It’s Time to Re-Certify

It is that time of year again to renew your pesticide license and/or your fertilizer certificate. We will be holding two classes, one on February 18th 2019 from 8:45 a.m. – 1:00 p.m. and another on March 13th 2019 from 5:15 p.m. - 9:30 p.m. You must arrive before the start of the meeting or you will not be allowed in the room. Please call our office 419-947-1070 to reserve your spot today. If you cannot make it to one of these classes, please call us to find out where other classes will be offered.

The Pesticide and Fertilizer recertification meeting will be held at the Ag Credit Building in the 2nd floor conference room.

Please preregister for these certifications.

Pesticide Applicator Test Opportunity

If you know of someone who would like to obtain their Pesticide License, OSU Extension Morrow County has set up a testing date with the Ohio Department of Agriculture (ODA) for 2019 to allow private and commercial applicators to obtain a pesticide applicator license. ODA personnel administer the tests and all testing will take place at the Ag Credit Building in the second floor conference room on March 14, 2019 @ 9:00 a.m. sharp.

There are a limited amount of spaces available for each testing session. Once the spaces are filled, the testing session is closed. Register to reserve a spot online at http://go.osu.edu/ODAexamregistration, or by phone to the ODA Pesticide Division at 614-728-6987, then press 1 for pesticide licensing.

Study materials for the private pesticide applicator test are available at the Morrow County Extension office.

Regarding the OSU Extension – Morrow County Renewal Levy

On November 6th, 2018 your OSU Extension – Morrow County Services Renewal Levy did not pass. It lost by 69 votes. Please look to 2019 for the renewal on the ballot again. We will keep you informed.

From the passage of the 2014 Levy for 5 years the office funding/collection of the 0.5 mil tax continues for 2019. Since the passing of the first levy in 2009, our goal was to have OSU Extension – Morrow County services be free or at a discount as compared to other county Extension offices and that will continue in 2019.

At this point, we have no intention of reducing programming and services to help you better your lives, businesses, and make our county great. Please, if you have any ideas or needs related to 4-H Youth Development, Agriculture and Natural Resources, or Family and Consumer Sciences contact our office or us individually.

And thank you to all our supporters and all who believe in this county service, all it does, and what it can do for future generations!
Central Ohio Precision Ag Symposium

The Central Ohio Precision Ag Symposium will be held on Wednesday, January 16, 2019 at All Occasions Catering 6986 Waldo-Delaware Rd., Waldo Ohio from 9 a.m. to 4 p.m. This year’s program will feature the most current technologies available in precision agriculture. These topics will be shared by some of the leading university and industry Precision Ag experts.

This year’s program opens with a discussion regarding where we are in Precision Ag today – “The Adoption of Precision Ag Technologies” - Jack Zemlicka, Ag Division Content Director Lessiter Media and ends with a look into the crystal ball – “The Future of Precision Ag” - Dr. Scott Shearer, The Ohio State University.

Data management is a “hot” topic in today precision agriculture. Dr. John Fulton will share his insights on “Data Considerations in Today’s Crop Production”. You will learn about data security and who can/has access to your data at afternoon breakout sessions from Climate-Fieldview, Agleader—Agfinity, and My JohnDeere. Learn about the value of your data and opportunities for selling your data at one of the Farm Mobile breakout sessions.

Artificial intelligence is changing our industry. Tim Norris will discuss “AI” and share insights from Knox County’s first autonomous tractor. “AI” will be part of several other afternoon breakout sessions as well. New datum changes are scheduled for 2022. Jeff Jalbrzikowski will explain how this change could potentially affect our current maps and GPS positioning files.

“When is the premier source of research-based information in the age of digital agriculture” is the vision of the Ohio State Digital Ag Program. Dr. Elizabeth Hawkins will discuss the nearly 100 OSU on-farm research trials conducted throughout Ohio in 2018. Everyone in attendance will receive a copy of the 2018 eFields Report.

Afternoon breakout sessions will include manufacturing and technology updates including how to get the most from your in-cab displays from John Deere, Case IH AFS, Precision Planting, Capstan, AGCO, New Holland and Soil Max.

$50 registration fee includes a buffet lunch, breaks and a notebook containing all presentations. Seating is limited, registration deadline is December 28, 2018.

This symposium will provide up to 11.5 Continuing Education Credits (CEU’s) for Certified Crop Advisors, S&W - .5, I.P.M. - .5, C.M. - 5.5.

This program is sponsored by The Ohio State University Extension, AgInfoTech, Advantage Ag & Equipment, Ag Leader, B&B Farm Service, Beck’s, Capstan, Centerra Co-op, Central Ohio Farmers Co-op, Channel, Clark Seeds, Climate Corp., Evolution Ag, Farm Credit Services, Farm Mobile, First Knox National Bank, JD Equipment, Ohio Ag Equipment, Precision Planting, Seed Consultants, Smart Ag and Soil-Max.


BEEF 509 set for February 16 & 22

Dates have been set for the 2019 edition of BEEF 509.

BEEF 509 will take ‘awareness’ and quality assurance to a whole new level for participants! The BEEF 509 program is held to raise the awareness level about the beef that is produced and what goes into producing a high-quality and consistent product. The program will take place on two consecutive Saturdays, February 16 and 23, 2019.

The part of the program held on February 16 will include a live animal evaluation session and grid pricing discussion. Carcass grading and fabrication are among the activities that will take place February 23. The program will take place at The Ohio State University Animal Sciences building in Columbus. It will be critical to attend both sessions as participants will be assigned to teams that will work together throughout the program.

A maximum of 32 spaces will be available on a first come, first served basis. If interest in BEEF 509 exceeds the 32 spaces provided, names will be held and applicants notified of upcoming sessions. The registration fee for each BEEF 509 participant is $150, and may be completed on-line following this link. This program is the result of a partnership with the Ohio Beef Council, Ohio Cattlemen’s Foundation, The Ohio State University Extension and The Ohio State University Department of Animal Sciences. These entities will be funding all remaining costs beyond the $150 individual registration fee that are associated with the BEEF 509 program.

Bed Bug Awareness

By Carri J. Jagger, Agriculture and Natural Resources Extension Educator, OSU Extension Morrow County

Bed bugs are something you should be very concerned about. If you think that you can’t or won’t get them, you are wrong. I get a call or actual bed bugs in my office for identification at least once a week. Bed Bugs are not something that should be taken lightly. I’m super paranoid about them and you should be also. According to Dayton Daily News Bed bugs are an epidemic in Ohio and the following cities rank in the top 50 for bed bugs. Columbus ranked Number 5 while Cincinnati landed at Number 8. The Cleveland-Akron-Canton metro area ranked 13th, and Dayton ranked Number 32.

According to the Ohio State University Extension Bed Bug resources page (u.osu.edu/bed-bugs/), Bed bugs are small, blood-sucking insects that negatively impact public health and the well-being of all socioeconomic classes. Bed bugs are easily transported, and they have become a major problem over a relatively short period of time in diverse residential and commercial settings. If left untreated or improperly treated, bed bug populations rapidly increase and infestations can quickly spread to impact others.

Compared to other insects, bed bugs are more difficult and expensive to control. Bed bugs necessitate multiple integrated pest management (IPM) strategies that often require professional pest management services. However, in part due to the high cost of professional bed bug control, the public has increasingly turned to over-the-counter (OTC) chemical products as a low cost alternative for bed bugs. Public expectations of these products can range from total eradication to simple decontamination, yet the vast majority of OTC chemical products are contact toxicants that have negligible impacts on bed bug infestations.

If you would like more information about bed bugs you can visit u.osu.edu/bed-bugs/ or call our office 419-947-1070 and I can get you information.

Lambing & Kidding School

Saturday, January 13, 2019

10:00 a.m. - 3:00 p.m.

Location:
Jeff Criswell Farm
2965 Keener Rd.
Marion, OH 43302

Cost: FREE

Join us for new proven barn ideas!

Contact Tim Barnes: 740-223-4041 or barnes.821@osu.edu

Reservations due by Jan. 9

Schedule:
10:00 a.m. Dr. Michelle “Mitch” Michalak, Maria Stein Animal Clinic:
“Obstetric & Care of Newborns” & “Flock/Herd Health”
11:30 a.m. Lunch by Marion County Sheep Improvement Association
12:30 p.m. Jacqi Smith, Delaware County Extension Educator:
“Birthling Problem Simulator & New Technology for Your Farm”
1:30 p.m. Tim Barnes, Marion County Extension Educator:
“Artificial Rearing for Young Offspring”
2:00 p.m. Dallas Miller, Kalmbach Show Feed:
“Nutrition: Gestation, Nursing, Early Growth & Maintenance”
Rabies in Livestock

By Timothy McDermott DVM
OSU Extension Educator, Franklin County
(Originally published in Farm & Dairy)

Many diseases can affect animals on pasture. The most difficult ones to stay aware of are the diseases that are uncommon, where the producer or livestock may never encounter the disease. Many diseases that affect livestock have presentation forms that can mimic multiple other diseases that are more common, leading to a delay in veterinary care or producer awareness. One disease that can affect livestock that fits this description, but should stay firmly in a producer’s awareness is rabies.

Rabies is an ancient disease caused by a virus. The Latin translation of rabies means, “To rave or rage.” The virus spreads in its host in an unusual way compared to how most people think of viral spread. While many viruses spread through the bloodstream, enter via the respiratory tract or digestive tract by ingestion, rabies is a neurotropic virus, meaning it spread along the nerves in the nervous system. After an infected host bites an animal or human, the virus enters the wound via the contaminated saliva and starts to move along the nervous system towards the brain. Contact with infected saliva or tissue can transmit the disease in the absence of a bite if the skin is broken. Rabies has also been transmitted through tissue transplants of infected donor tissue in one documented case.

Animal species most commonly affected by rabies in Ohio include bats, raccoons, skunks, cats, dogs, horses, and cattle, with the largest number of positive test results occurring in bats. Many other mammal species can contract rabies if exposed including fox, coyote, opossum, chipmunks and deer. The virus that causes rabies does not live long outside the host. It has persisted in the environment for thousands of years by living from animal to animal through transmission.

Grazing animals are naturally curious, often investigating a small mammal acting oddly in the pasture, instead of avoiding it as they would a predator or larger mammal such as a human. This behavior puts them at risk of a bite from a rabid animal such as a bat, skunk or raccoon. Common bite sites include the nose or legs. Once bitten there is an incubation period that can be extremely variable, lasting as short of a week but as long as months. Clinical signs usually start within a 3 week to 3-month period, depending on the location of the bite or viral entrance site.

While the commonly known presentation of rabies is the furious form secondary to central nervous system excitement, the list of potential clinical signs is vast. These signs include incoordination, difficulty swallowing, profuse salivation, restlessness, agitation, and partial or full paralysis. These signs can easily be mistaken for other more common problems such as choke, colic, nutritional disease, toxicity, or trauma. Rabies progresses to death in a species showing clinical signs.

Since 2010, the Ohio Department of Agriculture has confirmed case of rabies in bats, raccoons, skunks, dogs, cats and cattle in Ohio. What should a producer do to prevent exposure to this disease? First, when walking pasture or working animals around the barn, if a producer encounters an animal such as a raccoon or skunk, that is acting oddly, especially in daylight, avoid the animal at all costs. Exercise caution if the animal appears dead in case the animal is affected by the virus and paralyzed. Next, the producer should familiarize themselves with the signs of disease listed previously in this article. Contact a veterinarian immediately if rabies is suspected. Vaccines are available for most livestock and companion animal species. Vaccinate dogs and cats on the farm for rabies in every case and keep records of vaccine dates. Work with your veterinarian to develop a livestock vaccination protocol. Keep rabies on the list of diseases that while not common, can have devastating consequences if encountered.

Hay Quality: Trash versus Treasure

By Christine Gelley
Agriculture and Natural Resources Educator, OSU Extension Noble County
(Originally published in The Ohio Farmer on-line)

That saying “one man’s trash is another man’s treasure” usually does not apply to hay, but with as difficult as haymaking was in Ohio this year, it may be true.

The “man” mentioned could be yourself in 2017 versus yourself in 2018. Based on what is available this year, you may be inclined to lower your standards of hay quality to make it through the winter.

But, how low is too low when it comes to hay quality? The answer depends on your class of livestock, their nutritional needs, and your access to supplemental feed.

Without knowing the actual nutritive value of the hay, all recommendations are relative and subject to error. The only way to confidently adjust your feeding program in relation to hay quality is to have hay analyzed by a laboratory.

Characteristics like hay color, scent, dustiness, and texture are all indicators of hay quality, but are not definitive. On the other hand, mold and poisonous weeds are indicators of poor quality and should be avoided if found in stored hay.

Whether you choose to buy hay or make it, having bales tested can save you time and money over the winter. Pay for a good test that tells you more than just crude protein. Levels of digestible fiber and net energy are important too.

Sample multiple bales from each cutting and sample cuttings separately from one another. First cutting bales should be tested separately from second cutting bales.

When you receive your test results back, work with a nutritionist at your feed mill, your veterinarian, and/or your county extension educator to formulate a feeding program based on what your hay can provide.

Depending on the price of local and regional grain commodities, you might find more value in supplemental feed than your hay supply.

Check the current market prices for hay that align with the quality of what you have and negotiate sale prices based on those two factors. Once you have found hay worth feeding, one of the best ways to preserve your treasure is to store it out of the elements.

Moisture damage can turn that treasured hay into trash overtime. With that in mind, store bales on high ground, elevated off the soil surface if possible. Moisture can be wicked into the bale from the ground. Keep bales covered to prevent seepage into the bale from rain and snow. Air temperature and humidity will impact how significant damages can be.

Round bales stored outside should be oriented with the buff sides facing each other, with the line of bales proceeding north/south rather than east/west, and with three feet between rows. This will allow the bales to dry as fast as possible after a precipitation event.

Hay bale damage by the elements significantly increases the amount of hay waste you will have. On a foot round bale, the outer four inches make up 25 percent of the total hay. Which means, if that four inches is wasted, you will need 25 percent more hay to feed your animals than you initially accounted for.

When buying hay, ask questions about storage. If the hay has not been tested, request a test. If it has been tested, ask to see the test results. If the test was done months before you are there to shop, it is likely that the nutritive value will not be as good as it once was.

Think of a hay test as an appraiser of valued items. It is the advisor you approach to learn the market value of your perceived treasure. Then, do your best to preserve its condition until you are ready to trade it in for a return on livestock performance.

For more information on topics such as, how to perform a forage test and interpret test results or the basics of making high quality hay, consult your local Extension office.

Spring Garden Planning Vision Board Class

On March 30th from 10:00 a.m. – 1:00 p.m. join the Morrow County Master Gardener Volunteers for a fun filled day of planning your 2019 gardens. The Master Gardeners will be teaching about garden planning, layout and journaling as well as the importance of rotation and placement of certain plants. During the class you will get a poster board and will be able to use pictures to plan and create your 2019 garden. During the session Master Gardener Volunteers and Carri Jagger Extension Educator will be able to answer gardening questions you might have. Lunch will be provided. Please RSVP to the Extension Office @ 419-947-1070 by March 25th.
In 2018, 192 corn hybrids representing 24 commercial brands were evaluated in the Ohio Corn Performance Test (OCPT). Four tests were established in the Southwestern/West Central/Central (SW/WC/C) region and three tests were established in the Northwestern (NW) and North Central/Northeastern (NC/NE) regions (for a total of ten test sites statewide). Hybrid entries in the regional tests were planted in either an early or a full season maturity trial. These test sites provided a range of growing conditions and production environments.

Growing conditions were very favorable for corn production across most of Ohio in 2018. The growing season was characterized by well above average rainfall and heat unit accumulation (growing degree-days). Precipitation and heat unit accumulation were generally greater at OCPT sites in the SW/WC/C region (with rainfall ranging from 23.3 to 26.3 inches and heat unit accumulation ranging from 3270 to 3520 GDDs) than at sites in the NW and NC/NE regions. Moreover, rainfall was generally well distributed at these sites. The impact of dry conditions in July and August on crop performance at the Van Wert and Hoytville sites in SW/WC/C, and the Wooster and Beloit sites in NE/NC were mitigated by timely rains in late August and September. Due to the warm, wet conditions in July and August on crop performance at the Van Wert and Hoytville sites in SW/WC/C, and the Wooster and Beloit sites in NE/NC, Ohio were mitigated by timely rains in late August and September. Due to the warm, wet conditions in July and August on crop performance at the Van Wert and Hoytville sites in SW/WC/C, and the Wooster and Beloit sites in NE/NC, Ohio were mitigated by timely rains in late August and September.

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In 2018, USDA's National Agricultural Statistics Service estimates Ohio's corn yield at 193 bu/A, which would be 16 bu/A more than last year's and highest on record if realized. Yields at OCPT test sites paralleled the record yields reported across the state this year. Averaged across hybrid entries in the early and full season tests, yields were 273 bu/A in the Southwestern/West Central/Central region, 238 bu/A in the Northwestern region, and 242 bu/A in the North Central/Northeastern region. Yields at individual test sites, averaged across hybrid entries in the early and full season tests, ranged from 203 bu/A at Beloit to 285 bu/A at Greenville. Performance data for Upper Sandusky in the NW region is not presented because excessive rainfall shortly after planting created variable field conditions that resulted in erratic stands, uneven growth and inconsistent yields.

Tables 1 and 2 provide an overview of 2018 hybrid performance in the early maturity and full season hybrid trials by region. Averages for grain yield and other measures of agronomic performance are indicated for each region. In addition, the range in regional test site averages is shown in parentheses. Complete results are available online at: http://oardc.osu.edu/corntrials/. A bulletin containing the results, 2018 Ohio Corn Performance Test is also published as an insert in Ohio's Country Journal.

As you review 2018 test results, it's important to keep the following in mind. Confidence in test results increases with the number of years and the number of locations in which the hybrid was tested. Avoid selecting a hybrid based on data from a single test site, especially if the site was characterized by abnormal growing conditions. Look for consistency in a hybrid's performance across a range of environmental conditions. Consider the table providing a “Combined regional summary of hybrid performance” which indicates the performance of hybrids common to nine statewide test sites and the six tests in western Ohio. Differences in grain moisture percentages among hybrids at harvest can provide a basis for comparing hybrid maturity. Yield, % stalk lodging, grain moisture, and other comparisons should be made between hybrids of similar maturity to determine those best adapted to your farm.

### Table 1.
A regional overview of the early maturity 2018 Ohio Corn Performance Test.

<table>
<thead>
<tr>
<th>Region</th>
<th>Entries</th>
<th>Grain Yield (Bu/A)</th>
<th>Moisture (%)</th>
<th>Lodging (%)</th>
<th>Emergence (%)</th>
<th>Final Stand (plants/A)</th>
<th>Test Wt. (lbs/bu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW/WC/C</td>
<td>69</td>
<td>269 (218-302)</td>
<td>16.9 (15.5-18.3)</td>
<td>2 (0-17)</td>
<td>96 (92-99)</td>
<td>33400 (27000-37100)</td>
<td>57.6 (54.2-59.8)</td>
</tr>
<tr>
<td>NW</td>
<td>59</td>
<td>235 (215-249)</td>
<td>17.0 (15.7-17.8)</td>
<td>3 (0-11)</td>
<td>94 (86-99)</td>
<td>32800 (25700-36800)</td>
<td>58.1 (55.6-60.7)</td>
</tr>
<tr>
<td>NE/NC</td>
<td>58</td>
<td>238 (218-256)</td>
<td>18.6 (17.5-19.9)</td>
<td>1 (0-7)</td>
<td>96 (86-99)</td>
<td>33100 (27100-37400)</td>
<td>57.2 (54.7-59.2)</td>
</tr>
</tbody>
</table>

### Table 2.
A regional overview of the full season 2018 Ohio Corn Performance Test.

<table>
<thead>
<tr>
<th>Region</th>
<th>Entries</th>
<th>Grain Yield (Bu/A)</th>
<th>Moisture (%)</th>
<th>Lodging (%)</th>
<th>Emergence (%)</th>
<th>Final Stand (plants/A)</th>
<th>Test Wt. (lbs/bu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW/WC/C</td>
<td>60</td>
<td>277 (254-294)</td>
<td>18.3 (16.3-21.0)</td>
<td>2 (0-9)</td>
<td>97 (89-99)</td>
<td>33900 (27100-37200)</td>
<td>57.7 (55.2-60.0)</td>
</tr>
<tr>
<td>NW</td>
<td>78</td>
<td>241 (220-256)</td>
<td>18.0 (16.7-19.5)</td>
<td>6 (0-38)</td>
<td>96 (89-98)</td>
<td>33400 (29800-35700)</td>
<td>58.0 (55.7-60.2)</td>
</tr>
<tr>
<td>NE/NC</td>
<td>62</td>
<td>245 (226-261)</td>
<td>20.2 (18.3-22.5)</td>
<td>2 (0-20)</td>
<td>97 (90-99)</td>
<td>33900 (27000-37200)</td>
<td>56.5 (53.7-58.7)</td>
</tr>
</tbody>
</table>

The 2019 Ohio Beef Cattle School Webinar will be held Tuesday, February 5, 2019 starting at 7:00 p.m. at the AgCredit Building in the 2nd floor conference room.

The webinar agenda:

**“Winter Management of the Cow Herd to Insure a Productive 2019”**

- *Introduction: Analyzing the Current Situation: What is the quality and quantity of your hay supply and what is the body condition of your herd?*
- *Nutritional requirements of the beef female for optimal performance from the last trimester through breeding season.*
- *Impacts of nutrition on heifer development and conception rates of heifers. Impacts of nutrition on days to return to estrus and conception rates of lactating females.*
- *Managing calf health born into stressful situations: Weak calves, importance of amount and timing of colostrum intake, colostrum replacers or supplements, suggested newborn treatments and vaccinations, etc.*

*Speakers will include OSU Animal Science Dept. Specialists and members of the OSU Extension Beef Team.*
Help Lambs Beat the Winter Chill

Preparing for Winter
By Mike Metzger, Michigan State University Extension Educator

Access to fresh water is essential. As temperatures begin to drop, water troughs and buckets need to be dried quickly after birth in sub-freezing weather to prevent frostbite, especially to the newborns as quickly as possible so that they have the calories they need to create body heat and survive. Extra bedding may also help to keep lambs warm and dry – it can provide an extra layer of insulation.

Here are five areas to consider as you prepare for winter’s arrival:

Keep lambs out of cold, wet weather
“Adult sheep are capable of enduring the outdoors during the thick of winter, but lambs are not,” explains Olson. “Young sheep need protection from the elements and bitterly cold temperatures.”

House lambs in a well-ventilated structure free of direct drafts. Ventilation is important to keep lambs healthy and prevent illnesses like pneumonia. Fresh air reduces moisture, animal odor, and gasses that can cause respiratory problems by diluting the barn air contaminants. Consider opening windows, fans and inlets around the ceiling perimeter to allow fresh, cold air from the outside to mix with warm air before it reaches the lambs.

“Lambs are hardy animals that can tolerate cold temperatures if they have plenty of dry, clean bedding,” says Olson. “A thick layer of sawdust or shavings beneath the bedding can provide an extra layer of insulation.”

Provide nutrition to meet high requirements
“Nutritional requirements often increase during cold weather, especially if lambs become wet or are exposed to considerable wind,” notes Olson. “Typically, in temperatures below 32 degrees Fahrenheit, lambs demand additional energy to maintain normal body temperature.”

Quality nutrition is a must to meet the high energy requirements of growing lambs in winter. These energy demands begin on day one.

“Newborn lambs should receive colostrum, or a colostrum replacer specifically formulated for lambs, as soon after birth as possible,” says Olson.

Between two and four days of age, switch to a lamb-specific milk replacer. Look for an all-milk protein formula containing at least 23% protein and 30% fat to provide your lambs with high energy to meet your performance goals.

“Depending on the lamb’s age, you can supply more energy by adding in an additional feeding of milk replacer per day and by feeding grain or dry hay,” says Olson.

To give lambs a boost, feed an electrolyte supplement that contains energy and amino acids to help replenish lost nutrients and fluids.

Watch for signs of hypothermia
“Hypothermia can set in quickly during windy and wet conditions, even in mild temperatures,” warns Olson.

A lamb with hypothermia will appear weak, gaunt, or hunched up and have a cold mouth and ears. Use a rectal thermometer to check its temperature. “A temperature below 100 degrees Fahrenheit is considered hypothermic,” says Olson. “Feed warm colostrum or milk replacer to increase a hypothermic lamb’s body temperature.”

You can also warm lambs by placing them in a warming box until their temperature reaches 101 degrees Fahrenheit. A warming box is a confined space to keep lambs warm and dry – it can either be purchased or homemade. A homemade warming box can be as simple as hair dryers blowing into dog crates or an insulated cooler with hot water bottles. Warming boxes are designed to provide constant, gentle heat rather than direct heat, which can cause overheating or hyperthermia (above normal body temperature). Make sure to clean and sanitize the warming box regularly.

Don’t forget the water
Sheep still need water even when the weather turns cold. Growing lambs drink about 1-2 gallons of water per day, and adult sheep require 3-4 gallons of water daily. “Provide lambs and expectant ewes with plenty of fresh, clean water,” says Olson. “Eating snow or licking ice in winter is not a suitable substitute for water.”

Consider installing a tank heater in your water source to prevent the water from freezing.

Offer a clean, dry place for lambing
If you practice late-winter lambing, house ewes in a space that provides newborn lambs with a good start to life.

“Keep ewes close to lambing indoors to ensure they give birth in a dry, clean and draft-free environment,” recommends Olson.

Use warming lamps as an aid to dry off lambs. However, use lamps in moderation since overuse may lead to respiratory problems. Also, keep heat lamps away from hay, straw and excessive dust to help prevent fire.

Remember, sheep are most comfortable at 45-70 degrees Fahrenheit. Taking time to prepare for cold weather before it hits, will help your lambs stay healthy and keep growing during winter’s chill.

Ohio Agricultural Law Blog—Understanding Ohio's Line Fence Laws

By Evin Bachelor, Law Fellow, Agricultural and Resource Law Program

Since significant changes were made to Ohio’s Line Fence Law in 2008, landowners have contacted us with a variety of questions about how it works.

We have compiled many of the frequently asked questions in our new law bulletin, appropriately titled Ohio’s Line Fence Law: Frequently Asked Questions. The law bulletin answers questions like:

• Who has to pay for a new line fence?
• Can I stop my neighbor from installing a new line fence?
• Who has to pay for maintenance and upkeep of a line fence?

• What happens when my neighbor and I disagree?

The new law bulletin is available at https://farmoffice.osu.edu/sites/aglaw/files/site-library/Line%20Fence%20Law%20FAQ%20pdf. Or stop by our office to get a copy of the law bulletin.

If you still have some questions about Ohio’s line fence law, check out the Line Fence Law section of our Ag Law Library at https://farmoffice.osu.edu/our-library/line-fence-law, including our more in-depth fact sheet and our explanation about line fence affidavits.

AGRICULTURE
By Mark Sulc, OSU Extension Forage Specialist and John McCormick, OSU Senior Research Associate

The 2018 Ohio Forage Performance Trials Report is available online at https://u.osu.edu/per/. The report summarizes forage yield data collected from forage variety trials in Ohio during 2018, including commercial varieties of alfalfa planted from 2015 to 2017 (3 trials), annual ryegrass planted in September 2017 (1 trial) and cover crops planted in September 2017 (1 trial).

The trials summarize yield performance of 34 alfalfa varieties and 11 annual ryegrass varieties. The cover crop trial summarizes stand establishment and ground cover development in the fall after a mid-September seeding in 2017 and winter injury, ground cover and spring biomass production in the spring 2018 of 22 cover crop varieties including rape, turnip, annual ryegrass, radish, Balansa clover, winter pea, and hairy vetch.

2018 Forage and Cover Crop Performance Trials Available

By Mark Sulc, OSU Extension Forage Specialist and John McCormick, OSU Senior Research Associate

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Fruit Tree Pruning Clinic

Steve Osborne at Osborne Orchard
Morrow County Master Gardener Volunteers

Join them for an educational afternoon of learning the proper techniques of fruit tree pruning. Discussion will include how and when to properly prune your fruit trees.

The clinic will be held outside at Osborne Orchard, so please dress accordingly.

When: Date to be determined. Please call our office in February for the date.

Where: Osborne Orchard, 6027 US Hwy 42 N, Mt. Gilead, OH 43338.

Contact information: Carri Jagger 419-947-1070 or Jagger.6@osu.edu

2018 Ohio Soybean Performance Trials - All Yield Results Available

Yield results from all three regions (north, central, and south) are now available online as a pdf at: https://stepupsoy.osu.edu/soybean-production/variety-selection/ohio-soybean-performance-trials Grain quality results and sortable tables will be available in November.

Average yield for the Ohio Soybean Performance Trials by location and trial (early and late) for 2017 and 2018 is shown in the table below. Soybean yield in the north region (Henry and Sandusky County) was much greater in 2018 compared to 2017. (Yield from Henry County was not reported in 2017 due to extremely wet weather causing yield to be variable.) In the central region, soybeans in the early trial yielded greater in 2018 compared to 2017. However, in the late trial, soybean yield slightly decreased in 2018 compared to 2017. Yield in the south region was variable with Preble County yielding less in 2018 compared to 2017 while Clinton County yielded greater in 2018.

Good Agriculture Practices (GAPS) Training

Please call OSU Extension-Morrow County to sign up 419-947-1070

What: The OSU Fruit and Vegetable Safety Team educates growers of fresh produce about Good Agricultural Practices (GAPs). We strive to ensure a strong scientific basis behind the best practices taught and recommended by our team, provide helpful tools and resources to develop risk assessments and food safety plans for the farm, and promote high-quality, safe produce from Ohio growers.

Cost: $30

When: February 11th from 6:30 p.m. – 9:30 p.m.

Where: Ag. Credit Building, 5362 US Highway 42, Mt. Gilead, Ohio 43338, Second floor conference room
Thinking of Starting A 4-H Club or Just Volunteering?

Contact Becky Barker for more information. (419-947-1070)

2019 Club Advisor Kick-Off Meetings Set

January 28th:
Session 1: 10 AM to 12 Noon
Session 2: 3 PM to 5 PM
Session 3: 7 PM to 9 PM
February 7th:
Session 4: 10 AM to 12 Noon
Session 5: 3 PM to 5 PM

Session 6: 7 PM to 9 PM

**We would like all volunteers to attend but at least one representative from each club must come to ONE of the Sessions to be a 4-H club for 2019.

Animal Project Born By/Hatch Dates

January’s the time to start thinking about and getting some of our market and breeding project animals. Listed are our fair requirements for some of the animals born/hatched early in 2019.

* Market Hogs - Farrowed/Born after February 1st (ideally born mid February – mid March)
* Market Goats - Born after January 1
* Market Lambs - Under 1 year of age by fair
* Breeding Poultry – Under 1 year of age by fair

2019 Ohio 4-H Conference – Only $20!

The 2019 Ohio 4-H Conference will take place at the Greater Columbus Convention Center on Saturday, March 9, 2019. This event is designed to bring together 4-H volunteers and teens from across the State of Ohio. The objective of this event is to learn together and from each other in order to improve our abilities to deliver the Ohio 4-H Program to its members. Nearly 150 sessions will be available to choose from!

Who: All Ohio 4-H Teens & Volunteers are welcome to attend
When: March 9, 2019, 8:00am - 5:00pm
Where: Greater Columbus Convention Center, 400 N. High St., Columbus, Ohio

Deadline: Wednesday, February 6, 2019 (To Morrow County Office)
How Much Does It Cost: $20 for Morrow County Members and Volunteers ($40 Regularly)
Thanks to our 4-H Endowment!
All registrations received after February 6th will be charged $40 and will not include the luncheon.
The Registration Booklet can be found at our office or at http://ohio4h.org/events/ohio-4-h-conference
Registration opens at 8:00 am and Session I starts at 9:00 am.

From the Junior Fair Office

News from Shelby & Lisa

Happy New Year! I hope everyone had a wonderful holiday season. The position of Jr. Fair Coordinator has changed hands, and I would like to take this opportunity to introduce myself: I am Shelby Perkins, a 13-year resident of Morrow County, having been raised on a small grain farm in Lorain County, Ohio. Another addition to the office is Lisa Duckworth who has stepped into the position of Assistant Coordinator. Lisa lives on a hobby farm in Lexington and has had children involved in the Morrow County Fair for over ten years. Together we hope to continue to grow and shape the junior fair experience for the youth of Morrow County.

We held the steer/heifer weigh-in for our 2019 market animals on December 1st, 2018, and had a very nice turn out. It was great to see that the kids are already excited for the fair season. The revisions for the upcoming fair book are well on their way and our new additions to the Jr. Fair Board are finding their footing.

My regular office hours will be every Thursday from 9 a.m.-3 p.m. in the Jr. Fair building. I will add days and hours as needed. Please contact us with any questions you may have.

Shelby Perkins, Jr. Fair Coordinator
Lisa Duckworth, Assistant Coordinator
Office phone: 419-947-1567
Cell phone: 419-560-7046
New E-mail: morrowcountyjrfair@gmail.com

Extension, Bed Bugs and Buckeyes

Educators - Amanda, Carri, Candace and Sawyer Shipman (volunteer) enjoyed educating the community about Extension, Bed Bugs, and Buckeyes at the Mt. Gilead Library.

2019 Morrow County 4-H Camp Dates!

Mark your calendar for another fun 5 days of camping! 2019 Camp dates are July 9-13th.

Ambassadors Crowned at Fair

Congratulations to the following individuals:
Sr. Rabbit Ambassador – Emma Smith
Jr. Rabbit Ambassador – Greer Orr
Jr. Poultry Ambassador – Mila McRill
Sr. Goat Ambassador – Nevala Gallager
Jr. Goat Ambassador – Shalyann Irwin

** We would like all volunteers to attend but at least one representative from each club must come to ONE of the Sessions to be a 4-H club for 2019.

Morrow County Lamb Carcass Show

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exhibitor</th>
<th>HCW</th>
<th>Back Fat</th>
<th>REA</th>
<th>Body Wall</th>
<th>BTRC %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Riley Johnson</td>
<td>82</td>
<td>0.2</td>
<td>4.5</td>
<td>1</td>
<td>49.63</td>
</tr>
<tr>
<td>2</td>
<td>Zane Parrott</td>
<td>79</td>
<td>0.3</td>
<td>4.0</td>
<td>1</td>
<td>48.22</td>
</tr>
</tbody>
</table>

HWC = Hot Carcass Weight, lbs.
REA = Ribeye Area
Body Wall = Thickness measurement (in)
BTRC% = Boneless Trimmed Retail Cuts (saleable product)

Morrow County Pork Carcass Contest

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exhibitor</th>
<th>HCW</th>
<th>Back Fat</th>
<th>LMA</th>
<th>% BTRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kayla Barker/Barker Family Farms ★</td>
<td>140</td>
<td>0.2</td>
<td>8</td>
<td>66.67</td>
</tr>
<tr>
<td>2</td>
<td>Leigh Ann Bower</td>
<td>131</td>
<td>0.1</td>
<td>9</td>
<td>64.00</td>
</tr>
<tr>
<td>3</td>
<td>Joseph Elliott</td>
<td>172</td>
<td>0.4</td>
<td>9.3</td>
<td>62.99</td>
</tr>
<tr>
<td>4</td>
<td>Maggie Snider - Res. Grand Champion Show</td>
<td>184</td>
<td>0.4</td>
<td>9.75</td>
<td>62.33</td>
</tr>
<tr>
<td>5</td>
<td>Kaitlyn Straley/ Jack Ruhl ★</td>
<td>164</td>
<td>0.5</td>
<td>9</td>
<td>61.55</td>
</tr>
<tr>
<td>6</td>
<td>Griffin Gray</td>
<td>142</td>
<td>0.5</td>
<td>7.75</td>
<td>61.23</td>
</tr>
<tr>
<td>7</td>
<td>Jocelyn Dobson</td>
<td>189</td>
<td>0.3</td>
<td>8</td>
<td>60.23</td>
</tr>
<tr>
<td>8</td>
<td>Brooke Bower</td>
<td>189</td>
<td>0.7</td>
<td>8.5</td>
<td>56.44</td>
</tr>
<tr>
<td>9</td>
<td>Brook Huntsman - Grand Champion Show</td>
<td>174</td>
<td>0.9</td>
<td>8.5</td>
<td>54.78</td>
</tr>
<tr>
<td>10</td>
<td>Paul Urey ★</td>
<td>195</td>
<td>1.1</td>
<td>7.25</td>
<td>49.72</td>
</tr>
</tbody>
</table>

HWC = Hot Carcass Weight, lbs.
LMA = Loineye Measurement Area
BTRC% = Boneless Trimmed Retail Cuts (saleable product)
Winter Birds of Ohio
Make and take 2 types of bird feeders and learn about birds of Ohio who winter here!

Who: Morrow County Youth Ages 8 to 18

Saturday, January 19th, 2019
9:00 AM to 12 Noon

Marilyn Weiler and Kim Forget of Headwaters Outdoor Education Center will be our guest speakers.

Location: Ag Credit Building, 5362 US Highway 42, Mt. Gilead, OH 43338
2nd Floor Conference Room
Cost: FREE • Details: RSVP by January 14th Max of 25

Contact Information: Becky Barker, 419-947-1070 and/or barkery.157@osu.edu

Pictured: Bridget Oder (Selected member to raise pig), Kaitlyn Straley (Sr. Swine Ambassador), Taylor Stephen (2nd Runner Up Jr. Fair Queen), Delisa Goodman (Jr. Fair Queen), Megan Oder
**State 4-H Horse Hippology/Judging/Horse Bowl Clinic**

*When:* February 23, 2019 (All day)

*Deadline to register:* Friday, February 8, 2019

*To register go to:* https://ohio4h.org/statewide-programs/animal-sciences/horse

*Cost:* $10.00

*Location:* Kottman Hall, The Ohio State University

*Registration Information:* Registration postmarked after Feb 8th will be $15.00. Registration will not be accepted after Feb 15th. Registration is limited to the first 200 participants.

*Schedule*

9:00 am Check-In

9:30 am Gaits

10:15 am Team Problem

11:00 am Break

11:15 am Bits

12:00 pm Lunch (pizza and water provided)

12:45 pm Contest Overview

1:00 pm Rotations:
  - Bones
  - Plant Identification
  - Oral Reasons
  - Hippology Station/Judging Practice
  - Horse Bowl Practice

3:30 pm Adjourn

Due to the hands-on nature of the workshop, registration is limited to the first 40 participants.

*Questions? Contact Dr. Kimberly Cole, OSU Extension Equine Specialist, 614-292-2625 or cole.436@osu.edu.*

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**REINS Hands on Horses Workshop**

*WHEN:* Saturday, February 10, 2018

*WHERE:* The Ohio State University Equine Facility, 3658 Kays Road, Dublin, OH 43017

*Schedule*

9:30 am Check-In

10:00 am Assessing Horse Health

11:00 am Lameness Lab

11:30 am Strategies for Soundness

12:15 pm Lunch (catered by City Barbecue)

1:00 pm Colic

1:30 pm Administering Medications

2:00 pm Laminitis

3:15 pm Saddle Fit for Horse & Rider

3:30 pm Adjourn

Due to the hands-on nature of the workshop, registration is limited to the first 40 participants. Participants must be 14 years old as of January 1, 2018.

*Questions? Contact Dr. Kimberly Cole, OSU Extension Equine Specialist, 614-292-2625 or cole.436@osu.edu.*

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**REINS Hands on Horses Workshop Registration Form**

*Registration Deadline: Registration forms must be post-marked no later than February 1st, 2018.*

1. Name:

2. Email:

3. Address:

4. Phone:

*Registration Fee: $40.00*

Make checks payable to: The Ohio State University

Mail registration form and payment to:

OSU Extension Equine Specialist, 2029 Fyffe Court, Columbus, OH 43210

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**2018 Record Year for West Nile Virus Infections in Horses in Ohio**

*By Dr. Jeff Hayes, DVM, MS, ADDL Pathology Section Head*

The 2018 West Nile Virus infection season has come to a close in Ohio, and this year was a record year for confirmed equine cases (50) identified by the ADDL. Horses included had appropriate clinical signs and were confirmed by either serology (presence of IgM antibody in the absence of vaccination history, 48 cases) or by detection of WNV nucleic acid in inflamed horse brain tissue (2 cases).

Infected horses came from 18 of Ohio’s 88 counties, with 54% of confirmed cases coming from 3 counties: Holmes (14), Wayne (7) and Tuscarawas (6). See the map and chart below for location and listing of affected counties with equine WNV cases.

Standardbreds were the breed most affected (21, 42%), followed by 5 Paint and 4 Belgian horses. Two each of Hackney pony, Morgan, Percheron, other Pony, Quarterhorse, and Thoroughbreds were affected, and one each of other breeds (draft horse, Dutch Harness, Friesian, Haflinger, Mini Pony, donkey, mule), and one horse with breed not indicated. Ages affected ranged from 1 to 22 years, and 27 were male (54%), 21 female (42%) and 2 with no gender reported.

The Ohio Department of Health (ODH) reports that there were 64 human WNV cases in Ohio this year, as of 11/26/2018.

Only 14 positive WNV equine cases were confirmed in Ohio in 2017. Mosquito control and proper vaccination of horses are important preventive measures to minimize suffering and death of horses from this viral disease transmitted primarily by the northern house mosquito, Culex pipiens.

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**Congrats to Addie Wilhelm for winning the 2018 4-H Horse and Pony Scholarship**

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Gratitude? Can it affect overall health?

By Lorrissa Dunfee, Family and Consumer Sciences Educator, Ohio State University Extension, Belmont County

According to Cambridge Dictionary, gratitude is defined as “a strong feeling of appreciation to someone or something for what the person has done to help you”. Did you know when we practice an “attitude of gratitude”, not only do we encourage others but we reap the many benefits too? There is countless research available documenting the positive impacts on our health and well-being.

Time Health identified the following seven benefits of gratitude in their November 20, 2017 magazine.

1. Gratitude can make you more patient.
   Research from Northeastern University has found that people who felt grateful for little, everyday things were more patient and better able to make sensible decisions compared to those who didn’t feel very gracious on a day-to-day basis.

2. Gratitude might improve your relationshipships. According to a study in the Journal of Theoretical Social Psychology, feeling grateful toward your partner — and vice versa — can improve numerous aspects of your relationship, including feelings of connectedness and overall satisfaction as a couple.

3. Gratitude improves self-care. In a study published in the journal Personality and Individual Differences, researchers asked people to rate their levels of gratitude, physical health and psychological health, as well as how likely they were to do wellbeing-boosting behaviors like exercise, healthy eating and going to the doctor. They found positive correlations between gratitude and each of these behaviors, suggesting that giving thanks helps people appreciate and care for their bodies.

4. Gratitude can help you sleep. Research in the Journal of Psychosomatic Research has found that feeling grateful helps people sleep better and longer.

5. Gratitude may stop you from overeating. “Gratitude replenishes willpower,” says Susan Peirce Thompson, a cognitive scientist who specializes in the psychology of eating. The concept is similar to the Northeastern research that found a connection between gratitude and patience: Thompson says cultivating feelings of gratitude can boost your impulse control, helping you slow down and make better decisions.

6. Gratitude can help ease depression. Thompson says experiments have shown that people who partake in the “three good things” exercise — which, as the name suggests, prompts people to think of three good moments or things that happened that day — see considerable improvements in depression and overall happiness, sometimes in as little as two weeks.

7. Gratitude gives you happiness that lasts. Lots of things, from a compliment to a sugary treat, can bring little bursts of happiness. Instant gratification also goes away quickly, which leaves you craving more. Gratitude is a frame of mind that if you regularly take time to express gratitude, then you’re more likely to see results.

“New year” I would like to challenge you to cultivate gratitude! Start by just paying attention to the good around you, acknowledge it, and appreciate it. I think Maya Angelou said it best, “This is a wonderful day. I’ve never seen it before”.

Top 10 Tax Changes for Your 2018 Return

1. Standard deductions go UP. Married filing jointly standard deduction increase to $24,000 up from the $13,000 it would have been under previous law.

2. Personal exemptions—GONE! The personal exemption claim has been eliminated with the tax reform bill — you will no longer claim a $4,050 exemption.

3. Top income tax rate. Some brackets went up, some went down. A new 37 percent top rate will affect individuals with incomes of $500,000 and higher. Lower income brackets went down.

4. Estate Tax. The estate exemption doubles to $12 million per individual and $22.4 million per couple in 2019.

5. Child tax credit. The child tax credit has been raised to $2,000 per qualifying child, (children age 17 and under). Up from $1,000. A $500 credit is available for dependents who do not qualify for the $2,000 credit.

6. Mortgage interest (depends on when you got your mortgage). The deduction for interest is capped at $750,000 for mortgage loan balances taken out after Dec. 15 of last year. The limit is still $1 million for mortgages that were established prior to Dec. 15, 2017.

7. State and local taxes (for some). The itemized deduction is capped at $100,000 for both income and property taxes paid during the year. If your taxes were higher than that, you lose the amount over $10,000.

8. Contribution limits for retirement savings. Employees who participate in certain retirement plans – 401(k), 403(b) and most 457 plans, and the Thrift Savings Plan – can now contribute as much as $18,500 this year, a $500 increase from the $18,000 limit for 2017.

9. Savings in IRA's. The maximum amount you can contribute to a traditional IRA for those under the age of 50 is $5,500. Workers who are 50 and older can add an extra $1,000 ($6,500).

10. Income Phase-out. For individuals who are single or the heads of their households, the income phase-out has been raised to $120,000 to $135,000. For married couples who file jointly, the range climbs to $189,000 to $199,000.
Less Screen Time During Meals Can Help Promote Healthier Eating in Children

By Tracy Turner, 614-688-1067, turner.490@osu.edu

My kids love to watch TV or view their cellphones or tablets while they eat. I used to eat cereal on Saturday mornings and watch cartoons when I was a kid, but my children prefer to watch a screen at every meal, every day. Is this something I should be worried about?

Research has shown that children who have family mealtimes at least three or more times a week are more likely to be of normal weight and have healthier eating habits. And children who have family meals are more likely to feel better about themselves, experience less depression, are less likely to use illegal drugs and tend to get better grades at school.

And while 63 percent of consumers believe that eating at home with their families is important, only 30 percent actually share dinner every night, according to a September report published by the Food Marketing Institute Foundation.

One of the reasons cited in the poll — too many distractions, including TV and social media. With that in mind, researchers recommend that parents hold screen-free family meals as often as possible.

When compared to meals eaten in front of a screen, screen-free meals provide an opportunity for important social interactions between parents and children, says Ingrid Adams, an Ohio State University Extension specialist in Food, Health and Human Behavior in the College of Food, Agricultural, and Environmental Sciences at The Ohio State University.

"Some studies have shown that family meals help prevent obesity and lower the chances that children will engage in risky behaviors," she said. "Increases in screen time have been linked with unhealthy habits, such as eating more junk food, physical inactivity, poor sleep patterns and decreased social interaction."

"As a family, it is important to set healthy limits and boundaries for screen use, particularly when it comes to meal times." So how can you lessen the screen time at mealtimes with your kids? Adams suggests:

1️⃣ Eat your meals at the table. Have everyone sit at the table together rather than in front of the television while eating dinner. Have kids come to the kitchen when eating other meals and snacks as well.
2️⃣ Turn off the television during mealtime.
3️⃣ Create boundaries. Make firm rules about not using or viewing screens during meals. Set limits on screen time and where screen time can occur.
4️⃣ Remove distractions. Don’t bring phones, tablets or other devices to the dinner table. Consider removing any screens from the eating area.
5️⃣ Take turns sharing ideas. Have everyone take a turn sharing what he or she did during the day. This might help spark conversation and lessen the desire for distractions such as TV or phones.

Another tip? Set a good example yourself by not using any screens at mealtime and limiting your total screen time, especially when you are with your family.

Chow Line is a service of the College of Food, Agricultural, and Environmental Sciences and its outreach and research arms, Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Tracy Turner, 364 W. Lane Ave., Suite B120, Columbus, OH 43201, or turner.490@osu.edu.
THANK YOU Central Ohio Farmer’s Co-op
for over 32 years of donations toward 4-H project books!

Approximately $1,200 each year is donated! Thanks for helping make the best better!

Central Ohio Farmer’s Co-op, Inc.

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Phone: 419-946-4015 • 800-482-5905 FAX: 419-946-4025