CFAES OHIO STATE UNIVERSITY EXTENSION

Morrow County SCARLET & GRAY News

Volume 17 Issue 3 • June/July 2021

We value your input - please take our survey

By Candace J. Heer, Extension Educator, Family and Consumer Sciences

- https://go.osu.edu/surveymorrowextensionfcs
- **This survey is open through June 30, 2021.**

We are interested in obtaining your feedback about Family and Consumer Sciences (FCS) awareness and interest in programs through Morrow County Extension. An anonymous survey, at this link https://go.osu.edu/surveymorrowextensionfcs, will take approximately 5 minutes to complete. The link to the survey can also be found on our website at morrow.osu.edu.

If you would like help in completing the survey, please call our office at 419-947-1070 and someone will assist you. In the survey, you will also have an opportunity to provide your email to be placed on our FCS Program Information and Invitation list and your responses will not be linked to your information. This survey is open through June 30, 2021.

If you have questions about this survey or Family and Consumer Sciences in general, please contact me at heer.7@osu.edu and at the OSUE-Morrow County office number 419-947-1070.

Thank you for completing this survey. Your feedback will help guide future FCS programming in Morrow County.

Publications For Sale

OSU Extension – Morrow County has the following publications for sale:

- eFields Report (Free) This is a report of all the on farm research that OSU Extension is participating in around the state.
- Midwest Home Fruit Production Guide ($14.50 + Tax)
- The NEW Tri-State Fertilizer Recommendations ($5.76 + Tax)
- 2021 Weed Control Guide ($11.00 + Tax)
- Ohio Agronomy Guide ($10.00 + Tax)
- Corn, Soybean, Wheat and Forage Field Guide (9.44 + Tax)

Spot On sprayer calibrator can be borrowed

If you are getting ready to calibrate you rsprayer, OSU Extension has a handy little spray calibrator that you can borrow. It takes the guess work out of calibrating the sprayer.

Call the OSU Extension - Morrow County office at 419-947-1070 for more information.

Current Resident or

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

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AGRICULTURE

Clean Sweep Agriculture Chemical Disposal Collection

The Ohio Department of Agriculture will be sponsoring a collection event on August 12th from 8 a.m. to 3 p.m. for farmers wishing to dispose of unwanted pesticides. The event will be held at the Morrow County Fair Grounds, 195 S Main St, Mt Gilead, OH 43338

The pesticide collection and disposal services are free of charge, but only farm chemicals will be accepted. Paint, antifreeze, solvents, and household or non-farm pesticides will not be accepted.

The pesticide collections are sponsored by ODA in conjunction with the U.S. Environmental Protection Agency. For more information, contact the Ohio Department of Agriculture at 614-728-6987.

Please Call or Email Carri Jagger with any questions 419-947-1070 or Jagger.6@osu.edu

Sheep 101 Field Day scheduled for Saturday, August 14, 2021

OSU Extension – Morrow County, Morrow County Farm Bureau and The Ohio Sheep Improvement Association are offering a FREE small ruminant field day for local sheep producers. The program will be held Saturday, August 14 from 9:00 a.m. to 2:30 p.m. at the Dale and Kathy Davis Farm, 3149 County Road 169, Cardington, Ohio 43315.

The program is set up for both beginning and experienced producers. The topics in the program will include:

- Labor Saving Time Tricks
- Shearing
- Vaccinations
- Lambing Simulator
- Experienced Producer Q&A Panel

The sessions will be taught by OSU Extension Educators and industry professionals. Lunch will be provided.

Please RSVP by July 31st to Morrow County Farm Bureau at 419-747-7488 or morrow.ofbf.org.

Set the date: 2021 Agronomy Field Day

Save the Date! The 2021 Agronomy Field Day will be held Wednesday September 8th from 10:00 a.m. – 3:00 p.m. at the Headwaters Outdoor Education Center, 151 Home Road, Mt. Gilead, Ohio 43338.

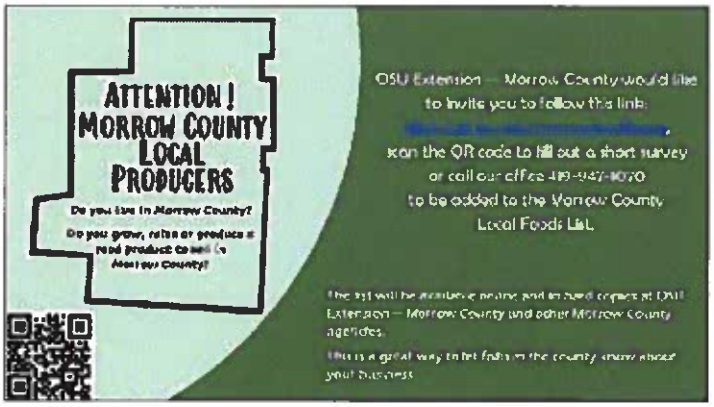
Check back with OSU Extension – Morrow County or Morrow Soil and Water for more details as the date gets closer.

Morrow County Cattlemen Association & Morrow County Pork Producers Looking for Workers At This Year's Fair

Once again, the Morrow County Pork Producers and The Morrow County Cattlemen's Association will be looking for groups who wish to work in their food stands during the Morrow County Fair. For more info and to sign up please call the following:

Mary Nevitska - Pork Producers - 419-656-7666

Dixie Shinaberry – Cattlemen's Association - 419-512-5644



Pond Clinic to be held June 10

The Morrow & Richland Soil and Water Conservation Districts will be hosting a Pond Clinic for new and established pond owners on June 10, starting at 7:00 p.m. The featured speaker will be Steve Fender, of Fenders Fish Hatchery in Baltic, Ohio.

The clinic will be held at Headwaters Outdoor Education Center, 151 Home Rd., Mt. Gilead, OH 43338 (just north of the Morrow County Sheriff's Office).

The topics covered will include: pond management, aquatic vegetation control, fish stocking, fish management, aeration systems and much more. Light refreshments will be provided and there will also be activities for kids. This event is open to the public.

Purchased Tilapia from the Morrow SWCD fish sale will be available for pick up from 6:00 p.m. to 7:00 p.m. that day or at the conclusion of the pond clinic. If interested in ordering Tilapia, please visit Morrow SWCD's website: mrwswcd.wixsite.com/morrowswcd.

For questions, please contact Morrow Soil & Water at 419-946-7923 or Richland Soil & Water at 419-747-8686.

Start Planning for Pre-Emergence

By Carri Jagger, Ag & Natural Resources Educator, Morrow County

I have had a few questions recently about when to apply pre-emergent herbicide to flower beds. Now is a great time to do it as long as you prepare the bed first. You want your beds to look like the picture below if you are planning on using pre-emergent herbicide

Pre-emergent herbicides are a great way to cut down on the amount of many annual and perennial weed seeds in flower beds. Pre-emergent herbicides control a variety of weeds but not all weeds. If your flower beds look like the picture below you need to make sure all of the perennial and annual broad leaf weeds and grass weeds are removed before applying pre-emergent. Because pre-emergent herbicide will not control weeds currently growing in the beds, thus the preparation. Pre-emergent prevents weed seeds from growing and maturing by inhibiting the root system development of the young weed seedling. This kills it before it matures.

Pre-emergent herbicide will not work on the picture below. The weeds and grass must be controlled before applying pre-emergent.

There are several brands of pre-emergent on the market including: trifluralin (Preen®), DCPA (Dacthal®), oryzalin (Surflan®), pendimethalin (Halts®) and isoxaben (Gallery®). Unfortunately, some of the previous are not readily available to home gardeners, since their primary use is by professional applicators. In all cases, careful reading of the herbicide label is important, since not all herbicides can be used among all ornamental plants and certain herbicides require special application techniques.

In fact, some herbicides, particularly those for vegetables, may require a period of time post-planting before application. Therefore, clean the beds up first and apply at the proper time.

Using pre-emergent herbicides is not a one and done treatment. It needs to be reapplied about every 3 months, depending on the product. If mulch is going to be used and annuals are planted, a pre-emergent application should be done after mulching. I usually use three applications a year. One at the end of March or the beginning of April, one in June after I mulch, and another at the end of September or beginning of October to control winter annuals. I actually spread mine the other day right before a rain. So now it is activated and protecting my flower beds from pesky little weed seeds that could be lurking in the soil. It is very important to water in pre-emergent herbicide once applied as this activates it.

Keep in mind that once pre-emergent herbicides are applied and watered in, they create a barrier thus preventing weed growth; if that barrier is disturbed from digging holes to plant or raking, the product will no longer be effective. Also, if annuals are started from direct seeding in the garden, avoid using pre-emergent herbicide in those areas. This would also include any perennials that you want to reseed and spread in your garden.

Information for this article came from Colorado State Extension, University of Missouri, and Purdue University Extension.

AGRICULTURE

Perennial Weeds can indicate soil health problems in pastures

By Dean Kreager, OSU Extension Educator ANR, Licking County

(Previously published in Farm and Dairy: May 6, 2021)

If plants could talk, we could learn a lot, and our jobs as stewards of the land would be much easier. When we go to the doctor because we are sick, we do not sit quietly and expect the doctor to know how we feel and then tell us how to get better. We need to provide information that will help with the diagnosis.

But since plants cannot talk, our job is difficult when we try to locate the source of a problem, such as low productivity or an infestation of weeds.

Recently, one of my colleagues, Ed Brown, suggested a method of taking stock of what is growing in your pasture. Knowing what plants are growing in your pastures is an important first step in listening to what the pasture is telling you. Varieties of plants or changes in these populations from year to year can provide important clues.

Indicators

Indicator plants are plants that can provide suggestions of issues in the soil. Often, perennial weeds can be our best indicator plants. These plants are living in a condition that has allowed them to survive for multiple years.

Annual plants only need conditions that allow them to make it through one growing season, but their ability to come back for multiple years can also suggest problems.

Identifying and inventorying these plants can be an additional tool to use when managing your pasture.

While I would not suggest that these plants take the place of soil testing, they could hint that a soil test is needed to interpret what the indicator plants are telling us. By testing soil and continuously monitoring the stock of plants present, we can document actual improvements over time.

Much of the information on indicator plants dates back many years, but there continue to be studies from universities that support many of the old findings.

Examples

Here are some examples of indicator plants, though there are many more. Broadleaf plantain may indicate compacted soil with low fertility. Broomsedge is often an indicator of low phosphorous, which may be due to low pH. Burdock can indicate low calcium and high potassium.

Curly dock often indicates wet or compacted soils, as well as low calcium and extremely high magnesium, phosphorous and potassium. Knapweed does well with low calcium and very low phosphorous.

Oxeye daisy likes low phosphorus, high potassium and high magnesium. Common mullein often indicates low pH rocky soils. Redroot pigweed can indicate too much iron or to little manganese, but it may also indicate high potassium and manganese and low phosphorous and calcium, and is often an indicator of fertile soil.

Managing weeds

Usually, our goal is to find a way to remove weeds from our pastures. They typically reduce productivity and compete against the desired forages. But research has shown that simply removing those weeds without addressing why they grew there in the first place will only provide a short-term solution, as the weeds will likely return.

Taking stock of weeds and listening to what they are telling us about soil conditions can be an additional tool in our toolbox. We do our best to provide a good representative soil sample to learn about the fertility status on our pastures. These samples are great for providing averages.

But maybe, for example, we did not pull a sample from a particular area, and we realize that area is covered with broomsedge. Going back and taking a soil sample in that area could be valuable in both getting rid of the weed problem and improving fertility.

Pick up a good weed identification guide and do not be afraid to contact your local extension educator for assistance with identification. There are also several university-based guides for assistance with what these weeds may be telling you. Listening to those indicator plants is one more tool for managing your pastures.

Are Periodical Cicadas a threat to field crops?

By Curtis Young, CCA

Are periodical cicadas a threat to field crops? The quick and dirty answer to this question is NO. Are they a thread to the health and welfare of anything? There is no quick and dirty answer to this question.

The best way to answer the second question is to start by looking at what the periodical cicada is, what it feeds on, where one would expect to find them, and its life cycle.

The periodical cicada or 17-year cicada is an insect with an extremely long life cycle that takes 17 years to get from the egg stage to the adult stage. Some people mistakenly refer to this insect as a locust. Unfortunately, locusts and cicadas are not one-in-the-same. Locusts are a type of grasshopper (Order Orthoptera). Cicadas (Order Hemiptera) are not grasshoppers. And the two look nothing like one another.

The periodical cicada feed mostly in their nymphal stages and are hosted by trees of many species. And since it takes 17 years of feeding by the nymphs, the trees have to be old and well established, minimally 20+ years old. Therefore, periodical cicadas are going to be found in and around long-standing woodlots, forests and landscapes (homes, parks, and cemeteries), especially those that have been established in or next to woodlots. What does this preclude? We will not find periodical cicadas in crop fields, pastures, landscapes recently established on field crop ground, housing developments where all of the ground was excavated, or basically anywhere where there isn't long established trees. There are also northern limits to their natural range (e.g. they do not exist very far into the state of Michigan).

The periodical cicada has three stages in its life cycle, eggs, nymphs and adults. Adults present themselves once every 17 years for about 4 to 6 weeks. In Ohio, the time period could start in early May in southern Ohio and mid- to late May in northern Ohio. Not all parts of Ohio will experience periodical cicada. Besides being limited to places where older growth trees are established, there are different populations called Broods that emerge in different years. In Ohio this year, we are expecting Brood X periodical cicadas which are mainly distributed in mid- to western Ohio.

There is currently a Citizen Science projected called Cicada Safari with a reporting application for people to report where they run into populations (https://cicadasafari.org). This is a smart phone application for reporting to help the scientists verify the true distribution of this insect.

Dog-day cicada

Grasshoppers

The main purpose of the adults is reproduction, find a mate, mate, and lay eggs for the next generation. This is when damage can occur to trees. Mated females jam their ovipositors (egg-laying structures) into small branches of trees. Multiple jabs can damage the stems to the point that they may die or at the very least be very easily broken called flagging. Mature, healthy trees will easily grow through this damage. Very young trees and newly planted trees may suffer from the damage. Because of the way that orchard trees are pruned and managed, this could cause serious damage and crop loss.

The eggs hatch a short time after they are laid. The newly hatched nymphs drop from the trees to the ground, dig in and find a tree root to attach to for feeding. No research has been done to determine if the nymphal feeding causes and problems for the trees. And that is where they stay for 17 years.

Are they a health concern for humans? No, they do not bite nor sting. Are they a threat to livestock or pets? They are not poisonous, however some dogs and cats stuff themselves with cicadas to the point that they vomit.

If you want to learn more about the periodical cicada, see the following links: OSU Fact Sheet, Periodical and "Dog-Day" Cicadas: https://ohioline.osu.edu/factsheet/ENT-58; Cicada Mania: https://www.cicadamania.com/; Crop Observation and Recommendation Network

Entering a Flower Show 101

Do you have an interest in entering flowers or flower arrangements in flower shows or county fairs, but not sure how to do it? You are in luck Morrow County Master Gardener Volunteers are offering a class to teach folks the ins and outs of entering flowers in flower shows and fairs.

The class, Entering a Flower Show 101 will be held Tuesday, June 29th at 6:00 p.m. at the Headwaters Outdoor Education Center, 151 Home Road Mt. Gilead, Ohio 43338.

Questions? Please Call OSU Extension Morrow County with questions 419-947-1070 or email Carri Jagger Jagger.6@osu.edu

Educational Dairy Tour set for July 10

An Educational Dairy Tour will be held on Saturday, July 10th from 10:00 a.m. to 2:00 p.m. at Berg Farms, 3100 Parsons Road, Bellville, Ohio 44813 (8.3 Miles South of Lexington and 11.3 Miles North of Chesterville).

Spend the morning and early afternoon with the Morrow County Dairy Association at a Working Dairy Farm where you will get a FREE hands on educational tour. This tour is open to the world. Delicious Dairy treats will be provided.

This educational tour will answer all of your questions about the dairy industry, including feeding, care, milk testing, nutritional food values and much more.

Please join us to learn about how and where the dairy products you buy at the store come from.

Sponsored by: Morrow County Dairy Association, Smith's Foods, Farm Bureau, OSU Extension, AgCredit.

Please RSVP by June 25th to OSU Extension - Morrow County at 419-947-1070.

AGRICULTURE

Growing degree days vs. calendar days – how long will emergence take?

By Alexander Lindsey, Greg LaBarge, CPAg/CCA

When we examine crop emergence post-planting, two factors can impact speed of emergence – soil moisture content and soil temperatures. If soil temperatures are lower, it can take more calendar days for emergence to occur meaning rowing corn may take a little more time. In the Ohio Agronomy Guide, emergence should begin to occur after approximately 100 air GDDs.

A difference in 10 degrees in temperature can dramatically affect how quickly crops will emerge. For example, at a temperature of 60 degrees F heat unit accumulation per day would be 60 F – 50 (base temperature for growth) = 10 GDDs. If it takes 100 GDDs to start to see emergence, at this rate it would take 10 calendar days to see the crop start to emerge. If temperatures are 70 degrees F, heat unit accumulation per day would be 70 F – 50 = 20 GDDs. This would shorten the emergence window to 5 calendar days instead, resulting in more rapid emergence from planting.

In recent work from Nemergut et al. (2021), researchers from OSU observed emergence starting at 110 to 120 soil accumulated GDDs (base of 50 degrees F) for corn, which equated to first emergence observed in 4 or 5 days after planting. Some of the difference in calendar date for emergence (though GDD accumulation was similar) was because planting depth was changed, and the 1" planting accumulated GDDs faster than the 2" and 3" planting depths. These studies though were planted in May or early June (2019 wet spring delayed planting), and daily accumulated GDDs was higher than we might expect if planted in late April. Soil accumulated GDDs have been discussed above, and these could vary slightly compared to air accumulated GDDs (calculated using air temperatures). In the work referenced above, accumulated air GDDs in the first four days post-planting were 106-118 GDDs, slightly less than the soil accumulated GDDs.

If you want to predicate emergence on your farm, the GDD calculator found at https://mrcc.illinois.edu/U2U/gdd/ is a useful tool. It is a two-step process, first find your location on the map, then enter your planting date. The graph will display accumulated GDD's for your location. Example output in Figure 2 shows GDD accumulation from an April 19, 2021 planting date near London, OH in Madison County. By May 6 the accumulated GDD was 138 and the emerging corn is shown in Figure 1. The GDD calculator can be used to predict growth stage throughout the growing season. This is a handy to time when scouting and management decisions should be made.

As the days turn cooler, don't be surprised if the crops don't pop out of the ground quickly due to lower soil temperatures. If emergence is still not observed after two weeks, it may be worth checking the field to see if other issues may be affecting emergence.

Figure 1. Emerged corn on May 6, 2021 planted April 19 near London, OH.

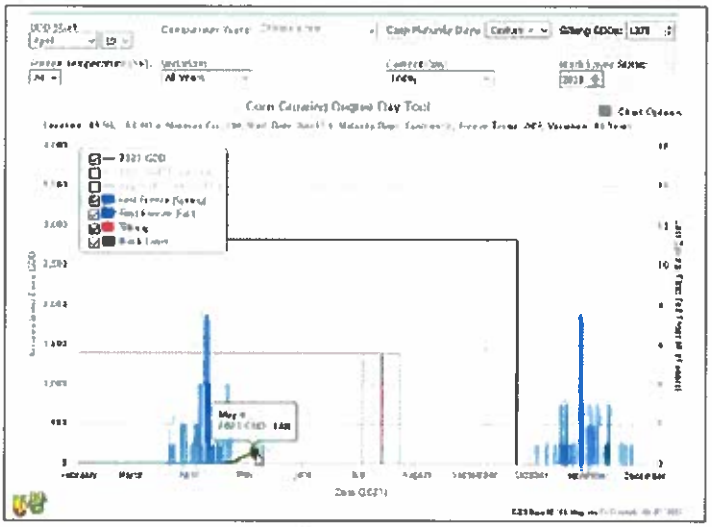


Figure 2. GDD accumulation from April 19 to May 6, 2021 near London, OH.

Make your best hay

By Mike Rankin
Hay and Forage Grower Managing Editor
(Previously published in Hay & Forage Grower: May 11, 2021)

There's never been a haymaker who couldn't improve on their craft. The opportunities to enhance forage yield, quality, and persistence are nearly endless. Whether you've already started cutting or are still waiting, Amanda Grev offers this bevy of suggestions in the University of Maryland's Agronomy News to improve this year's hay quality ledger.

Harvest at the correct maturity stage

"The single most important factor affecting forage quality is the stage of maturity at the time of harvest," notes the extension pasture and forage specialist. "This is especially true in the spring when forages are growing and maturing rapidly."

Target the onset of cutting at the boot stage for grasses or late bud to early bloom for legumes. For legume-grass mixtures, base your cut-time decision on the maturity of the grass, which usually mature earlier than legumes in the spring.

Cut early, wide, and high

In humid regions, maximize curing time by mowing in mid- to late-morning after the dew has dried off. This will allow for more drying time before sunset. Grev notes that maximizing exposure to sunlight and wind will result in faster dry down and reduced plant respiration during hours of darkness.

"When mowing, set the mower to make as wide of a swath as possible, ideally at least 70% of the cut width," Grev writes. "Maximizing the swath width shortens the wilting time by exposing a larger portion of the forage to direct sunlight, which leads to faster drying and preserves more digestible dry matter."

She also recommends paying attention to cutting height and avoid cutting hayfields too close. For alfalfa, leave 2 to 3 inches of residual. Cool-season grasses generally require no less than a 4-inch cutting height.

"Not only will this result in improved stand persistence, earlier regrowth, and sooner subsequent cuttings, but the stubble will help to elevate the swath and promote airflow and rapid drying," Grev explains.

Monitor moisture

Ted or rake forage above 40% moisture; this helps to reduce leaf loss, especially for legumes. Make sure rakes are properly adjusted to avoid picking up soil. Using rakes that handle the hay gently or slowing the speed of the rake are also ways to further minimize leaf loss and maintain forage quality.

Bale hay at 15% to 18% moisture to inhibit mold growth and reduce heating. Hay that is too wet — above 20% moisture — is prone to excessive heating and is subject to having high concentrations of heat-damaged, indigestible protein. Hay that is excessively dry will have greater leaf loss, which reduces forage quality.

Time cuttings

"Appropriate timing includes not only harvesting at the ideal forage maturity but also timing your cutting schedule for optimal growth based on seasonal weather conditions," Grev notes. "For example, completing the first cutting in a timely manner allows time for adequate regrowth and a good second cutting prior to the onset of the hot summer months. A nitrogen application (for grasses) following first harvest can help with this by stimulating forage regrowth."

Grev recommends allowing cool-season hayfields to go into the summer with at least 5 to 6 inches of regrowth. Doing so will provide shade to the plant crown and moderate the soil surface temperature, reducing soil moisture losses.

Fall hay cuttings need to be scheduled to allow stands enough time to regrow and replenish root carbohydrate reserves prior to winter dormancy.

Feed the crop

Quality forage can't be achieved without a sound soil fertility program. Grev suggests that a sound forage system entails providing adequate nutrients to the crop while also monitoring soil pH, soil compaction, nutrient removal rates, and overall nutrient status.

"High-yielding cuttings of hay remove substantial amounts of nutrients from fields, making a balanced fertility program essential for optimizing hay production," Grev says. "Take the time to soil test and apply nutrients and lime according to soil test results. Avoid using "complete" fertilizers like 10-10-10, which commonly overapply phosphorus and underapply potassium."

Keep it covered

Finally, Grev cautions to preserve forage yield and quality during storage. Store hay off the ground and preferably under cover. Weathering losses are largely the result of hay bales wicking moisture from the ground.

AGRICULTURE

Adapting Burndown Programs to late-planted situations

It's déjà vu all over again. We have run this article every few years, and it seems like maybe the frequency is increasing as we deal with wet and cold weather that delays planting.

The questions about this have not changed much, and neither have the suggestions we provide here. One of the most common questions, 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 since there is no wait to plant). Overwintered marestail plants become tougher to kill in May, so this is an issue primarily in fields not treated last fall. The good news is that we have more effective herbicide/trait options for help with burndown compared with a few years ago. The bad news is that nothing we suggest here is going to be 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. 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)

Saflufenacil 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 is usually going to be a 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 can be 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.

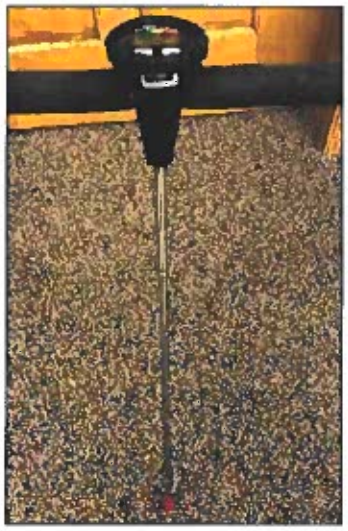
5. Among all of the residual herbicides, chlorimuron contributes the most activity on emerged annual weeds and dandelion. This is probably most evident when the chlorimuron is applied as a premix that contains metribuzin (Canopy Blend/Cloak DF, etc). The chloirmuron may not be much of a help for marestail 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.

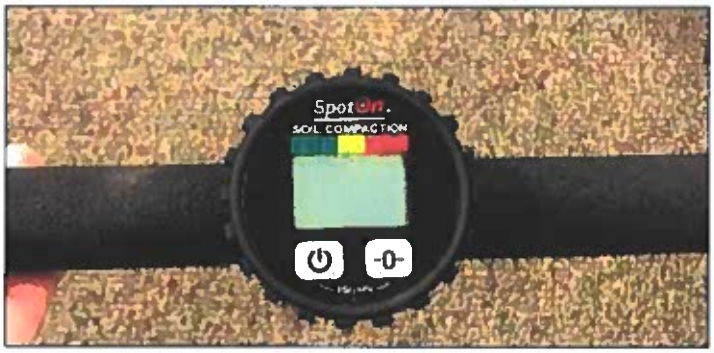
6. It is possible to substitute tillage for burndown herbicides. Make sure that the tillage is deep and thorough enough to completely uproot weeds. Weeds that regrow after being "beat up" by tillage are often impossible to control for the rest of the season. Tillage tools that do not uniformly till the 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.

One of the OSU PrecisionU sessions that past winter dealt with planning for problems caused by wet weather in late spring. The related video on weed management can be found here: https://www.youtube.com/watch?v=212t-85mpKk&feature=youtu.be

C.O.R.N. Newsletter is a summary of crop observations, related information, and appropriate recommendations for Ohio crop producers and industry. C.O.R.N. Newsletter is produced by the Ohio State University Extension Agronomy Team, state specialists at The Ohio State University and the Ohio Agricultural Research and Development Center (OARDC). C.O.R.N. Newsletter questions are directed to Extension and OARDC state specialists and associates at Ohio State.





Do you have soil compaction in your fields?

Do you ever wonder about soil compaction in your fields? OSU Extension – Morrow County purchased a new tool called a penetrometer. This tool helps to determine how compact your soils are. If you are interested in knowing how compacted your soils might be call our office 419-947-1070 and Carri would be happy to schedule an appointment to walk your fields and test the compaction.

OSU EXTENSION CALENDAR OF EVENTS

JUNE 2021

7 Junior Fair board, 7 p.m., Fair Grounds

7 Junior Fair Entries Due

8 REGISTRATION DUE: 4-H Illustrated Talk or Demonstration, Health and Safety Speaking Contest, and Public Speaking - LEGO Edition Contest

9 CARTEENS, 6:30 pm – Ag Credit 2nd Floor Conference Room

10 Pork Producers, 7 p.m., Ag Credit 2nd Floor Conference Room

10 Pond Clinic, 7 p.m., Headwaters Outdoor Education Center (see flyer in newsletter)

11 Early 4-H Project Judging Registration Due

12 Food Preservation-Canning Basics, Ag Credit Building, Second Floor Conference Room, 9 a.m.

14-18 Green Crusader Youth Camp, Headwaters Outdoor Education Center, Registration TBA

13 Horse PAS State Fair Qualifying Show, Fair Grounds, 10 a.m., Contesting then Pleasure

15 4-H Illustrated Talk or Demonstration, Ag Credit 2nd Floor Conference Room, 6 p.m.

15 Health and Safety Speaking Contest, Ag Credit 2nd Floor Conference Room, 7 p.m.

15 Public Speaking - LEGO Edition Contest, Ag Credit 2nd Floor Conference Room, 7 p.m.

16 Market Broilers for Fair order DUE!

17 Horse & Pony Committee, 8 a.m., Ag Credit 2nd Floor Conference Room

20 Ohio State Fair Livestock & Dog Entries Due

21 Early 4-H Project Judging, 6 p.m., Fairgrounds Youth Building

27 Horse PAS State Fair Qualifying Show, Fairgrounds, 10 a.m.

30 Writing 4-H Projects Due To The Extension Office

JULY 2021

5 Junior Fair Board, 7 p.m., Fairgrounds Youth Building

7 Cattlemen's Meeting, 6:30 p.m., Ag Credit 2nd Floor Conference Room

8 Pork Producers, 7 p.m., Ag Credit 2nd Floor Conference Room

10-13 4-H Camp – Watch 4-H Emails for Registration

10 Morrow County Dairy Tour, Berg Farms, 10-2 p.m.

10 Food Preservation-Drying Basics, Ag Credit Building, Second Floor Conference Room, 9 a.m.

15 Market Broilers Pick Up – 12:30 PM, Youth Building, Fair Grounds

15 Agriculture, FCS, Small Animal & STEM 4-H Project Judging by Appointment

15 Horse and Pony Committee – 8 p.m., Ag. Credit 2nd Floor Conference Room

16 Food & Nutrition 4-H Project Judging by Appointment, morning

16 Clothing & Quilt 4-H Project Judging by Appointment, afternoon, Style Show at 7 p.m.

20 CARTEENS, 6:30 p.m., Ag Credit 2nd Floor Conference Room

24 Cloverbud Fun Day, Location TBA, 9-1 p.m.

24 Cattle Hoof Trimming, 8:30 a.m.

AUGUST 2021

4 Cattlemen's Meeting, 6:30 p.m., Ag Credit 2nd Floor Conference Room

5 Market Rabbit Pre Fair Registration/Tattooing, 5-8 p.m., Youth Building Fair Grounds

9 Livestock, Horse, and Dogs Skillathons, 6-9 p.m., Schedule TBA

10 Livestock, Horse, and Dogs Skillathons, 6-9 p.m., Schedule TBA

12 Pork Producers, 7 p.m., Fairgrounds

12 Clean Sweep Agriculture Chemical Collection, Fairgrounds, 8 a.m.-3 p.m.

14 Food Preservation-Freezing Basics, Ag Credit Building, Second Floor Conference Room, 9 a.m.

14 Sheep 101 Field Day, Dale & Kathy Davis Farm (see flyer in newsletter)

19 Horse and Pony Committee, TBA, Fair Grounds

30 – Sept. 6 Morrow County Fair