Hello Northeast Ohio Counties!

Lots of second and third cutting hay was made over the August dry-spell. Read today’s newsletter to learn more about late season forage management and decide if it’s worth taking another cutting this year.

Most of Northeast Ohio hasn’t seen significant rainfall for most of the month of August so far. We currently have rain in the forecast for the end of the week but that could depend on what the hurricane in the Gulf of Mexico does.

Have a great week everyone!
Making Corn Silage in Dry Conditions

By: Bill Weiss
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-28/making-corn-silage-dry-conditions

The primary goal of making corn silage is to preserve as many nutrients in the corn plant as possible, to produce a feed that is acceptable to cows, and to minimize any risks associated with feeding the silage. The following are important considerations for making corn silage when growing conditions have been dry.

Chop at the correct dry matter concentration (Editor’s note: see accompanying article “Corn Silage Harvest Timing”). Drought-stressed corn plants are often much wetter than they appear, even if the lower plant leaves are brown and dried up. Before starting chopping, sample some plants (cut at the same height as they will be with the harvester) and either analyze DM using a Koster tester or microwave or send to a commercial lab (turn-around time may be a few days if you send it to a lab). If the plants are too wet, delay chopping until the desired plant DM is reached. The plant may continue to accumulate DM (increase yield), and you will not suffer increased fermentation losses caused by ensiling corn that is too wet.

Use a proven inoculant. When silage is worth upwards of $80/ton (35% DM) reducing shrink by 2 percentage units has a value of about $2/ton. Homolactic inoculants (these are the ‘standard silage inoculants’) produce lactic acid which reduces fermentation losses but sometimes can increase spoilage during feedout. The buchneri inoculants increase acetic acid which slightly increases fermentation losses but greatly reduce spoilage during feedout. Severely drought-stressed corn can have a high concentration of sugars because the plant is not depositing starch into the kernels. High sugar concentrations can increase spoilage at feed out because it is food source for yeasts and molds. Use of a good (from a reputable company with research showing efficacy) buchneri inoculant may be especially cost-effective with drought-stressed corn.

Check for nitrates. Drought-stressed corn plants can accumulate nitrates which are toxic (as in fatal) to ruminants. Silage from drought-stressed fields should be tested before it is fed. Ideally, corn plants should be sampled and assayed for nitrates prior to chopping (most labs offer very rapid turn-around times for a nitrate.
If values are high, raising the cutting height will reduce nitrate concentrations in the silage because the bottom of the stalk usually has the highest nitrate concentrations. Because forage likely will be very limited this coming year, do not raise the cutting height unless necessary to reduce nitrate concentrations. Nitrate concentrations are often reduced during silage fermentation so that high nitrates in fresh corn plants may end up as acceptable concentrations in the fermented corn silage. Silage with more than 1.5% nitrate (0.35% nitrate-N) has a high risk of causing nitrate toxicity in cattle. See the following University of Wisconsin-Extension fact sheet for more details on nitrate toxicity: https://fyi.extension.wisc.edu/forage/nitrate-poisoning-in-cattle-sheep-and-goats/

**Chop at correct particle length.** Do not chop too finely so that the effective fiber concentration of corn silage is reduced. If the corn plants have limited ear development, fine chopping is not needed for good starch digestibility. Generally, a theoretical length of cut (TLC) of about ½ inch is acceptable (longer with kernel processing and BMR silage) but this varies greatly between choppers and crop moisture concentration. If using a Penn State particle size sieve, aim for 5 to 10% on the top screen.

**Use a kernel processor.** Kernel processed corn silage tends to pack more densely than unprocessed corn silage which may help increase aerobic stability. Kernel processing will also increase starch digestibility by breaking the kernel. Poor starch digestibility is a major problem with dry, mature corn silage. Reduce Shrink. Fill quickly, pack adequately, cover, and seal the silo as soon as you are done filling. Practicing good silage-making techniques can reduce shrink by more than 5 percentage units, which can be worth more than $4/ton of corn silage (35% DM).

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**Valuing Bred Beef Heifers**
By: Dr. Andrew Griffith, Assistant Professor, Department of Agricultural and Resource Economics, University of Tennessee
Source: https://u.osu.edu/beef/2020/08/19/valuing-bred-beef-heifers/

Several weeks ago, there was a discussion on rules of thumb for valuing bred beef heifers. This led to a question this week about rules of thumb related to valuing bred cows and their appreciation and depreciation.
There are no rules of thumb, but there was some research performed at Oklahoma State University that can be helpful in determining bred cow value. The study found several factors including animal age, weight, overall quality, stage of gestation, hide color, and time of year influence price. Based on the study findings, bred heifers and three year old animals have the highest value, but bred cows hold their value fairly well until age six. Bred cow values increases the longer bred an animal is and the heavier she is.

There are some rather useful details in the study that can be used to assist producers in determining bred cow value as well as make management decisions to reduce value loss due to depreciation. The complete study can be found at the following website: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/B86DA932FD2E964ECF4FFD31680C0EB9/S1074070817000207a.pdf/price_determinants_of_bred_cows.pdf.

**The Ag Law Harvest**

By: Ellen Essman

Source: https://farmoffice.osu.edu/blog

This edition of the Ag Law Harvest is heavily focused on recent environmental case law at the federal level. Read on to find out how habitats, migratory birds, environmental and administrative laws, and Trump's new Waters of the United States rule have fared in recent decisions.

What does “habitat” mean to you? Think about it carefully, because now is your chance to provide your input to the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). Readers of the blog may remember we reported on a Supreme Court case dealing with critical habitat under the Endangered Species Act (ESA) a few years ago. The Supreme Court remanded the case back to the Fifth Circuit Court of Appeals. The Court of Appeals was charged with interpreting the word “habitat.” The Court of appeals then punt the interpretation to the U.S. District Court for the Eastern District of Louisiana, where the parties settled the case. Even with a settlement, the question of what “habitat” means remains. To remedy this omission, the FWS and NMFS published a proposed rule on August 5th to define “habitat” under the ESA. In this proposal, FWS and NMFS put forward two possible definitions of “habitat”:

- The physical places that individuals of a species depend upon to carry out one or more life processes. Habitat includes areas with existing attributes that have the capacity to support individuals of the species; or
• The physical places that individuals of a species use to carry out one or more life processes. Habitat includes areas where individuals of the species do not presently exist but have the capacity to support such individuals, only where the necessary attributes to support the species presently exist.

The agencies are asking for public comment on the two definitions, and “on whether either definition is too broad or too narrow or is otherwise proper or improper, and on whether other formulations of a definition of ‘habitat’ would be preferable to either of the two definitions, including formulations that incorporate various aspects of these two definitions.” The comment period is open until September 4, 2020.

Will a lawsuit stop planned changes to NEPA? At the end of July, a number of environmental groups banded together and filed a 180-page complaint against the U.S. Council on Environmental Quality (CEQ). The complaint challenges the Council’s update to rules under the National Environmental Protection Act (NEPA). The groups’ basic argument is that the CEQ, under the direction of the Trump administration, published a new administrative rule under NEPA, but did not follow the Administrative Procedure Act (APA), which governs agency actions, when doing so. The lawsuit alleges: “[r]ather than make this drastic change deliberately and with the careful process the APA requires, CEQ cut every corner. The agency disregarded clear evidence from over 40 years of past implementation; ignored the reliance interests of the citizens, businesses, and industries that depend on full and complete NEPA analyses; and turned the mandatory public engagement process into a paper exercise, rather than the meaningful inquiry the law requires.” Basically, the groups argue that the administration ignored the APA all together. Why is this important? The environmental groups argue that the new rule essentially makes it possible for the federal government to push through projects that might have impacts on citizens and the environment, such as pipelines and roadways, much more quickly, and without much input from the public. You can read the final NEPA rule here. We will have to wait and see whether the court agrees that the APA was violated in the creation of this rule.

Ruling on Migratory Bird Act clips the administration’s wings. Another lawsuit against the federal government was decided on August 11, 2020. The U.S. District Court for the Southern District of New York sided with a number states as well as environmental groups, including the Natural Resources Defense Fund and the National Wildlife Federation. The Court found that the U.S. Department of the Interior (DOI) and FWS (at the direction of the administration) could not overturn 50 years of DOI interpretations of what “killings” and “takings” of birds meant under the Migratory Bird Treaty Act of 1918 with a single memo. Traditionally, the killing or taking any migratory bird, even accidentally or incidentally, has been interpreted as a violation of the Act. DOI’s memo sought to change this, only making the Act only apply to intentional hunting, killing, or taking. Essentially, if a business or
person had a pond full of wastewater, and migratory birds swam in it, eventually killing the birds, it would only be “incidental” taking and not intentional under DOI’s logic in the memo. Ultimately, Judge Valerie Caproni channeled Atticus Finch by stating “It is not only a sin to kill a mockingbird, it is also a crime,” meaning that one memorandum could not overturn the fact that incidental and accidental takings of birds are still takings punishable by the Act.

Another WOTUS lawsuit bites the dust. There’s always something going on with the Waters of the United States (WOTUS) rule. In April, the Trump administration published its final rule on WOTUS, which replaced the Obama administration’s beleaguered rule from 2015. Almost immediately, the rule was challenged in court by those who thought it went too far in protecting waters, as well as those who felt it didn’t go far enough. The Oregon Cattlemen’s Association, which falls into the latter camp, filed suit against the EPA and the U.S. Army Corps of Engineers over the 2015 rule, later amending their complaint to address the 2020 rule. The Association claimed that both the old and new rules went too far, and that EPA did not have the authority to carry them out under the Clean Water Act. The judge dismissed the Association’s case without prejudice for lack of standing, meaning that the issue may be litigated again, but the Oregon Cattlemen’s Association could not show that its members are being negatively affected by the 2020 rule at this time.

Late Season Forage Harvest Management
By: Mark Sulc
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-28/late-season-forage-harvest-management

The best time to take a last harvest of alfalfa and other legumes is sometime in early September in Ohio, for the least risk to the long-term health of the stand. These forages need a fall period of rest to replenish carbohydrate and protein reserves in the taproots that are used for winter survival and regrowth next spring.

Many forage producers around the state have been cutting this past week and are continuing into this week. It will be ideal if this is indeed the last harvest of the season. But some growers might try to squeeze out another late cutting, and others have fields that are not quite ready for harvest right now. Like most farming decisions, there are trade-offs and risk factors to consider when making a fall harvest of forage legumes after the first week of September. This article reviews best management practices and risk factors affecting fall cutting management.

The decision of when to take the last harvest with the least risk to the stand can be boiled down to two choices: 1) cut early enough in the fall (generally early September)
to permit alfalfa to regrow and replenish carbohydrate root reserves, or 2) cut late enough so that alfalfa does not regrow and use up root reserves prior to winter dormancy. Cutting in between those times (mid-September to mid-October) means more risk to the stand. Factors such as previous cutting management, age of stand, soil fertility, variety, and soil moisture affect the level of that risk.

For those who are risk adverse, following the last cutting date recommendations offers the highest probability of promoting good winter survival and vigorous growth next spring. The recommendation in the 15th edition of the Ohio Agronomy Guide is to complete the last regular harvest of alfalfa by September 7 in northern Ohio, September 12 in central Ohio and by September 15 in southern Ohio. The corollary is to delay final harvest until a killing frost (25F for several hours) has occurred.

Another approach to fall harvest management uses growing degree-days (GDD) rather than calendar dates. Research conducted in Canada showed that alfalfa needs 500 GDD (based on degrees Celsius and base 5 C for alfalfa growth) between the last cutting and a killing frost to generate sufficient regrowth to provide good winter survival and yield potential the following year. Dan Undersander, University of Wisconsin Extension retired forage specialist, wrote in a 2012 article “…we do not need to wait for a killing frost to take the last cutting. We must only wait until it is so cool that little or no regrowth will occur. Thus, harvesting in late fall, when less than 200 GDD will accumulate, minimizes winter injury.”

The period between an accumulation of 200 to less than 500 GDD is a no-cut period (GDD calculated from degrees Celsius scale with base 5C). This GDD approach provides more exact timing for the date of last harvest, but it involves more risk because the grower must predict or consider the probability of either accumulating enough GDD for energy replenishment or GDD not accumulating to enough to trigger regrowth that uses up energy reserves. Historic weather data, like that available from the OSU weather stations (http://www.oardc.ohio-state.edu/weather1/), is useful to calculate those probabilities.

Based on this GDD approach, we studied 5 years (2013-2017) of weather data at Wooster, OH. The date of a killing frost (25 F for several hours) ranged from November 3 to 22. The no cut zone of 500 to 200 GDD prior to the killing frost was September 17 to October 13 for three of the five years, but September 4 to 30 in 2014 and September 10 to October 4 in 2013.

So, the period of most risk for cutting alfalfa based on this GDD criterion agrees well with past recommendations to not cut alfalfa from early September to mid-October. Therefore, cutting in late October prior to a true killing frost of forage legumes, is likely to result in little to no regrowth and no significant depletion of root reserves. However,
there is still the risk of frost heaving with the late removal of forage cover (discussed more below).

Previous harvest management should be a part of the risk assessment for fall cutting. The cutting frequency during the growing season affects the energy status of the plant going into the fall. Frequent cutting (30-day intervals or less) results in the plant never reaching full energy reserve status during the growing season. A short regrowth period just prior to the fall harvest can be especially risky, if that fall harvest occurs between mid-September and early October, because the regrowth uses root reserves and there won’t be enough growing weather remaining for the plants to restore a high level of root reserves before cold weather shuts down the plants. This lower root reserve status may limit winter survival and spring regrowth, depending on the winter and early spring growing conditions.

Variety selection may also affect the fall cutting risk assessment. Today’s top varieties have genetics selected to better withstand intensive cutting schedules. Alfalfa varieties with high disease resistance and good levels of winter hardiness will be more tolerant of a fall cutting. Adequate fertility, especially soil potassium, and a soil pH near 6.8 will improve plant health and increase tolerance to fall cutting. Stands under 3 years of age are generally more tolerant of fall cuttings than older stands where root and crown diseases are setting in. However, you have more productive stand life to lose if younger stands are harmed by fall cutting.

Soil drainage and soil moisture affect the risk of fall cutting. High soil moisture slows down the cold hardening process, increasing the risk of winter injury. Alfalfa on well-drained soils tolerates late fall cuttings better than on moderately or poorly drained soils. But a word of CAUTION - Removing the top growth of alfalfa plants going into the winter on heavy soils and poorly drained soils increases the risk of spring frost heaving. Heaving is a significant risk on many Ohio soils with higher clay content. This would be a concern when cutting very late after the 200 GDD threshold date.

Finally, consider the economics of a fall harvest. Often the height of the alfalfa is deceptive as an indicator of tonnage. The resulting windrow after cutting is often sparse. Thus, the cost of mechanical harvesting is high on a per ton basis.

Fall cutting risk can be reduced but not eliminated. Nature bats last and alfalfa stand health and survival will suffer more from fall cutting when when have early freezes, open and very cold winters, early springs with ice, and/or extreme rainfall and temperature variations. If at all possible, we urge producers to observe the fall rest period for forage legumes. And if you do harvest during the fall rest period, leave some strips of uncut forage to compare to. You might learn something useful!
2020 Ashtabula County Local Food Guide Now Available
By: Julie Wayman

The 2020 edition of the Ashtabula County Local Food guide has been published. 2020 is the 4th year of publication for this guide that started in 2016 as a project of what was then the Ashtabula Local Food Council. Since then, it has become a collaborative project between OSU Extension and what is now called Ashtabula Local Food-a grassroots group of local food enthusiasts.

The Guide lists all the farmers and producers that sell food within Ashtabula County and includes listing for the area Farmers Markets, Honey Producers, Meat Butchers/Processors, and information on local food related resources such as community gardens, educational opportunities, seed libraries, and related programming. This year’s guide boasts 14 new listings. These were farms that may have been in business previous years but somehow escaped notice. This year an extra effort was made to identify these food producers as interest in and awareness of local food security issues is at an all-time high due to the Corona Virus pandemic. Efforts were made to find these farms through word of mouth networking, visits to farm stands, online searches including Facebook and Craigslist contacts, and scouting local advertisements.

In addition to the new listings, farms previously included were contacted to verify their information remains current. Updates were made to include any changes to food produced, operating hours, or contact information. “We like to say that this Guide is the County’s most comprehensive, longest running, and free to farmers Local Food Guide,” said Food Guide Committee Chairperson, Meghan Davis.

This year, the Guide will be promoted and published primarily on-line due to the pandemic. The Guide can be viewed at https://ashtabula.osu.edu/program-areas/community-development/local-food and/or https://ashtabulalocalfood.org/local-food-guide/

OSU Extension Local Food Coordinator, Julie Wayman explains, “This guide should serve as a roadmap for those seeking local food. We hope to do future educational programming using this guide to help consumers connect to local farms and for local farms to connect to new markets.

Limited print copies of the guide will be available at area Farmers Markets, Public Libraries, and Meat Processors. Anyone with questions, updates, or additions to future versions of the Guide should contact Julie Wayman at wayman.31@osu.edu or 440-567-9008.
UNSOLICITED SEEDS ALERT

ODA Asks Ohioans to Send in Unsolicited Seeds

The USDA-APHIS and ODA are asking Ohioans who have received unsolicited packages of seed not to open, plant, or throw the seed away. Instead, citizens should report receiving seeds and then submit the packages to USDA using one of the following methods:

1. If possible, place the materials including the seeds, original packaging material and your contact information in a resealable plastic bag and mail them to USDA-APHIS at the following address:
   Attn: USDA -SITC
   8995 East Main Street, Building 23
   Reynoldsburg, OH 43068

   -or-

2. Place the materials including the seeds, original packaging material and your contact information in a resealable plastic bag and drop them off at your county’s OSU Extension Office during business hours. You can find the nearest extension office here: https://extension.osu.edu/lao. Please note that extension facilities may have COVID-19 specific signage detailing procedures such as wearing a facial covering that must be followed.

The Public Should Report the Seeds and Submit the Packages to USDA or to an OSU County Extension Office