

Auglaize County OSU Extension Weekly Agriculture Newsletter – November 27, 2019

Scouting and Latest Information



2-leaf wheat



Harvesting corn



Worked soybean stubble

Hello!! Good afternoon! I pray you are well. We had some rain this week and very strong winds today!

If you are a buyer and need some hay OR have hay to sell, let me know. I have an individual that needs some hay right now. Call the OSU Extension office at 419-739-6580.

OSU Extension is conducting a survey. Please read the information below and participate in the survey! A hard copy will be attached if you need that format:

Attached is the 2019 Yield Survey that will be shared in this week's CORN newsletter. There are two ways to complete the survey: 1. a Qualtrics survey that can be accessed at go.osu.edu/yield19, or 2. completing the attached paper form and returning to Elizabeth Hawkins (by email: Hawkins.301@osu.edu or US mail: 111 S. Nelson Ave, Suite 2, Wilmington, OH 45177).

We would like to gather information for as many fields as possible, in as many counties as possible to maximize what we can learn from 2019 and the planting delays caused by the excessive rainfall. The results will be summarized and shared with you. The survey needs to be completed by **December 31, 2019** to ensure we will have the information available for use at your local meetings this winter. If you have any questions, please don't hesitate to ask.

Joke: Why did the farmer feed his pigs sugar and vinegar???

Rain fell three days this past week. Rainfall for Thursday, November 21st, ranged from a Trace near Bloody Bridge, about 1 mile northeast of Fryburg, and at Wapakoneta – Fisher and Townline – Lima Roads to 0.1” at about 1 mile north of St. Marys. Total liquid precipitation on Saturday ranged from 0.04” at about 5 miles east of New Hampshire to 0.3” about 5 miles northwest of St. Marys, at about 3 miles west of St. Marys, at about 1 mile north of St. Marys, and at about 1 mile northeast of Fryburg. It also snowed Saturday. Snowfall ranged from a Trace at four locations to 1” of snow at about 3 miles west of St. Marys. Average snowfall for the week was 0.68”. Rainfall on Tuesday ranged from 0.15” near Bloody Bridge to 0.5” at Wapakoneta – Fisher and Townline – Lime roads. Rainfall for the week ranged from 0.35” near Bloody Bridge to 0.8” at about 1 mile northeast of Fryburg. The average liquid precipitation for the week was 0.59”. Temperatures were both above and below normal this past week. Average high temperatures as of yesterday, Tuesday, should be 46 degrees F! Temperatures and now falling fast since last week was 52 degrees F.

Tasks for the week were minimal but included: fall tillage, hauling manure, harvesting corn, spreading fertilizer and other amendments, and tiling fields.

I drove a section of the county on Sunday.

Wheat – I rated the wheat the same as last week which was 7% excellent, 29% good, 69% fair, and 0% for poor and very poor.

Alfalfa – Alfalfa is now dormant. Dormant herbicide applications can now be made.

Corn – All corn is at the R6 (black layer) stage. We now have about 95% of the corn harvested in the county as of Sunday and there were people harvesting on Tuesday. Some people are waiting for the moisture to come down as it is still in the mid-20's. Last year at this time only 87% of the corn was harvested in the county. I'm sure for those fields that still need to be harvested that a good amount of it is falling over from the wind today. I conducted a tillage survey Sunday. Only 14% of corn stubble fields had some type of tillage.

Soybean – Nearly all are harvested. I conducted a tillage survey on Sunday and found that 50% of soybean stubble fields has some type of tillage, whether a v-ripper or strip-tillage or some type of a chisel plow.

Weeds – Fall herbicide application may no longer be effective, although it looks like the snow protected most of them, so I would try some applications when it is warm and sunny to see what happens.

Insects - No report.

There were NO changes to the XtendiMAX, Engenia, FeXapan, or Tavium labels. The Engenia label still has the most approved products compared to XtendiMAX and FeXapan. No new herbicides were added to the XtendiMAX label this past week, which totals 152 herbicides. No new adjuvant was added to the XtendiMAX label, now totaling 344. Eleven new nozzles were added to the XtendiMAX label, which totals 37. No new Drift Reducing Adjuvant (DRA's) was added to the XtendiMAX label this week, making a total of 58 DRA's. No new nutritional products were removed from the XtendiMAX label which totals 203. No new products were added to the Insecticides, Fungicides, Plant Growth Regulator and Other group on the XtendiMAX label which totals 61. Three new adjuvants were added to the Engenia label, which now totals 485. No new herbicides were added to the Engenia label, which brings the total herbicide count to 144. No new products were added to the Other category (growth regulators, and fungicides) on the Engenia label, which totals 29. No new insecticide were added to the label which currently has 28 products. No new Drift Reducing Adjuvants (DRA's) were added to the Engenia label, which totals 105. No new nozzles were added to the Engenia label, which totals 29. No new nutritional products were added to the Engenia label which

totals 177 products. No new product was added to the pH Modifier group of the Engenia label which totals 16 products. The FeXapan label has many of same the products and nozzles as the XtendiMAX label, but NOT all are the same, so check the FeXapan label carefully. There are 120 herbicides, 49 DRA's, 312 adjuvants, 151 nutritionals, 44 insecticides, fungicides, and others, and 26 nozzles that have been approved for the FeXapan label. There are 13 herbicides, 66 DRA's, 181 adjuvants, and 41 nozzles approved for use with Tavium.

Answer to joke: He wanted sweet and sour pork!

Upcoming Meetings

- 1. Pesticide Applicator Exam Preparation Course.** This meeting will be held **December 5, 2019** from 8:30 AM to 12:30 PM at the Auglaize County Administration Building in the basement room. Check flyer for additional details.
- 2. Pesticide Applicator Exam.** The ODA will be at the Auglaize County Administration Building in the basement room (209 S. Blackhoof St.) on **December 12, 2019** starting at 10:00 AM to offer exams to commercial and private applicators. Register for the testing date as soon as possible by calling ODA (614-728-6987) or by going on line at: <https://agri.ohio.gov/wps/portal/gov/oda/divisions/plant-health/pesticides/exam-registration> **Please register right away as the room is filling up!!**
- 3. Ag Outlook.** This meeting will be held **January 8, 2020** from 1:00 PM to 4:30 PM and a second session from 5:45 PM to 9:15 PM at the Wapakoneta Eagles (25 East Auglaize St., Wapakoneta). Topics discussed will be Farm Bill Nuts and Bolts, Farm Bill, Farming Outlook, and Grain Market Outlook. Register before 12-31. A meal will be provide for free between the two sessions. See attached flyer for more information.
- 4. Small Grains Management Workshop.** This meeting will be held **January 9, 2020** from 9:00 AM to 2:30 PM in the downstairs room of the Auglaize County Administration Building (209 S. Blackhoof St.).

This will be the best small grains meeting you have ever been to so get signed up. See the flyer for additional information.

- 5. Plant and Soil Nutrient Management.** This meeting will be held **January 22, 2020**. The exact starting time has not been determined but it will be an all day meeting. The location will be the Eagles in Wapakoneta. This meeting will talk about all aspects of nutrient management.

What is Northern Corn Leaf Blight?



Northern corn leaf blight was not very prevalent for most of the 2019 growing season, but some came in late and some came in really bad in a few fields. Northern corn leaf blight is so prevalent that it occurs every year now in corn. It is just a matter of the weather conditions as to how soon and severe the infestation becomes.

Northern corn leaf blight is caused by the fungus *Exserohilum turcicum*. There are four known races of the fungus. The fungus causing northern corn leaf blight overwinters as mycelia and conidia on corn residues left on the soil surface. As temperatures rise in the spring spores are produced on the corn residue that splash or are wind-blown onto young corn leaves. Infection occurs during wet and humid weather with temperatures between 64° and 81°F. The fungus requires six to 18 hours of water on the leaf surface to cause infection.

Northern corn leaf blight can be identified by its tan to grayish lesions that are oblong or cigar-like in shape. The lesions run parallel with the veins of the leaf and can be 0.5 inches to 7 inches in length. When the disease is severe the lesions can cover the entire leaf surface.

Northern corn leaf blight can reduce yield when conditions are favorable for early development of the disease by reducing photosynthetic area of leaves. If lesions reach the ear leaf or higher two weeks before and after tasseling, yield loss can occur. Corn yield can be reduced by 30 percent if lesions are present prior to or at tasseling. If lesions do not appear on upper leaves until late in the season, yield losses are minimal. Northern corn leaf blight can contribute to stalk rot and lodging.

The most cost-effective method to managing northern corn leaf blight is to plant resistant hybrids. There are two types of resistant hybrids available to control northern corn leaf blight: partial resistance and race-specific resistance. Partial resistance protects corn from all four of the known races of the fungus. Partial resistant hybrids are most common, but there are some hybrids with partial and race-specific resistance. Some seed companies rate the degree of resistance, but be careful when comparing hybrids as not all companies use the same rating scale. Where northern corn leaf blight is a chronic problem select hybrids with race-specific resistance.

Another method of controlling northern corn leaf blight is to manage corn residue. Practices that encourage decomposition of corn residue will reduce the amount of the fungus. In no-tillage or reduced tillage fields with a history of northern corn leaf blight a two year rotation out of corn may be required to reduce the amount of the disease.

Fungicides are usually only needed to control northern corn leaf blight when susceptible hybrids are planted. If lesions appear on the leaf below the ear leaf on 50% of plants and a susceptible hybrid is planted, then a fungicide application is warranted. Fungicides applied at tasseling (VT) to early silking (R1) have the greatest likelihood of economic return. The most effective fungicides include Aproach, Headline, Proline, Folicur, Quilt Xcel, Trivapro, Aproach Prima, Fortix, Preemptor, Headline AMP, and Stratego YLD.

C.O.R.N. Newsletter

<https://agcrops.osu.edu/newsletter/corn-newsletter>

How Reliable will this Year's Test Plot Data Be?



Shelling Corn

Ohio's corn and soybean crops experienced exceptional growing conditions in 2019, including record rainfall in May and June followed by drier than normal August and September conditions in many areas. As a result of the early season saturated soils, corn and soybean planting was delayed across most of the state. For soybean, planting date is the most important cultural practice that influences grain yield. Planting date is also a major factor affecting crop performance and profitability in corn. The persistent rains and saturated soils caused localized ponding and flooding. These conditions resulted in root damage and N loss that led to uneven crop growth and development between and within fields. Agronomists often question the value of test plot data when adverse growing conditions severely limit yield potential.

With corn, is data from test plots planted in June of questionable value since corn is typically planted by mid-May for optimal crop performance? According to USDA-NASS estimates, 50% of Ohio's corn acreage was planted after June 9, 2019. When selecting corn hybrids to plant in 2020, using May planting dates is preferable especially when comparing hybrids of similar relative maturity (and GDD requirements). Nevertheless, if hybrids have performed well in June as well as in May, they demonstrate resiliency that should be considered in hybrid selection. Major planting delays and replanting due to erratic weather conditions (excessive spring rainfall) occur about every three to four years in Ohio (<https://agcrops.osu.edu/newsletter/corn-newsletter/2019-12/delayed-planting-effects-corn-yield-%E2%80%9Chistorical%E2%80%9D-perspective>), so hybrids that perform well when planted on both normal and late planting dates should not be overlooked.

The validity of test plot results depends primarily on whether effects of the varied stress conditions are uniform across test plots. If not, test plot data may be questionable. To be certain that effects of stress were

fairly uniform, it would be necessary to monitor test plots on a regular basis to determine crop response to the various stresses as they occurred; however, such monitoring was probably unlikely in many test plot fields.

Another problem with test plot results is that the various yield limiting factors may accentuate the natural "variability" already existing in the field, and may thereby further "mask" the true treatment effects that are being compared. Stress conditions like the ponding and saturated soils this year coupled with slight differences in soil organic matter, drainage, weed control, etc. across a field may magnify differences in crop performance. If test plot results include a coefficient of variance (CV) value, the CV can be used to help understand the variability among test plots. CV is an indicator of data uniformity. Larger CVs indicate that the data were less uniform possibly due to environmental variability. Lower CVs indicate that the data were more uniform.

If one assumes that the varied stress conditions affected test plots uniformly within a field, then interpretation of test plot data becomes an issue. This issue can be especially relevant when evaluating results of hybrid and cultivar performance trials affected by excessive soil moisture. Did a hybrid or cultivar yield well under saturated soils because it genuinely possessed some flooding tolerance or because it was planted in better drained areas of the field? This year we had more than 30 bu/A differences in plot yield between hybrid entries planted at different locations within a field that are related to soil drainage and N loss. Usually there are striking visual differences between such plots associated with plant height and overall plant health but differences are not always pronounced.

Test plot information this year can still be very useful but take precautions. Results from single on-farm strip tests should not be used to make a decision on adoption of a treatment or variety. Even replicated data from a single test site should be avoided, especially if the site was characterized by abnormal growing conditions. Use test plot data from multiple sites (and preferably from at least 2 years of testing) and inquire about the weather patterns and conditions associated with the results. Look for consistency in a product or cultivar's performance across a range of environmental conditions.

Reference:

Geyer, A. and P.Thomison.2019. Delayed Planting Effects on Corn Yield: A "Historical" Perspective. Ohio State University Extension. C.O.R.N. Newsletter 2019-12. <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-12/delayed-plant...>

Author(s):

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Help OSU Extension Document the Yield Impacts of the 2019 Planting Delays



Flooded Field

By: CFAES Ag Crisis Taskforce

Normal planting dates for Ohio range from mid-April to the end of May. This season was quite different when planting for both crops was delayed until late May and stretched into June and even July across many parts of Ohio. We found ourselves grasping for any information we could find including 1) how much of an effect late planting dates would have on yield, and 2) what, if anything, we should change in management of these late planted crops. The historical planting date information we did have was somewhat helpful, but we did not have any data on what could happen when planting is delayed into the second half of June nor July.

While it may be tempting to write off this year as a fluke from which there are no real lessons to be learned, there is a growing body of data from climatologists that suggest that this is a beginning of a trend. What we have is a giant, unplanned and involuntary trial being conducted by Ohio corn and soybean farmers this year. This experiment can help us understand the ramifications of how planting date and hybrid/variety maturity affected overall yields, as well as pinpoint where further research is needed to fill the gaps in knowledge for future management decisions. To accomplish these goals, we plan to collect a small amount of data on a large number of fields, which can be used to provide baseline information to share how to manage these crops under similar weather events in the future.

To do this, we have a simple request: share your information with us. We ask only for the following information from as many fields as possible:

1. County where the field is located
2. Crop: corn or soybean
3. Planting date
4. Harvest date
5. Maturity rating (corn relative maturity (days RM); soybean maturity group) of crop planted
6. Yield
7. Harvest moisture
8. Test weight

Information on weather or management can be added, but this is optional. The information can be submitted to us in one of two ways: 1. Follow this link, go.osu.edu/yield19, to an online form with which you can report one field at a time or 2. Print or download a paper form at go.osu.edu/yield19form, fill it out for as many fields as possible, and send a copy via email to Elizabeth Hawkins (Hawkins.301@osu.edu). We will collect this data from farmers until December 31, 2019.

Additional notes:

1. Don't forget to include early or normal planting dates too. This will help us capture the breadth of the crop in 2019. We want data across a wide range of planting dates, not just late plantings
2. If a field has drowned-out spots where there's no yield, either don't use the field average or estimate yield from yield monitor data from parts of the field where stands were representative.

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Assessing the 2019 Production Year Survey - Second Call



Variable Corn

The 2019 production year has presented many challenges. Regardless of where you are in the state, we hope you respond to a brief survey to identify both short- and long-term outreach and research needs based on the 2019 year. The survey is located at <https://go.osu.edu/ag2019> If you have already responded, thank you for taking the time to share . The survey will close at midnight on November 27, 2019.

The survey is for Ohio crop and livestock/forage producers. Questions relate to crop production, prevented plant, livestock forage needs, emergency forage success, economic and human stress concerns. Since challenges and concerns varied across the state, this survey is designed to assess needs on a county, regional and statewide basis. Results will be used to determine Extension programming and future research needs.

Author(s):

[Greg LaBarge](#), [CPAg/CCA](#), [Dee Jepsen](#), [Ben Brown](#), [Anne Dorrance](#)

Other Articles

Experts unlock key to photosynthesis, a find that could help us meet food security demands

Date: November 13, 2019

Source: University of Sheffield

Source: <https://www.sciencedaily.com/releases/2019/11/191113153102.htm>



Green leaf in sunlight (stock image).

Credit: © Korn V. / [Adobe Stock](#)

Scientists have solved the structure of one of the key components of photosynthesis, a discovery that could lead to photosynthesis being 'redesigned' to achieve higher yields and meet urgent food security needs.

The study, led by the University of Sheffield and published today in the journal *Nature*, reveals the structure of cytochrome b6f -- the protein complex that significantly influences plant growth via photosynthesis.

Photosynthesis is the foundation of life on Earth providing the food, oxygen and energy that sustains the biosphere and human civilisation.

Using a high-resolution structural model, the team found that the protein complex provides the electrical connection between the two light-powered chlorophyll-proteins (Photosystems I and II) found in the plant cell chloroplast that convert sunlight into chemical energy.

Lorna Malone, the first author of the study and a PhD student in the University of Sheffield's Department of Molecular Biology and Biotechnology, said: "Our study provides important new insights into how cytochrome b6f

utilises the electrical current passing through it to power up a 'proton battery'. This stored energy can then be then used to make ATP, the energy currency of living cells. Ultimately this reaction provides the energy that plants need to turn carbon dioxide into the carbohydrates and biomass that sustain the global food chain."

The high-resolution structural model, determined using single-particle cryo-electron microscopy, reveals new details of the additional role of cytochrome b6f as a sensor to tune photosynthetic efficiency in response to ever-changing environmental conditions. This response mechanism protects the plant from damage during exposure to harsh conditions such as drought or excess light.

Dr Matt Johnson, reader in Biochemistry at the University of Sheffield and one of the supervisors of the study added: "Cytochrome b6f is the beating heart of photosynthesis which plays a crucial role in regulating photosynthetic efficiency.

"Previous studies have shown that by manipulating the levels of this complex we can grow bigger and better plants. With the new insights we have obtained from our structure we can hope to rationally redesign photosynthesis in crop plants to achieve the higher yields we urgently need to sustain a projected global population of 9-10 billion by 2050."

The research was conducted in collaboration with the Astbury Centre for Structural Molecular Biology at the University of Leeds.

Researchers now aim to establish how cytochrome b6f is controlled by a myriad of regulatory proteins and how these regulators affect the function of this complex.

Drought impact study shows new issues for plants and carbon dioxide

Multiple Earth Systems computer models assessed potential drought levels

Date: November 25, 2019

Source: DOE/Los Alamos National Laboratory

Source: <https://www.sciencedaily.com/releases/2019/11/191125145549.htm>

Extreme drought's impact on plants will become more dominant under future climate change, as noted in a paper out today in the journal *Nature Climate Change*. Analysis shows that not only will droughts become more frequent under future climates, but more of those events will be extreme, adding to the reduction of plant production essential to human and animal populations.

"Even though plants can, in many cases, benefit from increased levels of carbon dioxide that are predicted for the future atmosphere, the impact of severe drought on destroying these plants will be extreme, especially in the

Amazon, South Africa, Mediterranean, Australia, and southwest USA," said lead study author Chonggang Xu of Los Alamos National Laboratory. Future drought events are typically associated with low humidity, low precipitation, high temperature, and changes in carbon released from fire disturbances.

The frequency of extreme droughts (defined by low plant-accessible soil water) per year is predicted to increase by a factor of ~3.8 under a high greenhouse-gas emission scenario and by a factor of ~3.1 under an intermediate greenhouse-gas emission scenario during 2075-2099, compared to the historical period of 1850-1999.

Drought is already the most widespread factor affecting plant production via direct physiological impacts such as water limitation and heat stress. But indirectly it also can have devastating effect, through increased frequency and intensity of disturbances such as fire and insect outbreaks that release large amounts of carbon back into the atmosphere.

Plants fix carbon dioxide into an ecosystem through photosynthesis, and this process plays a key role in the net carbon balance of the terrestrial biosphere that contributed to its regulation of atmospheric carbon dioxide. And even though higher carbon dioxide concentrations in future decades can help increase plant production, the combination of low soil water availability, heat stress, and disturbances associated with droughts could negate the benefits of such fertilization.

"Future plant production under elevated carbon dioxide levels remains highly uncertain despite our knowledge on carbon dioxide fertilization effects on plant productivity," Xu said.

The research team analyzed the outputs from 13 Earth System Models (ESMs) and the results show that due to a dramatic increase in the frequency of extreme droughts, the magnitude of globally-averaged reductions in plant production will be nearly tripled by the last quarter of this century relative to that of the study's historical period (1850-1999).

For plants living through mild or moderate droughts, the situation is not as dire. The problem is that more of the droughts that come will be the extreme ones. "Our analysis indicates a high risk of increasing impacts of extreme droughts on the global carbon cycle with atmospheric warming," Xu said, "At the same time though, this drought risk will be potentially mitigated by positive anomalies of plant production associated with favorable environmental conditions."

OHIO AG LAW BLOG--BE PREPARED FOR NEW WAVES OF WOTUS LAWSUITS

By: Ellen Essman, Wednesday, November 20th, 2019

Source: <https://farmoffice.osu.edu/blog/wed-11202019-409pm/ohio-ag-law-blog-be-prepared-new-waves-wotus-lawsuits>

You're never going to make everyone happy. This is especially true when it comes to the federal definition of "waters of the United States," or WOTUS, under the Clean Water Act (CWA). The definition of WOTUS has changed over the years in order to adapt to numerous court decisions. The Obama

administration's 2015 rule has been litigated so much that a patchwork of enforcement has been created across the country, with some states falling under the 2015 rule and others falling under the previous iterations of the rule from 1986 and 1988. In fact, in New Mexico, parts of the state follow one rule and other parts follow the other. You can see the current state breakdown [here](#).

To add even more chaos to all of this confusion, the Trump administration decided to repeal and replace Obama's 2015 rule. In September, a rule was announced that would repeal the 2015 WOTUS rule and replace it with the 1986 and 1988 rule. This reversion would not be permanent; the 1986/1988 rule is simply a placeholder until the EPA and Army Corps of Engineers finalize a new WOTUS rule to replace it. The repeal is set to become effective in December. You can read our blog post on the repeal [here](#). Of course, there are those who are unhappy with the 1986/1988 rule being reinstated, even if only for a time. In October, two lawsuits were filed against the EPA and Army Corps of Engineers in federal district courts. In South Carolina, environmental groups sued because they feel that the 1986/1988 rules do not go far enough to protect waters. On the other hand, in the New Mexico Cattle Growers' Association sued because they feel that returning to the 1986/1988 rules goes too far in regulating water. Below, we will briefly break down the arguments in each of these lawsuits.

South Carolina lawsuit

Following the October repeal announcement, environmental groups, including the South Carolina Coastal Conservation League and the Natural Resources Defense Council, sued the EPA and U.S. Army Corps of Engineers in the U.S. District Court for the District of South Carolina, Charleston Division, claiming that the repeal rulemaking was unlawful. In their [complaint](#), the environmental groups make several arguments. They allege that the repeal rulemaking violates the Due Process Clause, Administrative Procedure Act (APA), and Supreme Court precedent. They say that the Due Process Clause has been violated because the rulemaking was not undertaken with an open mind, instead it was already pre-judged or all but decided before the process even started. They cite many violations of the APA—including failing to provide a “reasoned explanation” for the repeal, failing to discuss alternatives to repealing the rule, and failing to provide a meaningful opportunity for public comment on the rulemaking. Additionally, the environmental groups claim that the repeal “illegally departs from Justice Kennedy’s” opinion in the *Rapanos* case. Ultimately, Kennedy’s opinion in *Rapanos* is what led the EPA and Corps to scrap the 1986/1988 rule and create the 2015 rule to be more consistent with that opinion. Therefore, the environmental groups argue that going back to the 1986/1988 version would violate Kennedy’s “significant nexus” test for WOTUS, which invalidated the old version of the rule. In other words, the environmental groups believe that going back to the 1980s rules will result in less waters being protected.

New Mexico lawsuit

The New Mexico Cattle Growers' Association (NMCGA) sued the EPA and the U.S. Army Corps of Engineers in the U.S. District Court for the District of New Mexico. In the [complaint](#), NMCGA asks the court to enjoin, or stop the enforcement of the repeal rule, claiming that the rule violates the CWA, the Congressional Review Act, the Commerce Clause, the Due Process Clause, the Non-delegation Doctrine,

and the Tenth Amendment. The NMCGA’s argument hinges on the definition of “navigable waters.” Under the CWA, “navigable waters” are the same as WOTUS. Like the environmental groups in South Carolina, NMCGA interprets the *Rapanos* decision as invalidating provisions of the 1986/1988 WOTUS rule. NMCGA, however, reads *Rapanos* as limiting “navigable waters” to only the waters that are *actually navigable*, or “navigable-in-fact.” Thus, unlike the environmental groups, NMCGA believes that both the 1986/1988 rule and the 2015 rule result in more waters being regulated than is allowed under the CWA and Supreme Court decisions.

Will the tide turn on WOTUS in the future?

Despite the Trump EPA’s repeal and upcoming replacement of the 2015 rule, the future of WOTUS is anything but certain. The lawsuits in South Carolina and New Mexico are just the latest proof of that. What is more, the lawsuits to enjoin the 2015 rule are still ongoing, and it is unclear whether they will be wiped out when the repeal rule becomes effective in December. When the replacement rule is finally published, there is no doubt even more lawsuits will follow. It’s also important to remember that we have an election next year, so if there’s a new administration, they’ll probably put their own stamp on WOTUS.

Prepared by Jeff Stachler

Ohio State University Agriculture and Natural Resources Extension Educator, Auglaize County