable to recognized at the Ohio 4-H Conference originally scheduled for March 2020.

Russ Mayer and Bill Hershner to be recognized!

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Multi-Species Grazing as an Alternative to Pasture Spraying

By James Doyle, Extension Natural Resource Management Field Specialist, South Dakota State University

(Previously published by South Dakota State University Extension: August 6, 2020)

Broadacre spraying of pastures is intended to reduce undesirable plants and increase grasses for livestock. This practice often results in unintended consequences including damage and reduction of native forbs and reduced profitability. One approach to managing perceived "weedy" plants that can offset those negative outcomes is incorporating different species of livestock into a grazing operation.

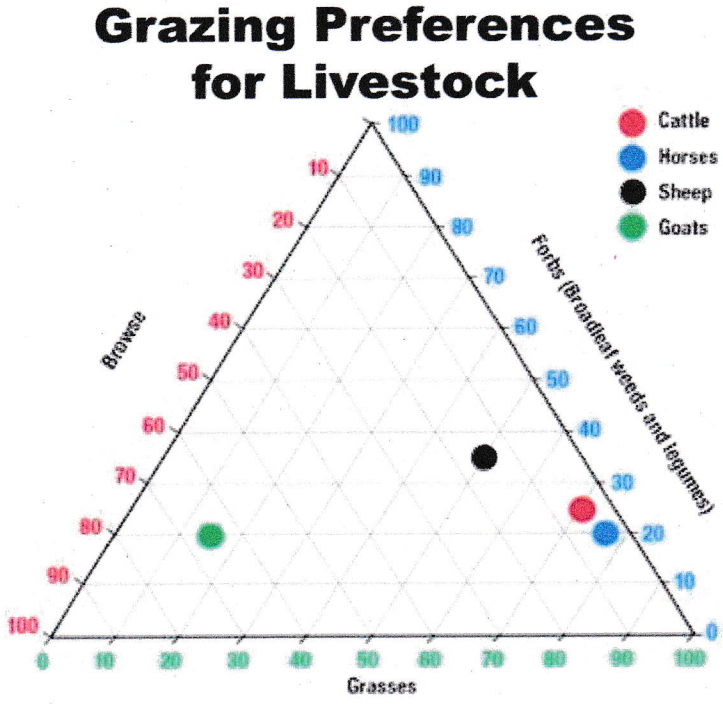
All species of livestock have different dietary preferences, and producers can harness this to help manage their plant communities in an ecologically and economically sustainable manner. Small ruminants, in particular sheep and goats, are the most common livestock species that are added alongside a cattle enterprise.

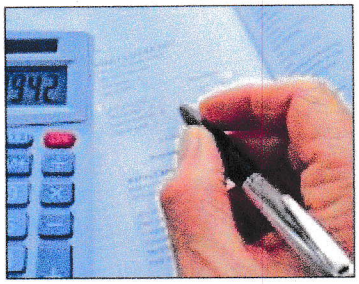
All species of livestock have different preferences when it comes to selecting the species of plants they consume, as demonstrated in the image above.

Generally speaking, cattle diets are dominated by grass, a moderate forb component, and very little browse (or woody plants); goats are on the opposite end of the spectrum, with a strong preference for browse, followed by forbs and a minor grass component; sheep are intermediate, with a selection for forbs, grass, and a moderate browse component. By incorporating additional livestock species, producers can manage previously undesirable plants with a positive outcome. Broadcast spraying can have very damaging effects on native forbs, and rarely results in lasting eradication of undesirable plants. Additionally, a pasture spray program can be very expensive, with little evidence to suggest that the expense is recaptured in increased grass production and pounds of beef harvested. In contrast, sheep or goats can effectively utilize plants that cattle avoid. Harvesting these additional plant species with a different species of livestock can effectively increase the pounds of livestock produced per acre, without damaging the plant community. This can provide a level of management of undesirable species in conjunction with increased economic returns. In fact, this may lead you to question whether some of those "weeds" might actually be good to have around!

As with any livestock, it is important to not overstock the pasture or range when bringing in a new species. First and foremost, the stocking rate of the livestock needs to be in line with the production of the land. A general rule of thumb when adding sheep to a cattle enterprise is that one ewe can be run alongside each cow without negatively affecting the pasture health or forage availability for cattle. For instance, a 100 cow operation could add 100 ewes to their pastures, without reducing capacity for the cows, or damaging the pastures; this demonstrates how it is possible to harness the differences in dietary preferences to increase the overall output of your pastures. With goats, this ratio may be even higher because of the greater difference between the diet of goats and cattle. This 1:1 ratio is just a rough starting point. Producers should inventory their pastures to have an idea of the different plant species present. Pastures with very high forb or shrub content may be able to support more sheep, and conversely pastures that are almost entirely grass may not be able to run as many sheep alongside the cattle. As with any new enterprise, the best approach is to start conservatively, observe the animal behavior and effects on the pasture, and then adjust accordingly.

Bringing a new species of livestock on to an operation comes with plenty of challenges, as well as opportunities that should be considered carefully. One of the primary challenges with sheep or goats is fencing, as most cattle fences will not contain them reliably. Woven wire is an ideal fence for the small ruminants, but additional hot wires added to an existing fence can be a relatively inexpensive way to improve a fence. Additionally, improvements in portable electric fence have made it increasingly easier to manage sheep and goats in pastures that don't have permanent fencing in place. Additionally, portable fencing can enable managers to more effectively target grazing on certain species or areas. Lambing or kidding can also demand a significant amount of labor that should be considered. On the other hand, lambing/kidding results in an additional crop of market livestock to sell that can improve the overall returns, as well as smooth cash flow by providing income at different times of the year and diversifying income across different markets. Of course, going out and purchasing a flock of sheep or goats is not the only way to realize the benefits of their presence. This can provide an excellent opportunity for land managers to partner with sheep owners to provide access to pasture while receiving a rental income for the grazing, the ecological benefits of a new species, and less of the risk/hassle associated with developing a new enterprise. Finally, it is important to note that landowners are still obligated to control noxious weeds on their property, which may still require targeted mowing/clipping or spot spraying. As with anything, multi species grazing should be considered as another tool managers can utilize, but not a silver bullet for everything.





Farmer & Farmland Owner Income Tax Webinar

By Barry Ward, Director, OSU Income Tax Schools College of Food, Agricultural and Environmental Sciences, OSU Extension

Are you getting the most from your tax return? Farmers and farmland owners who wish to increase their tax knowledge should consider attending this webinar that will address tax issues specific to this industry. Content focuses on important tax issues and will offer insight into new COVID related legislation.

Mark your calendars for December 3rd, 2020 to participate in this live webinar from 6:30 to 8:30 pm. The event is a joint offering from OSU Income Tax Schools which are a part of OSU Extension and the College of Food, Agricultural and Environmental Sciences and Purdue University Income Tax Schools. If you are not able to attend the live webinar, all registered participants will receive a link to view the recorded webinar at a time of their convenience. This link will be available through the tax filing season.

The two-hour program is targeted towards owners who file their own farm taxes or simply wish to arm themselves with more tax information that will help them to better plan for tax filing.

Topics to be discussed during the webinar include:

- Tax Issues related to COVID-related legislations including tax credits, PPP loans, EIDL loans etc.
- New 1099-Misc and 1099-NEC
- Tax planning in an unusual year: prevented planting crop insurance indemnity payments, Revenue Crop Insurance Payments, CFAP payments, etc.
- Like Kind Exchanges (farm machinery and equipment no longer are eligible for this provision – this is a significant change), how this change may affect state income tax and how this change may affect your Social Security credits and eventual payments
- Qualified Business Income Deduction, sales to cooperatives, lease income
- Other topics

The cost for the webinar is $35. To register, go to https://go.osu.edu/farmertax2020. For more information, contact Julie Strawser at strawser.35@osu.edu or call the OSU Extension Farm Office at 614-292-2433.

Know what you are feeding: HAY SAMPLING 101

By Chris Teutsch, Associate Extension Professor, Forage Specialist, University of Kentucky

Knowing the nutritional quality of forage and hay is an integral part of a profitable and efficient livestock operation. Accurate estimation of forage quality starts with obtaining a representative sample of the forage to be fed. Proper sampling technique is critical.

Hay is preserved in a number of different packages ranging from the small square bale weighing 40-50 lb to the large square bale weighing more than 1500 lb. In Kentucky, most hay is packaged in large round bales weighing between 500 and 1500 lb. Wrapped bale silage is also gaining popularity and should be sampled in a similar manner to large round hay bales with the exceptions listed below.

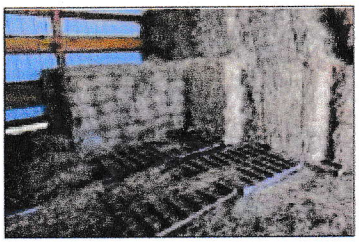


Figure 1. Always sample hay in lots. A lot is hay that comes from the same cutting and same field.

Obtaining a Representative Sample

Hay should ALWAYS be sampled in lots (Figure 1). A lot consists of hay made from the same field and cutting. A lot should not represent more than 200 tons of dry matter. In the event that a lot exceeds 200 tons of dry matter, multiple samples should be taken and forage quality results should be averaged to represent the overall lot.

Delay sampling until three to four weeks after baling for hay stored out of the weather. During this period bales undergo the heating or sweating process and forage quality can decline. For hay stored outside, it is best to delay sampling until three to four weeks ***prior to feeding*** to account for weathering that occurs after harvest. Remember to allow time for sample shipping and analysis and for making the feeding adjustments needed.

A representative sample will consist of at least 20 cores from 20 bales (one core per bale) resulting in a sample size of approximately one-half pound of hay from each lot. Sample bales at random and not on some predetermined characteristic such as leafiness, color, or weed content.

Use a sampling strategy such as dividing the total number of bales by 20 (number of desired cores) can help to get a representative sample of the hay lot. For example, if a lot consists of 240 large round bales and 20 cores are desired, then every 12th bale should be sampled (240 total bales ÷ 20 samples = 12). If the lot contains less than 20 bales, sample every bale. For stacked hay or truckloads count the number of exposed bale ends (square bales) or sides (round bales), divide by 20, then sample every nth bale end or side. Using the above numbers if there are 240 bale ends on an exposed side, sample every 12th bale. Equally sample each exposed side of the stack.

Figure 2. Large and small square bales should be samples from the ends to a depth of 15 to 18 inches.

Figure 3. Round bales should be cored from the side to a depth of 15 to 18 inches.

Core rectangular bales by centering the probe in the end and inserting the probe horizontally into the bale (Figure 2). Sample round bales by drilling or pushing the probe horizontally into center of the rounded side of the bale (Figure 3).

For round bales, remove weathered material from the area to be probed prior to sampling. Weathered material represents refusal and should not be included in the sample. The probe should penetrate the bale at least 15-18 inches for rectangular or round bales.

Figure 4. Always submit the entire sample. Subdividing the sample can result in altered lab results since the fine material segregates from the larger particles. Make sure the bag is clearly labeled with all required information.

After the lot has been sampled, the entire sample should be placed into a labeled plastic bag and sealed (Figure 4). Make sure that the bag is clearly labeled with your farm's name, a description of the hay lot sampled that will allow you to reference the results back to the hay lot, the type of hay, cutting, and year, and the date it was sampled. The sample should be sent immediately to the lab for analysis. In cases where the sample is not immediately submitted, store the sample in a cool, dry place that is not in direct sunlight. Make sure and complete the sample submission form for the lab that you are using. Do NOT subdivide the sample.

Sampling Baled Silage

Sample baled silage in the same manner as hay. Delay sampling until at least four weeks after harvest to allow complete ensiling. Samples should be placed into labeled plastic bags as previously described. Submit the samples immediately or refrigerate until shipped. Remember to immediately repair holes caused by coring using a UV-resistant tape designed for silage film.

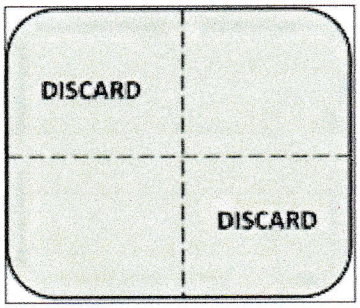


Figure 5. If excessively large samples must be subdivided, always use the quartering technique. Quartering a sample is accomplished by thoroughly mixing the collected cores, pouring the sample onto a clean flat surface, discarding opposite quarters, and recombining the remaining quarters. This is repeated until the desired sample size is obtained.

Using a larger diameter or longer probe or collecting more than 20 cores result in a sample greater than ½ lb. This is not problem in itself and may even be more representative of the hay lot. However, most labs are not set up to handle and grind large sample sizes and will only grind a portion of the sample. The portion of the sample ground may not be representative of the lot. Therefore, AVOID SUBMITTING EXCESSIVELY LARGE SAMPLES FOR ANALYSIS. If a sample must be subdivided, it should be done using a technique called "quartering" (Figure 5). Thoroughly mix the sample and then pour it onto a clean and flat sheet of butcher paper or similar material. Then divide the sample into four equal parts. Discard two opposite quarters. Recombine the two remaining quarters. If the sample size is still too large, then repeat the procedure until the desired sample size is obtained.

Hay Sampling at a Glance

- Always collect hay samples by coring hay with a sampling probe designed for hay.
- Always sample hay in lots. A lot consists of a harvest-field combination.
- Delay sampling for dry hay stores inside for 3-4 weeks after harvest.
- Sample hay stored outside 3-4 weeks prior to feeding.
- Collect 20 cores per hay lot.
- Use a sampling strategy to obtain a representative sample of the hay lot. For example, if a hay lot has 200 bales, core every 200 bales divided by 20 cores or 10th bale.
- Core square bales from the end.
- Core round bales from the side.
- Do NOT subdivide samples.
- Place entire sample into labeled plastic bag and ship to lab.
- Delay sampling baleage for 4-6 weeks after baling to allow fermentation to finish.
- Refrigerate baleage samples prior to shipping.
- Repair holes in silage film with UV stabilized tape designed for silage wrap.
- Work with your extension agent or livestock nutritialist to interpret test results and design an appropriate supplementation program.

Precautions for feeding frosted and drought-stressed forages

By Mark Sulc

Livestock owners feeding forage need to keep in mind the potential for some forage toxicities and other problems that can develop this fall. High nitrates and prussic acid poisoning are the main potential concerns. These are primarily an issue with annual forages and several weed species, but nitrates can be an issue even in drought stressed perennial forages. There is also an increased risk of bloat when grazing legumes after a frost.

Nitrate Toxicity

Drought stressed forages can accumulate toxic nitrate levels. This can occur in many different forage species, including both annuals and perennials. Several areas in Ohio have been dry of late. Corn, oat and other small grains, sudangrass, and sorghum sudangrass, and many weed species including johnsongrass can accumulate toxic levels of nitrates. Even alfalfa can accumulate toxic nitrate levels under severe drought stress.

Before feeding or grazing drought stressed forage, send in a forage sample to be tested for nitrates. Most labs now offer nitrate tests, so it is likely that you can get a forage nitrate test by your favorite lab. Several labs are listed at the end of this article that do nitrate testing. This list is for your convenience and no labs are intentionally omitted. Check your chosen lab's website or call them and follow their specific instructions about how to collect and handle the sample. The cost is well worth it against the risk of losing animals.

See the following references for more details:

Nitrates in Cattle Sheep and Goats (University of Wisconsin Extension) https://fyi.extension.wisc.edu/forage/nitrate-poisoning-in-cattle-sheep-and-goats/

Nitrates and Prussic Acid in Forages (Texas Cooperative Extension) http://forages.tamu.edu/PDF/Nitrate.pdf

Nitrate accumulation in frosted forages. Freezing damage slows down metabolism in all plants, and this might result in nitrate accumulation in plants that are still growing, especially grasses like oats and other small grains, millet, and sudangrass. This build-up usually is not hazardous to grazing animals, but greenchop or hay cut right after a freeze can be more dangerous. When in doubt, test the forage for nitrates before grazing or feeding it.

Prussic Acid Toxicity

Several forage and weed species contain compounds called cyanogenic glucosides that are converted quickly to prussic acid (i.e. hydrogen cyanide) in freeze-damaged plant tissues, or under drought conditions. Some labs provide prussic acid testing of forages. Sampling and shipping guidelines should be carefully followed because prussic acid is a gas and can dissipate during shipping leading to a false sense of security when no prussic acid is found in the sample.

Drought stress can affect prussic acid poisoning risk. Drought-stunted plants can contain or produce prussic acid and can possess toxic levels at maturity. Prussic acid poisoning can be associated with new regrowth following a drought-ending rain. Rain after drought plus young stages of plant maturity can combine to cause toxic levels of prussic acid in forage.

Plant age affects toxicity. Young, rapidly growing plants of species that contain cyanogenic glucosides will have the highest levels of prussic acid. Pure stands of indiangrass can have lethal levels of cyanide if they are grazed when the plants are less than 8 inches tall.

Species with prussic acid poisoning potential. Forage species that can contain prussic acid are listed below in decreasing order of risk of toxicity:

Grain sorghum = high to very high toxic potential

Indiangrass = high toxic potential

Sorghum-sudangrass hybrids and forage sorghums = intermediate to high potential

Sudangrass hybrids = intermediate potential

Sudangrass varieties = low to intermediate in cyanide poisoning potential

Piper sudangrass = low prussic acid poisoning potential

Pearl millet and foxtail millet = rarely cause toxicity

Species not usually planted for agronomic use can also develop toxic levels of prussic acid, including the following:

Johnsongrass
Shattercane
Chokecherry
Black cherry
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.

Frost affects toxicity. Cyanogenic glucosides are converted quickly to prussic acid (i.e. hydrogen cyanide) in freeze-damaged plant tissues. Prussic acid poisoning potential is most common after the first autumn frost. New growth from frosted plants is palatable but can be dangerously high in prussic acid.

Fertility can affect poisoning risk. 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.

Fresh forage has more risk. 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.

Prussic Acid Toxicity Symptoms

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.

Grazing Precautions Against Nitrate & Prussic Acid Poisoning

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

Under drought conditions, allow animals to graze only the upper one-third to one-half of the plant or the leaves of coarse-stemmed forages if the nitrate levels in these plant parts is safe. Monitor animals closely and remove them quickly when the upper portion of plants is grazed off.

Generally, forage nitrate levels drop significantly 3 to 5 days after sufficient rainfall, but it is always safer to send in a sample for testing before grazing or feeding forage soon after drought stress periods.

Making hay does not reduce nitrate levels in the forage, but the hay can be tested and diluted sufficiently with other feeds to make it safe for animals.

Ensiling forage converts nitrates to volatile nitrous oxides, or "silo gases". These gases are highly toxic to humans. Safety practices include removing tarps from a portion of the silo a day or two before removing the silage from the bunker.

Do not graze on nights when frost is likely. High levels of toxic prussic acid 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 prussic acid.

New growth may appear at the base of the plant after a non-killing frost. If this occurs, wait for a killing freeze, then wait another 10 to 14 days before grazing the new growth.

Do not 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 will not reduce the level of nitrates and is not likely to greatly reduce the level of prussic acid present. However, greenchopping 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. If feeding greenchopped forage of species containing cyanogenic glucosides, feed it within a few hours of greenchopping, and do not leave greenchopped forage in wagons or feedbunks overnight.

Hay and Silage

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 any time after a frost if you are making hay. It is 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.

Species That Can Cause Bloat After Frost

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

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Tips to Improve the Success of Weaning Beef Calves

By Jeff Lehmkuhler, Associate Extension Professor, University of Kentucky

Fall is officially here and with it will bring the country sound of calves bawling as weaning occurs on beef cattle farms. This time of year can be busy with field crops, getting the last cutting of hay and other farm activities. Take some time to prepare for weaning of the beef calves to add value to the calf crop prior to marketing. Weaning preparation can reduce stress for you and the calves.

A Few Tips to Successful Weaning

1) Minimize Transitional Stress – have castration, dehorning, first round vaccines and other procedures done prior to weaning; minimize diet changes and wean on pasture if possible and/or provide the same grain mix if calves were creep fed; consider fenceline weaning if facilities allow; watch the weather forecast and avoid weaning when rain or significant temperature changes (20+ degrees) are predicted within 3-5 days of weaning.

2) Ensure calves can drink clean, fresh water – for energy free/freeze proof waterers, consider removing balls/lids or locking balls/lids down so calves have access to water; long, shallow water troughs will encourage water intake the first 2-3 days post-weaning; check waterers daily and clean routinely to keep water free of feed, hay, and fecal contamination.

3) When feeding hay, provide a high quality grass hay – second or third cutting, leafy grass hay with 50% or less legumes is preferred; provide hay free-choice and drape hay over the feed bunk if using concrete bunks; ensure round bales are not so tightly wrapped that calves can't pull hay from the bale easily; hay should be free of mold to encourage intake.

4) When offering a grain mix, start at 0.5-0.75% of body weight – hand-feed 3-4 pounds per calf (400-500 lb weaning weights) the first few days; encourage calves to approach the feed bunk by walking them up to the bunk if needed; provide 18-24 inches of linear bunk space per calf (10 foot feed trough for every 10-12 head);

5) Grain mix considerations – if using a commercial grain mix read and follow the feeding directions; for custom mixes consider including low starch containing feedstuffs such as soybean hulls, corn gluten feed, dried distillers grains, rice bran, wheat middlings, and others; corn can be used for weaning mixtures and requires additional bunk management; consult your nutritionist for recommendations.

6) Balance ration for target gains – Ensure the energy and protein levels of the diet are going to support desired performance; Often hay will need to supplemented with a grain mix that is 80%+ TDN and 16-20% crude protein; Have the minerals, vitamins, and any medications mixed into the grain mix; grain supplementation of 1-2% of body weight may be necessary to achieve target gains after calves have overcome weaning stress.

7) Take preventative steps for coccidiosis – consider including an ionophore, decoquinate or other medication to prevent or control coccidiosis.

8) Manage the environment – Provide access to shade when weaning during warm months; Keep barn areas dry and well bedded; Ensure fences are sound and free of broken boards or breaks in the fence that could lead to injury.

9) Be prepared to treat – having antibiotics on-hand for treatment of respiratory disease quickly will provide for a quicker response; digestive disorders can occur so have the necessary tools to manage bloat ready; evaluate castrated calves to ensure they are healing.

10) Market your calves – this means to communicate the to the market manager information on what products have been given, length of time calves have been weaned and other information that will make your calves more marketable; market calves in sales when other weaned calves of similar weight/type will be marketed to allow load lots to be assembled to increase opportunities for capturing premiums; consider preconditioning market programs.

For more information on managing the beef cattle herd, contact your local county Extension office. Additional information on weaning can be found in our Extension fact sheet ID-258 Weaning Beef Calves http://www2.ca.uky.edu/agcomm/pubs/ID/ID258/ID258.pdf . See you soon and hoping your calves top the market!

Frosted

Continued from Page 4

uniform amount each day.

Frost and Equine Toxicity Problems

(source: Bruce Anderson, University of Nebraska)

Minnesota specialists report that fall pasture, especially frost damaged pasture, can have high concentrations of nonstructural carbohydrates, like sugars. This can lead to various health problems for horses, such as founder and colic. They recommend pulling horses off of pasture for about one week following the first killing frost.

High concentrations of nonstructural carbohydrates are most likely in leafy regrowth of cool-season grasses such as brome, timothy, and bluegrass but native warm-season grasses also may occasionally have similar risks.

Another unexpected risk can come from dead maple leaves that fall or are blown into horse pastures. Red blood cells can be damaged in horses that eat 1.5 to 3 pounds of dried maple leaves per one thousand pounds of bodyweight. This problem apparently does not occur with fresh green leaves or with any other animal type. Fortunately, the toxicity does not appear to remain in the leaves the following spring.

Where to Test Forages for Nitrates (there probably are others not listed):

Brookside Laboratories, Inc., New Bremen, Ohio, www.blinc.com/, 419-977-2766

Cumberland Valley Analytical Services, Waynesboro, PA, www.foragelab.com/, 800-282-7522

Dairyland Labs, www.dairylandlabs.com, Wisconsin & Minnesota, 608-323-2123

Dairy One, dairyone.com, Ithaca, NY, 800-344-2697

Holmes Lab, holmeslab.com, Millersburg, Ohio, 330-893-2933 or 330-893-1326

Rock River Lab, www.rockriverlab.com, Wooster, OH, 330-462-6041

Spectrum Analytic, www.spectrumanalytic.com, Washington Court House, Ohio, 800-321-1562

Sure-Tech, www.winfieldunited.com/ research-and-innovation/suretech-laboratories, Indianapolis, Indiana, 800-266-7176

Fall-applied herbicides - what goes around comes around

By Mark Loux

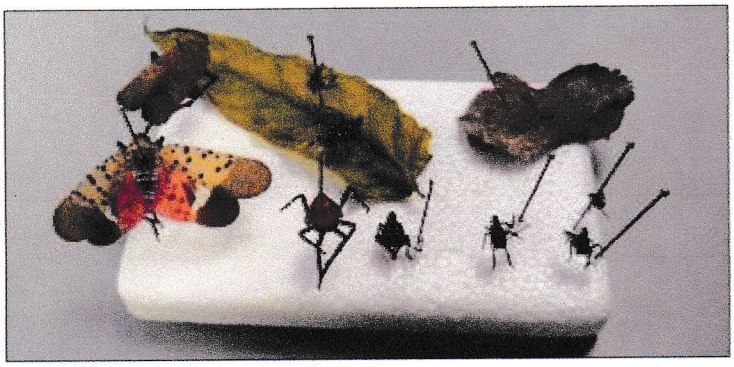
Fall herbicide treatments have fallen off over the past several years for a couple of reasons, among them the effectiveness of new soybean trait systems for managing marestail, some generally crappy weather in late fall, and efforts to reduce input costs. We are seeing a resurgence in some weeds, such as dandelion, which respond well to fall herbicides, though. Some growers have also experience issues with messy fields and late spring burndowns that could have been avoided with fall herbicides. It's worth recalling the history of fall herbicide applications, which helps explain some of their benefits, especially if you have not been managing weeds or making recommendations for as long as some of us have.

In the late 1990s, a few years after the initial introduction of Roundup Ready soybeans, a number of growers were experiencing problems in spring with dense infestations of winter annual weeds - chickweed, purple deadnettle, mustards, cressleaf groundsel, etc – and also dandelion. These weeds were generally interfering with spring tillage and crop establishment, slowing the drying and warming of soils, and also harboring insects. Spring burndown herbicides could be variably effective and, under cool conditions, slow to kill the weeds. One of the reasons for the increase in these weeds was the use of only glyphosate in soybeans, and the oversimplification of herbicide programs. This included a failure to apply burndown early enough (the "hey I'll just plant soybeans into weeds and spray glyphosate whenever I get around to it" approach), which allowed winter annuals to go to seed, and a failure to include residual herbicides, some of which could possibly persist long enough to shut down some of the late-season winter annual weed emergence. This approach also allowed dandelion to proliferate and become more difficult to kill, because it had too much time to increase it's root size and go to seed unimpeded. We recall walking fields infested with dandelion in the fall where the weeds were so dense we almost could not see the soil. Application of herbicides in fall largely solved these issues, providing for a weedfree seedbed well into spring, and reducing dandelion back to manageable levels.

Fast forward to the mid 2000s when glyphosate-resistant marestail became widespread. While the spring-applied mix of glyphosate and 2,4-D worked for a while on marestail, the increase in the level of glyphosate resistance shifted all of the work to the 2,4-D, which is really only about 70% effective on overwintered marestail. The net result was a failure of many burndown treatments for control of the overwintered plants. The solution was fall application of 2,4-D mixtures, which controls fall-emerging plants, so that the spring burndown has to control only small spring emergers. Fall herbicide treatments have been standard component of marestail management programs for many growers since then. More recently, the availability of some alternative spring burndown treatments that can include Sharpen, glufosinate, Gramoxone, and/or dicamba have reduced the need for fall herbicide treatments on marestail. A consequence of this, along with a move once again to oversimplify herbicide programs, appears to be an increase in dandelion and winter annuals again. The Xtend, Enlist, and LibertyLink soybean programs cannot adequately control some of these weeds if not used in an integrated, multi-application system that includes an occasional fall herbicide treatment. The bottom line here is that fall-applied herbicides, even if used only every other year or so, go a long way toward preventing issues with these weeds and maintaining a more problem-free no-till planting situation. This can be especially true when wet weather in spring delays herbicide application and planting, and the result is a big, dense weed population that herbicides struggle to control. Fields with a fall herbicide treatment are likely to stay much more manageable into late spring compared to those without.

Winter annuals

So this is just a suggestion to think about making fall herbicides part of the weed management program again, and especially where the increase in winter annual weeds, dandelion, wild carrot, and curly dock has been noticeable and problematic. We have previously run articles in C.O.R.N. that cover the details of fall herbicide treatments, and this information really has not changed much.



The spotted lanternfly (SLF) (Lycorma delicatula) is an invasive planthopper first detected in eastern Pennsylvania in Berks County in 2014.

Spotted Lanternfly Update

By Amy Stone

Since the initial detection in Pennsylvania, many eyes have been watching to the east. Earlier this year, Pennsylvania expanded their quarantine to include an additional 14 counties, bringing the total to 26 counties in the state to our east. Two (Beaver and Allegheny Counties) of the 14 newly quarantined counties in 2020 were in western Pennsylvania, near the Ohio border. As the SLF inches its way toward the buckeye state, more people are becoming aware and engaged in looking for this insect pest.

With the increased awareness, suspect reports in Ohio are 'popping up.' The Ohio Department of Agriculture (ODA) is taking each report very seriously to determine if what is being reported is SLF or a look-a-like. If you suspect you have seen SLF, we ask that you make a report directly to ODA either by phone (614-728-6400), email (plantpest@agri.ohio. gov) or on their online reporting form located on their website (https://agri.ohio.gov/wps/portal/ gov/oda/divisions/plant-health/invasive-pests/slf), or by making a report on a downloadable app called the Great Lakes Early Detection Network (GLEDN) App at https://apps.bugwood.org/apps/gledn/

No matter which way you choose to report what you are seeing, photographs are an important part of the actual report. If you are able to capture and contain the insect/insects, that is also very helpful. Once the report is made, it will be determined if the insect submitted is SLF. If it is confirmed that the insect is SLF, the next step would be to determine if there is a reproducing population in the immediate area, or if the find was an individual and has not yet established itself as a reproducing population. This information is very important as other states have found that this insect can be a hitch-hiker, catching a ride on vehicles (i.e.: cars, truck, or trains) and depending on the situation, could still be alive, or could be dead on arrival (DOA).

It is important that if you or your family is traveling from, or through an area where SLF is present, before leaving the area, be sure to check your vehicle for the insect both inside and outside, and carefully go over any items that were outside during your trip. This should include looking for all stages of the insect, including egg masses that will be laid late summer and into the fall. You will want to re-check your vehicle and the contents again when you arrive home just to make sure that nothing was missed.

We all need to continue to be vigilant and do our part to monitor for this insect in Ohio. The GLEDN App also allows for negative reports. This is extremely helpful if you have identified an area that you can check on a regular basis looking for the signs and symptoms of the SLF. Ideally the location has a tree-of-heaven (Ailanthus altissima), a favorite food of the insect, especially the adults which are currently active in areas where the pest has been found.

You may ask, why is it important that we find this insect if it is here in Ohio? Early detection is key when we talk about invasive species. In addition to its favorite host, which is also a non-native species, it can feed on over 70 different plant species, but has found grapes, apples, and hops to its liking. The feeding injury can cause stress on the plants that can lead to decline and sometimes death. As their numbers build, they have become a nuisance in other areas as shown in some photos from Pennsylvania.

It is important to stay updated, as the situation can change quickly. If you can help look for this insect in your own landscape, or when you are outside, you can join the 'Spot the Spot' team in Ohio. While we hope that we don't find it in Ohio, if it is here, it is important that we know it and are able to determine the extent of the population. ODA, in cooperation with USDA, will verify any suspect reports, and if confirmed, will make an official announcement. If you happen to see any unofficial reports shared on social media channels, encourage the individual to make an official report or share the post with ODA yourself so that proper protocols are followed and that no finds go unreported and can't be followed up on to best manage the situation in Ohio.

For additional information on the insect, including photos of each life-stage, check-out the ODA website at: https://agri.ohio.gov/wps/ portal/gov/oda/divisions/plant-health/invasive-pests/slf

Are those mosquitoes on steroids… No, they are just Crane Flies

By Curtis Young, CCA

Crane flies (a.k.a. daddy longlegs and mosquito hawks) belong to the insect Order Diptera (the true flies) in the Family Tipulidae. There are some 15,000 species of crane fly throughout the world. Crane flies and mosquitoes belong to a common subgroup of the flies and crane flies do look superficially like giant mosquitoes. Crane flies fortunately do not possess the mosquito piercing/sucking mouthparts for taking a blood meal. Therefore, they do not bite other animals for blood. Some adult crane flies do not eat in their short life span or feed on liquids from plants. Adults live for upwards of 10-14 days.

The larvae of crane flies are maggots called leatherjackets because of their tough, leathery outer covering (exoskeleton). Depending on the species of crane fly, the larvae may be aquatic, semi-aquatic or terrestrial living in soils that are high in organic matter and relatively moist for most of the year. Some species can attack living plants eating root hairs, small roots, outer coverings of roots and stems, and occasionally eating leaves such as grass blades.

Adults usually appear in Ohio landscapes during two peak periods. Some species produce a heavy adult emergence in the spring while other species generate adults in the fall. Currently, parts of Ohio are experiencing extremely large numbers of newly emerged adult crane flies. These large numbers of crane flies flittering above lawns, pastures, and field crops are mostly a nuisance, and some of them can find their way into homes.

Like the adults, the larvae occasionally appear en masse spilling onto driveways or sidewalks, especially after heavy rainfalls. Such a dramatic appearance in a landscape may signal that the lawn has a thatch problem since the larvae are particularly fond of decaying thatch. However, the native species found in Ohio cause no damage to the turfgrass.

The same cannot be said for two non-native species that have been found in the northeastern states and eastern Canada and have now spread to Ohio and Michigan. Both were accidentally introduced from Europe. Larvae of the European crane fly (Tipula paludosa), and the Marsh crane fly (T. oleraceae) feed on the crowns and blades of living grass plants. Both can cause serious damage to turfgrass. They are also known to do damage to cereal (wheat, oats, rye, barley, etc.) and other crops, and a variety of minor crops ranging from sugar beets and turnips to brassicas, berries and carrots.

Agricultural & Natural Resources Income Tax Issues Webinar to be held Dec. 18, 2020

By Barry Ward, Director, OSU Income Tax Schools & Julie Strawser, OSU Income Tax Schools

Tax practitioners, farmers and farmland owners are encouraged to connect to the Agricultural and Natural Resources Income Tax Issues Webinar (via Zoom) on Dec. 18 from 8:45 a.m. to 3:30 p.m. The event is sponsored by Ohio State University Income Tax Schools.

The webinar focuses on issues specific to farm tax returns related to agriculture and natural resources and will highlight timely topics and new regulations related to COVID-related legislation.

The program is an intermediate-level course for tax preparers whose clients include farmers and rural landowners. Farmers who prepare and file their own taxes will also benefit from the webinar.

Tentative topics to be covered during the Ag Tax Issues webinar include:

- The Impact of New Legislation on Farmers
- Depreciation of Farm Assets
- Farm or Ranch Employer-Provided Meals and Lodging
- Tax Issues for Family-Owned Farms
- Family Farm Special Use Valuation
- Self-Employment Tax on Agricultural Income
- Like-Kind Exchange Issues Impacting Farmers
- Getting Out of the Business of Farming
- Retirement & Social Security Concerns for Farmers
- Form 4797, Sale of Business Property
- Qualified Business Income Tax Issues for Farmers
- Tax Issues Arising Upon the Death of a Farmer
- Current Uniform Capitalization Rules for Orchards and Vineyards

The cost for the one-day school is $150, and applications have been made for the following continuing education credits:

- Accountancy Board of Ohio, CPAs (6 hours)
- Office of Professional Responsibility, IRS (6 hours)
- Supreme Court of Ohio, Attorneys (5.25 hours)

Registration includes the Agricultural Tax Issues Workbook. The deadline to register is Dec. 8 to ensure participants will receive the workbook in the mail before the workshop. The live webinar will also feature options for interaction and the ability to ask questions about the presented material.

More information on the workshop, including how to register, can be found at go.osu.edu/agissues2020

Contact Barry Ward at 614-688-3959, ward.8@osu.edu or Julie Strawser at 614-292-2433, strawser.35@osu.edu with questions.

OSU EXTENSION CALENDAR OF EVENTS

NOVEMBER 2020

17 4-H CARTEENS, Ag Credit Building Conference Room, 6:30 pm

18 4-H Horse & Pony Committee Virtual, 7:30 pm (contact Becky for login)

19 Composting 101 Virtual , 6:30 pm

23 Strategies for Decluttering Virtual, 7 pm

27 Adventures in Morrow (AIM) participation sheets due!

DECEMBER 2020

1 Ohio 4-H Awards Recognition Virtual, 7 pm

1 Take Charge of Your Diabetes During the Holidays Virtual, 7 pm

5 2021 Fair Steer/Market Heifer Pre-Fair Weigh-In, Fair Grounds, 8-11 am

7 Jr. Fairboard Meeting, Location TBA, 7 pm

17 Backyard Composting Virtual, 6:30 pm

28 Quality Assurance Test Out for 2021, Extension Office, 1 pm, RSVP by 12 noon

JANUARY 2021

4 Jr. Fairboard Meeting, Location TBA, 7 pm

14 Pork Producers Meeting, Ag Credit Building Conference Room, 7 pm

19 4-H CARTEENS, Ag Credit Building Conference Room, 6:30 pm

21 4-H Horse & Pony Committee Virtual, 7:30 pm (contact Becky for login)

21 Verma Composting Virtual, 6:40 pm

FEBRUARY 2021

1 Jr. Fair Board Meeting, Location TBA, 7 PM

11 Pork Producers Meeting, Ag Credit Conference Room, 7 pm

18 4-H Horse & Pony Committee, Location TBA, 7:30 pm

18 Animal Waste Composting Virtual, 6:30 pm

MARCH 2021

1 Jr. Fair Board Meeting, Location TBA, 7 pm

18 4-H Horse & Pony Committee, Location TBA, 7:30 pm

18 Harvesting Compost Virtual, 6:30 pm

23 All About Roses Virtual, 6:30 pm

29 4-H CARTEENS, Ag Credit Building Conference Room, 6:30 PM