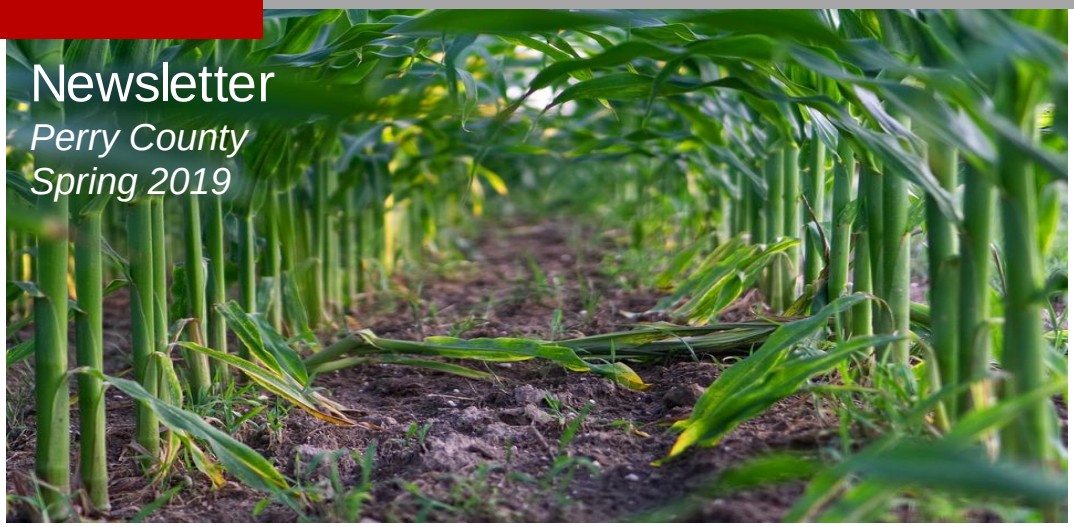
CFAES

OHIO STATE UNIVERSITY EXTENSION



Dear Friends,

The wet weather continues to delay field work and spring planting. Challenges in getting forages made last year along with the cold and mud has created some major issues for livestock producers. Poor quality forages have led to some poor body conditions this spring. Additional supplementation made be needed this spring to ensure good conception rates.

We will continue to conduct Beef Quality Certification this year for anyone who may still need it. Please feel free to call the office if you are in need of certification and I will set up additional programs.

The OSU Extension Farm Office (https://farmoffice.osu.edu/about-us), is an umbrella website containing information for agricultural producers and land owners on agricultural law, taxation, production economics and farm management. You'll find resources and tools to help you make informative business decisions and simplify your farm office operations.
The following link will take you to the 2018 Custom Rates information. When using these remember these are based upon survey data, not economically driven. This is the reason for some wide ranges for the various practices.
https://farmoffice.osu.edu/sites/aglaw/files/site-library/farmmgtpdf/enterprisebudgets/Ohio%20Farm%20Custom%20Rates%20Final%202018.pdf

Additional agriculture and natural resource informational can be found at Ohio State University Extension website: https://agnr.osu.edu/resources. There are several free blogs and newsletters available.

Ted Wiseman
Extension Educator
Perry County ANR

cc. Pam Montgomery

OSU Extension Perry County
104 S. Columbus St. PO Box 279
Somerset, OH. 43783
(740) 743-1602
Website: perry.osu.edu
Email: Wiseman.15@osu.edu

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

CFAES

OHIO STATE UNIVERSITY EXTENSION

UPCOMING PROGRAMS
2019

June:

12 **Small Grains Field Day**
Wooster, Ohio. Flyer Enclosed

21 **Southeast Ohio Hay Day**
Caldwell, OH., Flyer enclosed

July:

14 **2018 Ohio Sheep Day**
Caldwell, OH. Flyer enclosed

16-21 **Perry County Fair**

Contact the Perry County Extension Offices for detailed information
(Registration Deadlines and Fees, etc.)

May, 2019

A 365 Day Approach to Passing on Your Family Farm

By: David Marrison Written for the Farm & Dairy Newspaper (Dairy Excel Column) on April 18, 2019

During the past winter, one of the farm management workshops OSU Extension conducted across Ohio was the "Passing on the Family Farm" series. These workshops were a great way for families to grow together by developing a farm succession plan and to begin to have crucial conversations about the farm's future.

Each farm family is different regarding its goals for succession planning. Family dynamics, physical resources, financial position, and managerial styles vary from operation to operation. One of the most difficult issues is determining how to be fair to off-farm heirs without jeopardizing the future of the heirs who have remained with the family business. Other decisions include deciding who will manage the business in the future, how to distribute assets, how and when the senior generation will retire, and how the family will deal with the unexpected.

One of the biggest mistakes we make is putting off these discussions until tomorrow. After all, we are going to live forever, right? I would you encourage to make a 365 day pledge. So what is this pledge? Pledge to transfer one piece of knowledge per day to the next generation. Think of it in the context of if you were to die tomorrow, what management knowledge would your family need to know to continue to run the business at a successful level? Just imagine how better equipped your son or daughter will be a year from now if you follow this pledge.

When my dad was diagnosed with pancreatic cancer in 2010, we only had seven weeks with him before he passed away. I can tell you a lot of learning was done by our family in those seven weeks. Wouldn't it be easier to teach one thing a day over a series of years?

Your 365 day pledge could include lessons on financial record keeping, maintenance on equipment, tax and employee management, reading soil tests, making cropping and animal nutrition decisions, and much, much more. A great strategy to follow through with your 365 day challenge is to write your daily "lesson" on a calendar or in a journal. Have a plan and purpose for teaching the next generation.

Your 365 day pledge could also include teaching where all the property borders and underground electric, water lines, and drains are. I found out where the underground electric line at the farm was the hard way! Yep, we hit it with a backhoe digging up a waterline. The location of this electric line was one thing I was not able to learn from my dad before he passed. After all, we never had a problem with it, so we never discussed it.

Make sure to ask your children for their opinion on the responsibilities they believe they should or shouldn't have. What knowledge needs to be communicated for their success? Are there changes that need to be made for them to have a continuing interest in the business? You might be surprised on the good ideas that your kids might have for you. Have you taken the time to ask them and to listen? What are you waiting for?

For my successors, I am developing two notebooks. My estate notebook includes copies of my advanced directives, will, trust, life insurance policies, property deeds and copies of all my financial accounts. OSU Extension has a great guide titled "Getting Your Affairs in Order" to help you know what should be in this notebook. If you would like this PDF-writeable document, just email me at marrison.2@osu.edu and I would be happy to send it to you. The second notebook that I am creating is a farm resource book. This notebook includes maps, pictures, and measurements of where all the different water, electric, drainage and septic lines are. Included in this notebook are the tile maps for the farm as well as specifics on the history of the barns, farm equipment, and water wells.

While the majority of our "Passing on the Family Farm" are held during the winter, we are scheduling a few workshops for this summer across Ohio. One of regional interest will be a two day workshop scheduled for July 19 and 26 in Wooster, Ohio. This workshop will help you get a jump start on your succession plan and learn the estate planning tools which farm families can use. For more information about this workshop, just call the Wayne County Extension office at: 330-264-8722. If you cannot make this workshop but are interesting attending one of our future workshops, please email me at marrison.2@osu.edu and I will put your name on our list to receive information about other upcoming workshops. These workshops will also be promoted at http://ohioagmanager.osu.edu

Farm Bill Summit Video Available

Sam Custer OSU Extension
https://u.osu.edu/ohioagmanager/2019/04/16/farm-bill-summit-video-available/

The 2018 Farm Bill, passed by Congress and signed by President Trump, now awaits implementation by United States Department of Agriculture (USDA), agencies like the Farm Service Agency, Natural Resources Conservation Services, Risk Management Agency and many others. The passage of the farm bill authorizes funding for many of the federal programs producers utilize throughout the growing season. This bill is considered to be mostly evolutionary not revolutionary, but there are still changes that will be important to producers and agribusinesses.

The Ohio State University, the Purdue Center for Commercial Agriculture, the University of Kentucky and Farm Credit Mid-America hosted a Farm Bill Summit on Thursday, April 11, 2019 at the Versailles High School in Versailles, Ohio. The program featured presentations by three of the nation's top ag policy professionals: Keith Coble from Mississippi State; Jonathan Coppess from the University of Illinois; and Patrick Westhoff from the University of Missouri's Food and Agricultural Policy Research Institute.

The three keynote speakers spoke on their areas of expertise and covered the three largest agricultural titles in terms of spending within the farm bill: commodities (Patrick Westhoff), conservation (Jonathan Coppess) and crop insurance (Keith Coble).

Could not make it to the Farm Bill Summit last week? Check out the recording here: http://go.osu.edu/farmbillvideo

More detailed meetings and explanation on how to use developing tools will becoming as the rules are released.

New Requirements to Apply Dicamba!

Jennifer Andon

As of October of 2018, the EPA announced that the registration for dicamba will be extended for two years for over-the top use of dicamba resistant corn and soybeans. Additionally, new regulations now require that to mix, load or apply dicamba, you must be a licensed pesticide applicator. The trained serviceperson is no longer qualified under the new regulations. To receive a pesticide license to mix, load or apply dicamba, one must pass both the Core and Category 1 (Grain and Cereal Crops) exams offered by the Ohio Department of Agriculture. The Ohio State University Pesticide Safety Education Program has prepared training videos to assist growers in preparing for the Core exam. These trainings are supplemental to the study manuals and will not include the annual dicamba training, which is also mandatory. For more information regarding the New Pesticide Applicator Training courses and videos, and online dicamba training, please go to: https://pested.osu.edu/PrivNewApp

Vendor's License & Sales Tax Requirements for Ohio Farmers Market Vendors

By: Evin Bachelor, Law Fellow, Agricultural and Resource Law Program
Source: https://farmoffice.osu.edu/blog-categories/food

Farmers markets in Ohio continue to grow in number, and the types of vendors and products offered by those vendors have greatly diversified over the years. Along with this growth come new questions about vendor's licenses and the collection of sales taxes.

Many market vendors may know that traditional market items like fresh fruits and vegetables do not require a vendor's license or the collection of sales tax. But what about beverages, cottage foods, plants and flowers, ready to eat foods, soaps, crafts, and similar items that contribute to the success of today's farmers markets? Fortunately, learning about Ohio's vendor's license and sales tax requirements doesn't have to be a taxing experience.

In our fresh off the press law bulletin, titled "Vendor's Licenses and Sales Taxes at Ohio Farmers Markets," we dive into a number of questions that farmers market vendors frequently ask us. Specifically, we address questions such as:

- Do vendors at a farmer's market need a vendor's license?
- What items do not require the collection of sales tax?
- What items do require the collection of sales tax?
- How do I obtain a vendor's license in Ohio?
- Is a vendor's license the same as a retail food establishment license?
- What if I want to sell products in other states?
- Can vendors include sales tax in the price of the product?

While this law bulletin covers vendor's licenses and sales taxes fairly in depth, there is always more to learn. The law bulletin also provides a number of links to helpful resources from the Ohio Department of Taxation and neighboring states, along with a number of references to Ohio law. This new bulletin can be found at: https://farmoffice.osu.edu/sites/aglaw/files/sitelibrary/Vendor%27s%20Licenses%20and%20Sales%20Taxes%20at%20Ohio%20Farmers%20Markets.pdf

Blackleg of Potato

Kim Leonberger and Emily Pfeufer. University of Kentucky 4/11/19

Potatoes are often one of the first crops planted into the vegetable garden. However, growers and gardeners alike should be on the lookout for blackleg disease. This disease can occur in both commercial and homegrown potatoes. "Seed" potatoes may be infected from the previous season and once planted, fail to emerge or result in stunted plants with bacterial disease symptoms. Losses from blackleg can reach 100% since there are no management options after plants are infected. Clean seed along with proper planting and maintenance practices can reduce disease incidence.

Cause and Disease Development

Multiple species of *Pectobacterium* and *Dickeya* bacteria can cause blackleg of potato. Initial disease likely originates from seed potatoes that were infected during last field season, in storage, or during preparation for planting. Infected seed pieces may not have symptoms, since the bacteria can remain latent until conditions are appropriate for disease development. Blackleg symptoms develop during wet, cool conditions, then become more obvious when temperatures warm in subsequent weeks. Bacteria moved through soil by rain or irrigation may infect additional seeds and plants. Secondary infections from the same pathogens can occur throughout the season on stems (commonly called aerial stem blight) or tubers (also known as soft rot).

Symptoms

Infected seed pieces may yield plants that are weak or stunted (Figure 1), or plants may not emerge at all. Water-soaked lesions may be present at the base of the plant, and over time darken and expand up the stem (Figure 2). These lesions may be soft and wet under moist conditions, or drier under dry conditions. As the lesion expands, vascular tissues break down resulting in the wilting, chlorosis, and/or necrosis of leaves. Eventually, the plant may collapse and die.

Management of blackleg is dependent on the prevention of disease introduction via cultural practices. Once seed pieces or plants are infected, in-season management of blackleg is limited to removal of obviously infected plants. The following methods can be used to mitigate blackleg.

Figure 1: Seed potatoes infected with blackleg may result in stunted plants. (Photo: John Hartman, UK)

- Plant certified disease-free potato seed pieces. Blackleg disease has been identified in numerous different varieties from different sources, so carefully inspect the seed certification for any positive identifications of *Dickeya* or *Pectobacterium* spp. in the source farm's history. Avoid planting seed from these sources.
- If preparing your own seed pieces, use only the best quality potatoes. If splitting seed pieces, sanitize tools prior to each cut using a solution of 1 part bleach to 9 parts water. Spread seed pieces in a single layer for at least 24 hours to completely dry the cut sides.
- Plant into well drained, warm (greater than 50°F) soils.
- Increase plant spacing to reduce dense canopies.
- Water plants at the soil line. Do not water seed pieces before shoot emergence.
- In areas where blackleg has been a problem, rotate potato crops to a different field or area of the garden for at least two years.
- Harvest under cool conditions (less than 70°F). Try to limit tuber injuries to prevent the spread of blackleg bacteria on tools or stored tubers.

Figure 2: A symptom of blackleg is a darkened stem lesion that spreads upward. (Photo: Paul Bachi, UK)

Adapting Burndown Herbicide Programs to Wet Weather Delays

Mark Loux, CORN Newsletter 2019-11

While it's not terribly late yet, the wet soils and wet forecast could keep most of us out of the fields for a while. The questions about how to deal with burndown herbicide treatments in delayed planting situations are rolling in. One of the most common ones, predictably, is how to kill glyphosate-resistant marestail and giant ragweed and generally big weeds in soybeans when it's not possible to delay planting long enough to use 2,4-D ester (Enlist soybeans excluded). While we wrote last week about marestail populations being on the decline, this does not mean it's gone by any means. Overwintered marestail plants become tougher to kill in May, and the fact that fall weather was not conducive for herbicide applications makes the situation worse in some fields. The good news is that we have some additional herbicide/trait options for help with burndown since the last time we wrote an article covering this in 2016, although our experience is that nothing we suggest here is infallible on large marestail.

A burndown of glyphosate and 2,4-D struggles to control marestail in the spring anyway, especially in the absence of fall herbicide treatments. Our standard recommendation, regardless of when spring treatments are applied, is to either replace the 2,4-D with something more effective, or to add another herbicide to supplement the 2,4-D. Sharpen has been the frequent replacement/supplement, and we now have the option to use dicamba in the Xtend soybean system instead of 2,4-D. While it's possible to use higher 2,4-D rates in the Enlist soybean without waiting to plant, higher rates do not necessarily solve this issue based on our research, although a follow up POST treatment that includes glufosinate or 2,4-D usually finishes off plants that survive burndown. We also would not expect the addition of Elevore to consistently solve this issue either, and it requires a 14 day wait to plant any soybean. There's a list of suitable soybean burndown treatments in our marestail fact sheet, and also below – these are for fields not treated the prior fall.

- Glyphosate + saflufenacil + 2,4-D (+ metribuzin if possible)
- Gramoxone (3-4 pt) + 2,4-D + metribuzin
- Glyphosate + dicamba (Xtend soybeans)
- Glyphosate + dicamba + saflufenacil (Xtend soybeans)
- Glufosinate + Sharpen (+ metribuzin if possible)

Salfufenacil herbicides include Sharpen, Zidua PRO, and Verdict. It is possible to use a mix of glyphosate, saflufenacil, and metribuzin, omitting the 2,4-D, but control can be more variable. We have observed some weakness also with the glyphosate/saflufenacil combination on dandelion, purple deadnettle, and larger giant ragweed. There obviously can be some benefit to keeping 2,4-D in the burndown where possible, as part of a more comprehensive mixture. We advise against using Gramoxone unless it can be mixed with both 2,4-D and a metribuzin-containing herbicide. One strategy would be to plant corn first as soon fields are fit, and delay soybean planting so that 2,4-D could still be used. And a reminder - deciding to include saflufenacil at the last minute can result in a need to alter the residual herbicide program. Labels allow mixtures of Sharpen/Verdict with herbicides that contain flumioxazin (Valor), sulfentrazone (Authority), or fomesafen (Reflex) only if applied 2 or more weeks before planting.

Some other things to consider in a delayed burndown situation:

1. Aside from glyphosate-resistant weeds, increasing glyphosate rates may be one of the most effective ways to maintain effective control. We suggest a rate of at least 1.5 lb ae/A, and higher rates could be warranted. This will not improve marestail control, but should help with most other weeds, especially under (presumably) warmer May conditions.
2. To improve control with glyphosate/2,4-D, add Sharpen or another saflufenacil herbicide, as long as the residual herbicides in the mix do not include flumioxazin, sulfentrazone, or fomesafen if it's within 14 days of soybean planting. It's also possible to substitute Sharpen for 2,4-D when it's not possible to wait 7 days to plant, but this may result in reduced control of dandelion, deadnettle and giant ragweed. Where the residual herbicide in the mix does contain flumioxazin, sulfentrazone, or fomesafen, and it's not possible to change the residual or add Sharpen, adding metribuzin or Canopy Blend/Cloak DF to glyphosate/2,4-D can improve burndown effectiveness somewhat.
3. Consider substituting Gramoxone or glufosinate for glyphosate? Gramoxone is less effective than glufosinate on marestail, but glufosinate can struggle some in a dense, large no-till burndown situation. Either one should be applied with metribuzin and 2,4-D ideally. Use the higher labeled rates and a spray volume of 15 to 20 gpa for best results. A consideration here is that in large no-till weed situations, high rates of glyphosate typically have more value than high rates of Gramoxone or glufosinate, with the exception of glyphosate-resistant weeds. We know of some growers who have used a mixture of glyphosate and glufosinate for burndown, with the glufosinate in the mix to control marestail primarily. We do not have enough experience with this mix to make a recommendation in a burndown situation. The hail mary treatment here is a mix of glufosinate and Sharpen (plus metribuzin ideally), which is expensive but somewhat of a scorched earth approach on broadleaf weeds at least.
4. In the Enlist and Extend systems where it's possible to use 2,4-D or dicamba without waiting to plant, there can be an advantage to increasing herbicide rates as we move later and weeds become larger. Another advantage of these systems is the option to use 2,4-D or dicamba again in POST treatments to finish off weeds that survive burndown. We do have to assume that this strategy would likely select for resistance more rapidly, compared with use just PRE or POST. Including glufosinate in POST treatments of 2,4-D to Enlist soybeans should mitigate the resistance rate somewhat, although it does not substitute for late season scouting and removal of weeds to prevent seed. Reminder to consult the appropriate websites to determine the legal options to mix with 2,4-D and dicamba for use in Enlist or Xtend soybeans, especially when developing a more comprehensive mix to deal with tough burndown situations.
5. Among all of the residual herbicides, chlorimuron contributes the most activity on emerged annual weeds and dandelion. This is probably most evident when the chlorimuron is applied as a premix that contains metribuzin (Canopy Blend/Cloak DF, etc). The chloirmuron may not be much of a help for marestail or ragweed control, since many populations are ALS-resistant. Cloransulam (FirstRate) has activity primarily on emerged ragweeds and marestail, as long as they are not ALS-resistant. We have on occasion observed a reduction in systemic herbicide activity when mixed with residual herbicides that contain sulfentrazone or flumioxazin.
6. It is possible to substitute tillage for burndown herbicides. Make sure that the tillage is deep and thorough enough to completely uproot weeds. Weeds that regrow after being "beat up" by tillage are often impossible to control for the rest of the season. Tillage tools that do not uniformly till the upper few inches (e.g. TurboTill) should not be used for this purpose. One strategy to ensure complete control even in tilled situations is to apply glyphosate several days prior to tillage.
7. Late burndown in corn is typically a less dire situation compared with soybeans. Reasons for this include: 1) the activity of some residual corn herbicides (e.g. atrazine, mesotrione) on emerged weeds; 2), the ability to use dicamba around the time of planting; 3) the tolerance of emerged corn to 2,4-D (Enlist corn) and dicamba, and 4) the overall effectiveness of available POST corn herbicides. Overall, while not adequately controlling emerged weeds prior to soybean planting can make for a tough season, there is just more application flexibility and herbicide choice for corn. Having said this, be sure to make adjustments as necessary in rate or herbicide selection in no-till corn fields.

eShepherd- The Future of Grazing Livestock?

By: Marcus Tainsh, Pesel & Carr (on behalf of Agersens) Amber Robinson, The Ohio State University Brady Campbell, Program Coordinator, OSU Sheep Team Source: https://u.osu.edu/sheep/2019/03/19/eshepherd-the-future-of-grazing/

Agersens and The Ohio State University have signed a Memorandum of Understanding (MoU) that paves the way for the two organizations to implement research trials to determine the efficacy and economics of the eShepherd system for local conditions.

eShepherd is a smart collar system for livestock, enabling producers to create "virtual fences" and use their smart device to remotely fence, move, and monitor their livestock around the clock from anywhere in the world.

Ian Reilly, CEO of Agersens, said the team at The Ohio State University had the expertise and knowledge the company needed to better understand local livestock markets and determine how virtual fencing technology can help Ohio farmers get the most out of their land and livestock.

"eShepherd is set to revolutionize livestock management by unlocking value from the digital transformation of the American beef and dairy industries and will make farming more efficient, more manageable, and less labor intensive," said Mr. Reilly. "Farmers in Ohio understand that improved grazing control creates more productive, profitable properties and are eager to adopt technologies that enable controlled grazing without the associated time constraints and labor costs."

This latest MoU comes on the heels of similar Memorandums struck with the University of Idaho and Kansas State University last year, as well as an extended collaboration agreement with the CSIRO formalized last November. Land-Grant Universities in the United States have a unique role in providing farm extension services through their agricultural education mission for agricultural producers. In contrast such services are typically offered by Australian state government agriculture departments and Research and Development Corporations. "Ohio State will be seeking to add eShepherd to their kit of extension service technologies that can help farmers increase their efficiency and maximize productivity," Mr. Reilly said.

Dr. John Foltz, Chair of the Department of Animal Sciences at Ohio State, recognizes the technological and economic opportunities that eShepherd brings to Departmental research faculty and livestock producers in Ohio. "The virtual fence is an exciting technology, which we hope to utilize in numerous research projects to understand its potential as a livestock management tool," said Dr. Foltz. "It appears

to have some very unique capabilities and also generates large amounts of precision livestock data, which will be valuable to our research scientists."

The transformative eShepherd technology uses a GPS-enabled, solar-powered smart collar containing a CSIRO-developed algorithm and an audio cue to currently train cattle to stay within their prescribed virtual boundary. Ohio State plans to investigate this in the beef industry as well as other livestock industries that could benefit from this technology, including those in the sheep and goat industries.

The ability of the GPS-enabled collars to monitor and move livestock in real-time using mobile technology appealed to Animal Sciences Associate Chair, Dr. Anthony Parker. "The position of the livestock can be observed in real-time from the office on a tablet or computer. The technology has many practical applications for producers in Ohio from avoiding riparian, protected or overgrazed areas to moving livestock over a landscape to ensure an even grazing pressure," said Dr. Parker. "The e-Shepherd technology fits within existing research being undertaken at The Jackson Agricultural Research Station and the Eastern Agricultural Research Station with global positioning systems to better understand cattle behavior."

The eShepherd virtual fencing technology was patented by the CSIRO and licensed exclusively to Agersens worldwide. The business has already received orders for thousands of eShepherd collars in Australia, New Zealand, the United States, Canada, and the United Kingdom.