Hello Northeast Ohio Counties!

Crops are looking good throughout the region, but weed issues are starting to pop up. Waterhemp in particular is starting to make its presence known. Be sure to scout your soybeans, and look in between the rows to find the newly emerged seedlings.

Be sure to check out the newly updated Tri-State Fertilizer Recommendations.

Have a great week everyone!
Updated Tri-State Fertilizer Recommendations Available
By: Steve Culman
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-26/updated-tri-state-fertilizer-recommendations-available

The authors of the Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat, and Alfalfa include Steve Culman, Anthony Fulford, James Camberato, Kurt Steinke, Laura Lindsey, Greg LaBarge, Harold Watters, Ed Lentz, Ryan Haden, Eric Richer, Bethany Herman, Nicole Hoekstra, Peter Thomison, Rich Minyo, Anne Dorrance, Jeff Rutan, Darryl Warncke, Cassandra Brown

The Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat, and Alfalfa was first published in 1995 and has served as a cornerstone in nutrient management in field crops for Indiana, Michigan, and Ohio. As crop production practices in this region changed over the past 25 years, many questioned if these nutrient management guidelines were still relevant today.

In 2014, work began to revise and update the nutrient management recommendations in corn, soybeans and wheat. Over 300 on-farm trials were conducted across 34 Ohio counties, including trials evaluating crop response to N, P, K, and S. It was a tremendous collective effort with the ultimate goal of providing objective information to farmers to manage nutrients as judiciously and profitably as possible.

The recommendations have been comprehensively revised and updated. A summarized version can be found online: go.osu.edu/fert-recs

There is menu at the bottom of this webpage that will allow users to view the topics of interest, including an executive summary that provides the highlights. The full version of the recommendations is being finalized at OSU Extension Publishing and a downloadable pdf and printed bulletin will be available soon.

Late-Season Waterhemp - The Goal is Stopping Seed
By: Mark Loux
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-26/late-season-waterhemp-goal-stopping-seed

In our windshield scouting of soybeans this year we have seen a lot of weedfree fields. This makes sense given the shift toward Xtend, LibertyLink, LLGT27, and Enlist soybeans over the past several years, which provides us with effective POST options for our major weed problems – common and giant ragweed, marestail, and waterhemp.
(now if we could just get rid of the baggage some of these traits carry). We are however getting many reports of late-season waterhemp as it grows through the soybeans and becomes evident. This also makes sense given that statewide we are in the midst of an overall increase in waterhemp, and continue to move up the curve in terms of number of fields infested and the size of the infestations. Prevention and management of waterhemp and Palmer amaranth has been one of the primary goals of our state and county educational programs for half a decade or more. And one of the most important points about waterhemp and Palmer that we try to get across is their capacity for prodigious seed production – 500,000 to upwards of a million seeds per plant – and what this means for their ability to rapidly ramp up populations, infest equipment, etc.

The bottom line here is that it’s essential to scout fields this time of the season and kill or remove plants that could produce seed. Allowing even a few plants to produce seed means an increased population for the next year or two at least. Running harvest equipment through plants loaded with seed is a primary mechanism of spread from field to field. Plants can survive into late season because they emerged after herbicide treatments, or survived an improperly timed and less than effective POST treatment. These plants should produce less seed than plants allowed to grow full season without interruption. It’s also possible given waterhemp’s propensity to become resistant to any herbicide used against it, that the survivors are resistant to whatever POST herbicide was used. Resistance to glyphosate, ALS, and PPO inhibitors is widespread in Ohio, and we expect the development of resistance to dicamba, 2,4-D, and glufosinate will occur given their intensity of use (which is why the current period of clean fields makes us nervous). The only way to ensure that resistance does not develop is to follow herbicide programs with later season scouting and removal of plants to prevent seed.

The most effective way to prevent seed is to cut off waterhemp or Palmer plants just below soil line, remove plants from the field, and burn or compost or bury deep enough. Plants left in the field can reroot at multiple nodes and regrow. Another option to at least reduce seed production – use a weedeater to cut the tops of plants off. Once plants develop mature seed (hard brown or black), most effective strategy may be to cut off and bag up seedheads and remove from field. The value of herbicides this late in the season is questionable. PPO herbicides are the only legal option at this point, with following restrictions (DBH = days before harvest; from Table 18 of Weed Control Guide): Cobra/Phoenix – 45 DBH; fomesafen – 45 DBH; Ultra Blazer – 45 DBH. Carryover and injury to corn from late-season applications of fomesafen is
possible. None of these herbicides are likely to kill large waterhemp plants although they may reduce suppress smaller plants enough to reduce seed. Keep in mind that PPO inhibitors would be completely ineffective in waterhemp populations that are resistant to PPO inhibitors.

We suggest taking some time from now into September to scout fields for waterhemp and Palmer amaranth with the goal of preventing seed. If you are lucky enough to have avoided waterhemp, use scouting to maintain this status and prevent new infestations. If you are currently managing waterhemp infestations, consider late-season removal of plants as an important component of that management plan, and critical to maintaining POST herbicide utility. Scouting should include local roadsides and waterways, and areas of fields subject to flooding or near migratory bird or deer paths. Since combines are an effective dispersal mechanism, check the part of fields first harvested where combines are started up. If you need to harvest fields with waterhemp or Palmer amaranth, harvest these last followed by thorough cleaning of combines, grain carts, semis, etc. These efforts can go a long way toward avoiding future headaches and increased production costs.

Managing pasture into fall, during a hot, dry summer
By Victor Shelton, NRCS State Agronomist/Grazing Specialist
Source: https://u.osu.edu/beef/2020/08/05/rainfall-manage-so-you-keep-what-you-get/

According to the calendar and the weather, it’s August but it seems odd with no state fair. I won’t dwindle here but will state a familiar cliché that I look forward to being true; “this too shall pass.”

The last issue was a special edition and I want to thank all that emailed me afterwards. Your comments were greatly appreciated, and I have enjoyed them as they continue to trickle in.

Distribution of rain never seems fair, especially when you are on extreme ends of it. I greatly appreciate the rain that I’ve received and am pleased with good regrowth.
It certainly has been a good year for red clover and timothy. I thought I had a
tremendous take where I had frost-seeded back in February, but fields not seeded were
almost as good. The clover has rebounded after grazing events better than the grasses
under the drier conditions. With even just spotty rains, forages, including the grasses,
are slowly rebounding after grazing events, especially where cover and good residual
live vegetation has been maintained. Having some warm season grasses to fall back on
certainly has helped.

When it is dry like it is, you want to capture as much rain as you can during each
precipitation event. You might think that since the field is covered with forages there is
no erosion, but that is quite often not the case. You want water to infiltrate into the soil
and soil profile. This water is then stored in the soil with some of it slowly moving
downward to below ground aquifers to replenish our wells. What are a few of the factors
that impact water infiltration? First of all, it needs something to slow the water down
once the raindrop hits the surface. That could be a leaf, a stem, or residue on the soil
surface; ideally that impact is not on bare soil. The more live plant cover and residue
present, the less the impact of the raindrop. The average raindrop is about 3/16 inches
in diameter and travels up to 20 miles per hour. That is good amount of impact when it
hits the earth’s surface and if it hits bare soil, it will dislodge particles and move them.

Once the raindrop momentum has slowed for a moment, it should move downward into
the soil. Residue on the soil surface helps to slow it down, then depending on the soil
type, the water will start moving downward unless there is a non-permeable layer. A
roof or road certainly is non-permeable and most or all the water will run off that surface.

A soil that is compacted will also have increased water runoff. Organic matter content in
the soil and the natural structure, or lack of, also influences infiltration. Percolation rates
of soils can be measured. A good healthy soil should be able to take in at least two
inches or more of rain per hour.

When the rainwater drop’s impact isn’t slowed by vegetation or residue and infiltration is
poor, runoff is inevitable and it builds momentum as it travels down slopes, especially
steep ones. As it travels it has more opportunity to pick up and move more soil particles.

Where the runoff concentrates, ephemeral gullies start to form and if not improved, they
will eventually form gullies. Not only did we lose precious water that is needed for forage
growth, we have also lost soil and perhaps also an inconvenience to work around.
That was a long rabbit trail, but it certainly needed to be ran. The short of the long is
this: we want more water to soak into the soil and less runoff to more efficiently use
rainwater and reduce erosion. Easy, maintain good retardance with good live cover with
deep growing roots and reduce any operations that might increase compaction.
The livestock have been very content with the forage consumed this season. I've noted before that forage quality, especially energy, is often better under good or slightly dry conditions rather than wet, especially extended wet conditions. Usually, higher sugar levels will exist under droughty conditions. Samples may also show higher neutral detergent fiber digestibility (NDFD). Higher sugars and NDFD will contribute to net energy for gain or lactation.

On the other side of that, where higher amounts of nitrogen have been added, nitrates can also be higher in some drought-stressed forages. They may also be higher in prussic acid, especially sorghum Sudan’s, Sudangrass, and Johnsongrass. If in doubt or concerned, test before grazing. If it is wilted, it is probably safer to wait. Rains have been timely enough in most areas for this to not occur, but it is best to keep a watch on it.

Droughty conditions also usually tend to include higher temperatures and when you get a little shower, the humidity raises quickly. That certainly makes me want to sit under a tree in the shade with a nice cold drink. Shade becomes important once the heat index reaches 85 degrees or higher for most livestock.

The next important factor is daytime to nighttime temperature differences. If temperatures are close to 20-degrees cooler at night, this allows for a good cooling off period. When this doesn't happen and there is no break from the heat, heat stress starts showing up quickly. You will begin to notice increased water consumption, increased chance of wallowing, and reduced intake of forages. There are some who say that cattle will eventually adapt; I don’t buy that. I think shade should be available in at least a third or half of the paddocks.

I’ve actually moved cattle to areas with no shade at night and then moved them back to areas with shade late morning. It takes a bit more work, but the cattle sure appreciate it. Good soil coverage also helps cool cattle. Heavy forage cover cools the soil; the cooler the soil, the more you will see cattle laying down in the middle of the field, even on hot days. It’s not a bad idea to add some shade like portable structures or longer-term trees into the system. But plan ahead as they take some extra management because they become hot spots of nutrients quickly.

In short, shade is important, and so is the availability of close, cool water. The type of cattle and the amount of hair they have also makes a difference. Grazing endophyte infected tall fescue can add fuel to the fire because it can raise body temperature on its own. Think about where the livestock will be during hot weather and plan ahead. The best shade will always be obtained on the north or east side of a tree line or woods. Okay, it’s time to be thinking about some fall planted annuals. Oats, turnips, and cereal rye still remains my favorite combination. Fall oats are higher in water-soluble sugars and have a higher level of total digestible nutrients than spring grown oats and produce
a lot of quality forage in a short time frame with sufficient moisture. The cereal rye can then take off and provide good cover and forage for early spring grazing. Being able to get off pastures for a while in the late summer or early fall allows for those pastures to rest and grow more forage for use later; a perfect situation for some stockpiling. Remember, it’s not about maximizing a grazing event, but maximizing a grazing season! Keep on grazing!

**WBC Numbers Continue to Decrease**


Source: [https://agcrops.osu.edu/newsletter/corn-newsletter/2020-26/wbc-numbers-continue-decrease](https://agcrops.osu.edu/newsletter/corn-newsletter/2020-26/wbc-numbers-continue-decrease)

Western bean cutworm (WBC) trap counts for the week of August 3 – August 9 continue to decrease in the majority of monitoring counties. Trap counts indicated only one county, Lake, had an average of 7 or more moths, suggesting scouting is necessary. Overall, a total of 26 counties monitored 89 traps, resulting in 111 WBC adults (a statewide average of 1.2 moths per trap) (Figure 1). Monitoring for WBC moths will continue in many counties until the end of August.

![WBC Map Legend](image)

Figure 1. Average Western bean cutworm adult per trap
Farm Science Review 2020: Online and free
By Alayna DeMartini
Source: https://cfaes.osu.edu/news/articles/farm-science-review-2020-online-and-free

COLUMBUS, Ohio—Farm Science Review will come to you on your laptop or smartphone this year, and for free, you can watch livestreamed talks and recorded videos featuring the latest farm equipment and research to pique your curiosity.

From Sept. 22–24, people from across the Midwest and the world can learn tips for increasing farm profits and growing crops from soybeans to hemp.

Beginning in September, virtual visitors can find out about the show’s offerings by going to fsr.osu.edu and clicking on an image of the show’s site. Within that image, people can click on the various icons to find the schedules for talks and demos they’re most interested in, such as field demonstrations or “Ask the Expert” talks. Among the livestreamed talks will be Ask the Expert presentations that feature the advice of staff from The Ohio State University College of Food, Agricultural, and Environmental Sciences (CFAES) on various topics in agriculture. Viewers will enter the talks through a Zoom meeting link and be able to post their questions in chat boxes. If you miss any, you can check back after the talks to watch the recordings. “It will be even easier this year to benefit from the show’s valuable advice that can help farmers improve their businesses,” said Nick Zachrich, manager of Farm Science Review, which is hosted by CFAES.

“Whether farm operators have questions on finances, insurance protection, or which new tool fits their needs, resources will be available through Farm Science Review online.”
The virtual format is a first for Farm Science Review, held annually for nearly 60 years.

Topics for talks at FSR this year include the risks of transmitting COVID-19 to your animals, the prospects of U.S. agricultural exports abroad, increasing profits from small grains by planting double crops, climate trends, managing cash flow on the farm, farm stress, and rental rates on agricultural land.

Looking for a job in agriculture? For the second time this year, FSR will include a career fair. Before the Sept. 22 event, which will be from 10 a.m. to noon, anyone can view videos and other content from prospective employers to know what those employers are seeking and schedule live chats with company representatives. Presentations on raising backyard chickens, starting a flock of sheep, and growing blackberries and other specialty crops could spark some inspiration. Other major attractions at this year’s show will include online field demonstrations that will show how various types of farm equipment boost the efficiency of fertilizing, harvesting a field, or performing other tasks. Viewers can catch a close-up view of the machinery, which, on site, they’d normally have to see from several yards away.

“With many events canceled and disruptions across the industry because of the pandemic, Farm Science Review aims to provide as many solutions as possible,” Zachrich said.

“A showcase of equipment, other products, services, and education will help address limitations that have surfaced in recent months.”

The annual talk given by agricultural economists in CFAES will focus on supply chains in food and agriculture. Many of those supply chains were tested earlier this year when the nation’s major meat processors closed down temporarily because so many of their employees had COVID-19.

Ty Higgins, director of media relations for the Ohio Farm Bureau, will moderate the talk, which will include Ben Brown, Joyce Chen, Zoë Plakias and Ian Sheldon, all agricultural economists with CFAES.

If you require an accommodation, such as live captioning or interpretation, to participate in this event, please email fsrinfo@osu.edu.

Requests made 10 business days prior to the event will typically allow the university enough time to provide seamless access. But after that, the university will make every effort to meet requests.
For more information about the format or offerings in this year’s show, visit fsr.osu.edu.

**UNSOLICITED SEEDS ALERT**

**ODA Asks Ohioans to Send in Unsolicited Seeds**

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

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

   -or-

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

**The Public Should Report the Seeds and Submit the Packages to USDA or to an OSU County Extension Office**
OSU Good Agricultural Practices (GAPs) Training

August 13th and 27th
6:00 PM to 9:00 PM

OSU GAPs Training Webinar
FREE
Registration Required

Topics Include:
• General Produce Safety Concepts
• Water Quality
• Worker Training, Health & Hygiene
• Manure and Compost handling
• Domestic and Wild Animals
• Storage and Transport

Instructors:
• Melanie Lewis Ivey, OSU Extension Specialist
• Jaqueline Kowalski, OSU Extension Educator-Summit County
• Suzanne Mills-Wasniak, OSU Extension Educator-Montgomery County
• Beth Scheckelhoff, OSU Extension Educator-Putnam County

Register at: producesafety.osu.edu/events

This is a 3-hour educational course that covers good agricultural practices or GAPs. GAPs trainings provide growers with the knowledge and tools needed to implement on farm best management practices to reduce on-farm microbial food safety hazards. Participants will receive a certificate of completion at the end of the training.