



2017 WATER QUALITY STATUS REPORT

Across the state, farmers are taking up the call to work together to improve Ohio's water quality.

Thousands of farmers have completed continuing education training on fertilizer application to help reduce nutrient loss. They've put in cover crops to enrich the soil, developed nutrient management plans, opened their farms up to research and worked in their communities to identify both challenges and practical solutions to Ohio's water quality.

These actions are all part of Ohio Farm Bureau's comprehensive Water Quality Action Plan, started in September 2015. Ohio Farm Bureau has invested \$2.3 million of member funds to help farmers improve and protect water quality for all Ohioans. With the help of dozens of partnering organizations, these

proactive efforts have drawn national attention and accolades, including American Farm Bureau's prestigious New Horizon Award, which Ohio received for its county water quality grants program. Ohio's farmers and partner organizations will continue to work together to find ways to improve the state's water and demonstrate that Ohio can have both clean water and productive farming.

This water quality report is part of a series of reports Ohio Farm Bureau has produced to show the strides farmers have made in improving and protecting one of the state's most valuable resources.

Water Quality By the Numbers

99 percent of cropland acres in the Western Lake Erie Basin are managed with at least one conservation practice, according to USDA



Marion County Farmer Don Ralph is one of thousands Ohio farmers who implement conservation practices like grass filter strips.



Getting results: agricultural soil phosphorus levels held steady or trended downward in at least 80 percent of Ohio counties from 1993 through 2015, according to Ohio State research

National Recognition:

The Community Water Quality grants program won American Farm Bureau's prestigious New Horizon Award

Healthy Water Ohio brought 200 individuals and organizations with diversified interests together to recommend the creation of a public-private Ohio Water Trust that would fund the group's recommendations for preserving the state's water resources



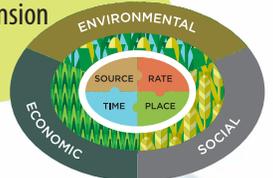
Healthy Water Ohio
A STRATEGY FOR WATER RESOURCES MANAGEMENT

Farm Bureau Member investment:
\$2.3 million of member funds have helped farmers improve and protect water quality for all Ohioans

4R certification program: 35 branches, representing 5,350 clients spanning 2.78 million acres of farmland have earned certification through a voluntary program for agricultural retailers and nutrient service providers

Fertilizer certification collaboration:

To date, **15,709 farmers** have taken one of about 200 classes offered through Ohio State University Extension. OFBF provided funding for the classes in counties that did not have Extension educators



Blanchard River
DEMONSTRATION FARMS NETWORK

Blanchard River Demonstration Farms Network: Three farms, five years, million-dollar investment, hundreds of tour participants

Community investment: **27** county Farm Bureaus have partnered with **117** groups on **31** high-caliber local programs. These projects were awarded **\$350,000**, which has garnered more than **\$550,000** in local matching funds



ONGOING ACTIONS & ACCOMPLISHMENTS

Water Quality Action Plan

In September 2015, Ohio Farm Bureau announced the creation of a comprehensive Water Quality Action Plan, setting the stage for its long-term commitment to addressing the state's water quality challenges. To date, Ohio Farm Bureau has invested more than \$2.3 million of member funds for the project, which requires unprecedented cooperation and collaboration among farmers, universities and federal, state and local agencies. The ultimate goal is to protect the state's water resources and preserve farmers' ability to grow food.

Ohio Farm Bureau staff members Dr. Larry Antosch and Jordan Hoewischer and Blanchard River Demonstration Farms Network Project Manager Aaron Heilers are leading and coordinating water quality efforts. The numerous components of the Water Quality Action Plan are detailed throughout this report.



From left, Dr. Larry Antosch, Aaron Heilers and Jordan Hoewischer

Fertilizer Certification

Under state law (Senate Bill 150), Ohio farmers who apply fertilizer on more than 50 acres for agricultural production must be certified by Sept. 30, 2017. Over the past three years, Ohio Farm Bureau has been actively promoting this fertilizer application certification, which is designed to reduce nutrient runoff. Ohio Farm Bureau also provided funding for the classes in counties that did not have Extension educators so training would be available in almost all of Ohio's counties.

To date, **15,709 farmers have taken one of about 200 classes offered** through Ohio State University Extension with thousands more expected to complete the training over the next few months. Some farmers who have less than 50 acres have taken the class even though they're not required by law.



On an episode of Town Hall Ohio, the topic was the intersection between food production and water quality, what farmers are doing to protect both and how the public plays a role in their success. Pictured left to right are Ohio Farm Bureau Executive Vice President Adam Sharp, Ohio State agronomist Greg Labarge and Ohio Department of Agriculture Director Dave Daniels.

On-Farm Research

Ohio Farm Bureau is helping fund on-farm research conducted by Ohio State University, the U.S. Department of Agriculture's Agricultural Research Service and other groups. **Edge-of-field testing** equipment has been installed at two of the Blanchard River Demonstration Farms as well as 40 fields throughout Ohio. Scientists are

“These findings show that Ohio farmers are doing a good job of managing soil phosphorus levels.”

~ Ohio State University researcher Elizabeth Dayton

capturing water samples during rain events and testing the amount of nutrients in the samples. This testing is helping researchers determine how applying different conservation methods to fields affects the amount of nutrients coming off farm fields.

The results are also helping researchers examining how to best update the **Ohio Phosphorus Risk Index**. Farmers use this tool to assess their risk of phosphorus moving off farm fields and what management practice they can implement to reduce phosphorus loss. Phosphorus is an agricultural nutrient that can contribute to harmful algal blooms in Lake Erie and other freshwater bodies.

Research results: A recent study found agricultural soil phosphorus levels held steady or trended downward in at least 80 percent of Ohio counties from 1993 through 2015. The study by Ohio State University researchers looked at more than 2 million phosphorus soil tests. In 2015 the median soil phosphorus level was within the appropriate agronomic range in 87 of 88 Ohio counties.

A U.S. Department of Agriculture study, Conservation Effects Assessment Project, shows 99 percent of cropland acres in the Western Lake Erie Basin are managed with at least one conservation practice.



Edge of field monitoring equipment at the Blanchard River Demonstration Farms Network.

Nutrient Management Plans

Ohio farmers in the 22-county Western Lake Erie Basin (WLEB) have been developing Nutrient



Tony Campbell,
Paulding County
Extension



Linda Lauber,
Fulton County
Extension



Jessie Schulze,
Defiance County
Extension



Brittany Sieler,
Wood County
Extension

Management Plans (NMPs) with the help of four Ohio State University Extension employees. Ohio Farm Bureau provided funding for the hiring of the NMP writers who are helping farmers identify ways to reduce nutrient and sediment loss as well as learn how to responsibly use fertilizer. These

NMPs exceed state legal requirements. Ohio Farm Bureau supported a 2015 law that put restrictions in place on nutrient applications in the WLEB during certain times of the year that are more prone to nutrient losses.

Support for Water Quality Funding

Ohio Farm Bureau continues to support and advocate for adequate funding of Ohio State University Extension, Ohio Sea Grant, Great Lakes Restoration Initiative and other key groups and programs that work to protect the state's waterways.



Terry McClure (center) testifies before the U.S. House of Agriculture subcommittee about farmers' work to protect water quality.

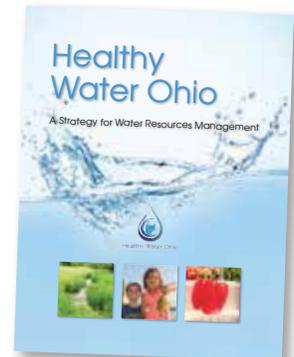
Healthy Water Ohio

Ohio Farm Bureau is continuing to work with partners on implementing recommendations made by Healthy Water Ohio (HwO). Ohio Farm Bureau led this coalition of conservation, business, academic and other interests who met to create a long-term water strategy report.

Input came from more than 200 individuals and organizations with diversified interests in Ohio's water. Right now the coalition is working on the creation of a public-private Ohio Water Trust that would fund HwO's recommendations for preserving the state's water resources. The group also is starting to examine ways to implement its education and outreach recommendations. Read the coalition's findings and recommendations at HealthyWaterOhio.org.



Healthy Water Ohio
A STRATEGY FOR WATER RESOURCES MANAGEMENT



RIGHT SOURCE
Matches fertilizer type to crop needs.

RIGHT RATE
Matches amount of fertilizer to crop needs.

RIGHT TIME
Makes nutrients available when crops need them.

RIGHT PLACE
Keeps nutrients where crops can use them.

Education and Outreach

Ohio Farm Bureau and partnering organizations have been reaching out to the public about farmers' water quality efforts across the state. An Ohio Farm Bureau exhibit at the Ohio State Fair featured mobile water quality displays and information about what farmers are doing to improve water quality around the state. An interactive virtual sandbox allows visitors to create topography models by shaping real sand that is then augmented in real time by an elevation color map, topographic contour lines and simulated water.



Water quality education is part of OFBF's display at the Ohio State Fair.

• **4R Nutrient Stewardship Certification Program.** Administered by the Ohio AgriBusiness Association, this voluntary program is focused on the 4Rs (using the **Right source** of nutrients at the **Right rate** and **Right time** and in the **Right place**). It's for agricultural retailers and independent crop consultants who provide agronomic services, best management practice consulting and 4R education to farmers. The initial target area was the tri-state Western Lake Erie Basin but was expanded in January to the entire state of Ohio. Six other states and a province in Canada are looking at adopting the program. 2.78 million acres—approximately 1.9 million in the Western Lake Erie Basin—and 5,350 farm clients are serviced by those agriculture retailers and nutrient service providers who have earned the certification.

• **Field to Faucet.** This \$1 million initiative run by Ohio State University's College of Food, Agricultural, and Environmental Sciences is dedicated to research, education and outreach activities designed to deliver solutions to harmful algal blooms and other water quality issues. Last year it released a free app, Ohio State PLOTS, that allows growers to compare the effectiveness of different management decisions within their fields.



Ohio State's PLOTS app.

DEMONSTRATION FARMS

A centerpiece of Ohio Farm Bureau's Water Quality Action Plan is the Blanchard River Demonstration Farms Network.

Three farms are showcasing new and existing on-farm conservation practices that farmers can implement statewide to help improve water quality by keeping nutrients on the ground and out of waterways. Ohio Farm Bureau and the U.S. Department of Agriculture's Natural Resources Conservation Service are partners on the five-year, \$1 million project. An advisory committee of diverse partners is providing guidance on the project.

The goal of the demonstration farms is to help farmers find the right combination of practices that reduce nutrient and sediment loss while minimally impacting their financial bottom line. Farmers, researchers, engineers, environmentalists, government officials, media and others have visited the three farms to see how the conservation practices work in reducing agricultural nutrient runoff. One event, a field day presented by the Hardin County Soil and Water Conservation District at Kurt Farms, drew 180 people. The

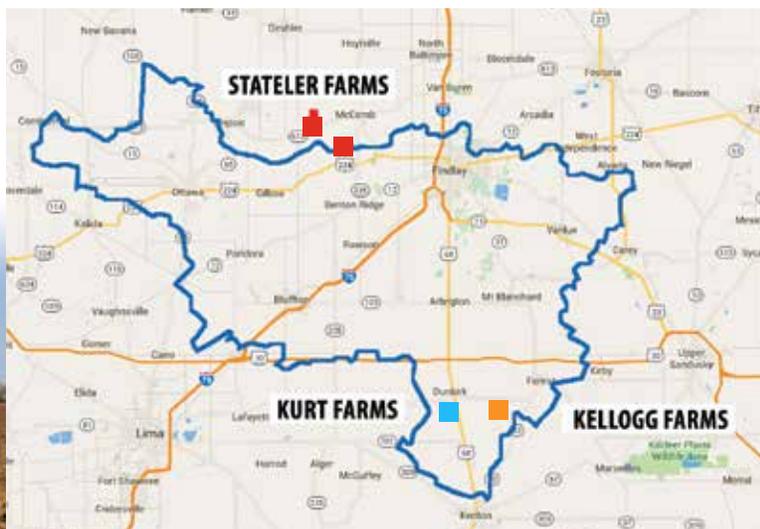


three model farms feature a wide variety of conservation measures so individual farmers can determine what method would work best on their land, meet water quality goals and be affordable.

While new conservation measures are still being implemented on the demonstration farms, researchers have narrowed their focus on four practices that will help farmers address nutrient and sediment loss:

- Adhering to Tri-State Fertility Guide recommendations for corn, soybeans, wheat and alfalfa.
- Improving soil health through no-till and cover crops, which allow water to better infiltrate the soil.
- Subsurface placement of nutrients.
- Disconnecting hydrologic pathways to slow down and manage the surface and tile flow of water.

**To learn more, visit
blancharddemofarms.org**



Meet the farmers



Stateler Family Farms

Stateler Family Farms is located in McComb and owned and operated by Duane and Anthony Stateler. The Stateres farm corn, soybeans and wheat on approximately 600 acres in Hancock County and also operate a 7,200 head finish swine operation. The Stateres have committed 243 acres to the demo farms project.

Conservation Strategies

Demonstrated:

- Variable Rate Manure Application
- Cover Crops
- Drainage Water Management
- Animal Mortality Composting Facility
- Edge-of-Field Monitoring
- Wetland with Pollinator Habitat



Kurt Farms

Chris Kurt owns and operates Kurt Farms, a 470-acre corn and soybean operation in Dunkirk in Hardin County. Kurt has committed 168 acres to the demonstration farms. Previously, he worked with The Nature Conservancy and Hardin Soil and Water Conservation District to construct a two-stage ditch on the demonstration farm site.

Conservation Strategies

Demonstrated:

- Two-Stage Ditch
- Phosphorus Removal Beds
- Filter Strips
- Blind Inlets
- Drainage Water Management
- Cover Crops
- Edge-of-Field Monitoring



Kellogg Farms

Bill and Shane Kellogg own and operate Kellogg Farms in Forest in Hardin County. The farms consist of 5,000 acres of corn and soybeans. The Kelloggs have committed 305 acres to the demonstration farms project.

Conservation Strategies

Demonstrated:

- Subsurface Nutrient Placement
- Cover Crops
- Reduced Tillage
- Abandoned Water Well Removal
- Grassed Waterway



“We want to try to prove to the other farmers and people in larger cities that we’re out here and we’re trying to fix this thing. We want to help the problem, not be a part of it.”

~ Demonstration Farms cooperator Shane Kellogg

Demonstration Farm supporting partners:

- Ag Credit
- Farm Credit Mid-America
- Hardin and Hancock County Farm Bureaus
- Hardin and Hancock Soil and Water Conservation Districts
- Blanchard River Watershed Partnership
- Legacy Farmers Cooperative
- Ohio AgriBusiness Association
- Ohio Corn and Wheat Growers
- Ohio Dairy Producers Association
- Ohio Department of Natural Resources
- Ohio Federation of Soil and Water Conservation Districts
- Ohio Pork Council
- Ohio Soybean Council
- The Ohio State University
- USDA Agricultural Research Service
- USDA Natural Resources Conservation Service
- U.S. Geological Survey
- Ohio State University Extension
- Ohio Environmental Protection Agency
- Ohio Department of Agriculture
- Sunrise Cooperative
- The Nature Conservancy in Ohio



1. Area agricultural professionals get an up-close look at a sub-surface nutrient placement toolbar at Kellogg Farms. 2. Kevin King from USDA-ARS discusses how edge-of-field monitoring equipment takes water samples for later testing. 3. A blind inlet phosphorus filter bed being constructed on Kurt Farms. 4. Surface water flume for collecting samples for edge-of-field monitoring.

COMMUNITY WATER QUALITY GRANTS

In 2015, Ohio Farm Bureau started providing funding for projects identified by volunteers that could help improve water quality in their communities. In the first two rounds of funding, 27 county Farm Bureaus have partnered with 117 groups on 31 high-caliber programs ranging from a nutrient management mobile app to educational workshops to the purchase of a no-till drill for planting cover crops. Project partners include groups such as Soil and Water Conservation Districts, Ohio State University Extension, U.S. Department of Agriculture’s Natural Resources Conservation Service and local park districts. In all, Ohio Farm Bureau has awarded \$350,000 to county Farm Bureaus and garnered more than \$550,000 in matching funds from outside groups. That number is expected to rise to **over \$1 million in total investment** when the newest round of county water quality projects are announced later this year. Ohio Farm Bureau has committed \$150,000 for new county projects.



ONMRK app

One county grant was awarded to Knox County to make improvements to the Ohio Nutrient Management Record Keeper app. The app helps farmers comply with state laws regarding fertilizer and manure application.

The county water quality grant program was honored with American Farm Bureau’s prestigious New Horizon Award, which recognizes new and innovative state Farm Bureau programs.



Frank Burkett, left, OFBF president, accepts the New Horizon Award from Zippy Duvall, AFBF president.

2016 Project Highlights:

County Farm Bureaus receiving funding and their projects:

Lucas County: The second phase of the Collaborative Look at Evaluating Available Nutrients (C.L.E.A.N) project was a detailed analysis of how nitrogen moves through the soil following varying agronomic practices and grower preferences in an effort to reduce nitrogen runoff.

Seneca County: Water quality stakeholders and others will have a better understanding of where nutrients are entering the Western Lake Erie Basin through a series of events, including an educational bus tour, nutrient sampling and consultation, on-farm visits and quarterly scientific nutrient management mailers.

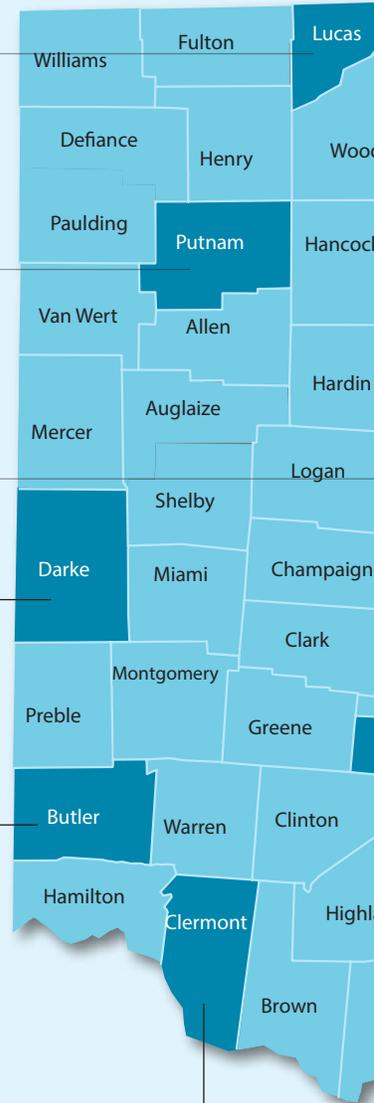
Putnam County: On an agricultural bus tour of the county, 75 residents saw the different ways the agricultural community works together on water quality issues, including seeing how a two-stage ditch works, what a working hog farm does to manage its manure and how water quality affects a hops farm.

Delaware County: Devices were placed on county farms to determine the amount of phosphorus lost through subsurface drainage to illustrate how land management affects runoff from farmers’ cropland.

Darke County: Grant money was used toward the design and building of a commercial 12-row dragline toolbar that will allow livestock producers to apply liquid manure to a crop instead of purchasing sidedress nitrogen.

Butler County: A new 8-acre Agricultural Conservation Education & Demonstration area will showcase best management practices in agricultural conservation, including cover crops, field buffers and grassed waterways.

Clermont County: The “Cover Crops for Southwest Ohio” booklet was updated for a second printing of 1,000 copies. The educational booklet shows how farmers can introduce cover crops into their row crop fields to improve soil permeability and reduce soil erosion.



\$350,000 awarded to local communities, generating \$550,000 in matching funds.

Erie and Huron counties: New equipment was purchased for volunteer monitoring of streams in the Firelands area and used for monthly water quality sampling from April through November. Three agricultural events focused on educating farmers and consumers on ways to improve area watersheds.

Lorain County: Data is being collected of runoff water at dozens of sites throughout the county, with an emphasis on agricultural areas. The data will be compared with different farming practices and will help educate farmers and landowners based on findings.

Cuyahoga County: A demonstration heavy-use site and riparian area was installed as part of educational workshops for horse and small livestock farm owners as well as the public. The site will protect the headwaters of Big Creek.

Mahoning County: Three workshops and two agricultural field days showed how soil sampling is one of the simplest cost-effective measures landowners and farmers can perform to ensure they are protecting water quality and saving money before they begin applying fertilizer. Free soil tests were offered to participants.

Jefferson County: The Upper Ohio River Watershed Community Outreach Campaign is an ongoing multifaceted approach to educating the public and leaders about water quality challenges. It includes a legislative reception, media campaign, student essay contest, community survey on general water quality knowledge and an educational Ohio River cruise that featured speaker Chad Pregracke, founder of Living Lands & Waters and winner of the 2013 CNN Hero of the Year Award.

Tuscarawas, Carroll and Harrison counties: Funding is helping support riparian landowner workshops, water quality signs for use at local conservation events and the Lake and Land Festival, a one-day conservation and environmental stewardship event at Atwood Lake Park.

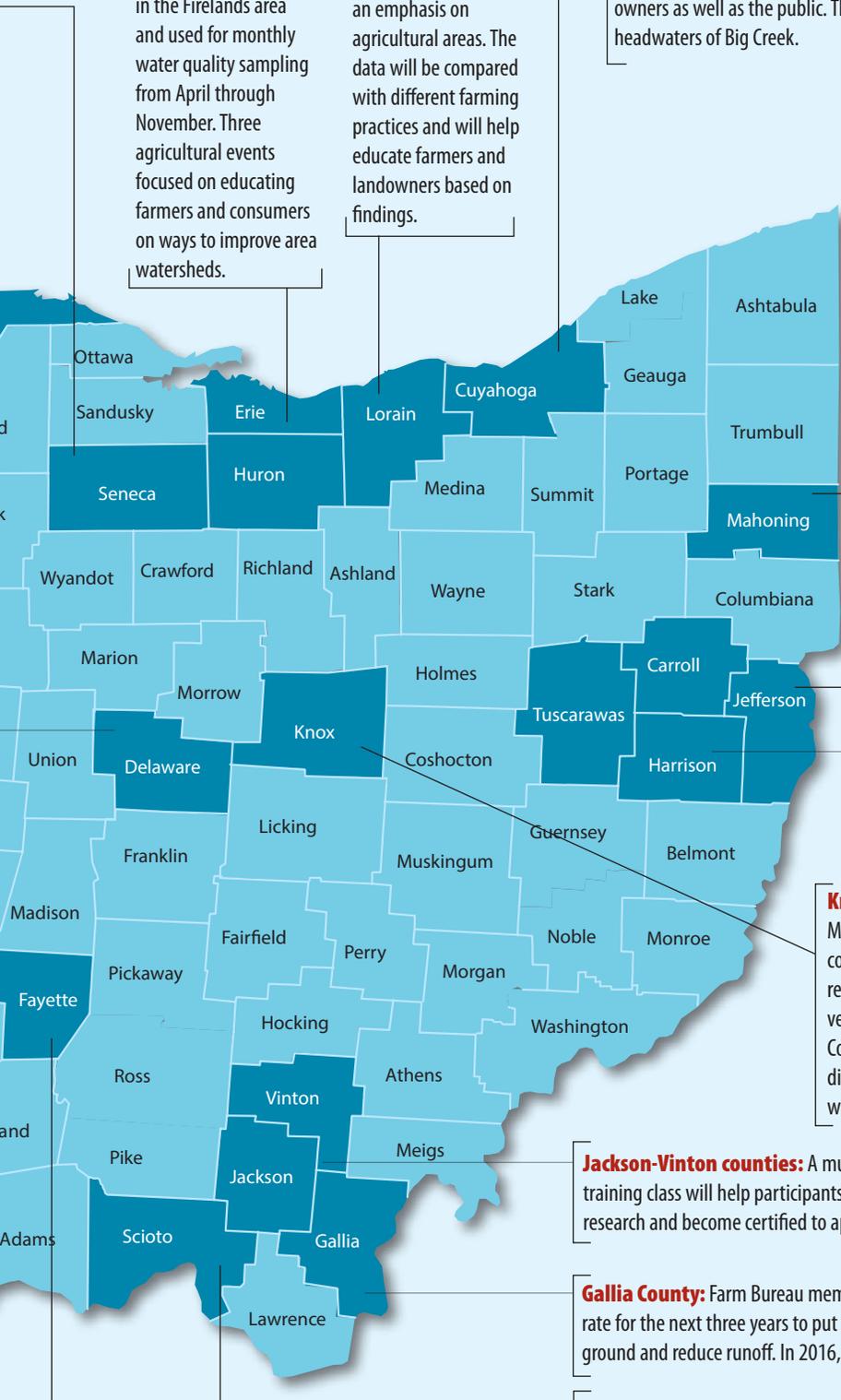
Knox County: Improvements were made to the Ohio Nutrient Management Record Keeper (ONMRK) app, which helps farmers comply with state laws that dictate record keeping and weather restrictions for application of fertilizer and manure. Also, a joint venture was formed between Knox County Farm Bureau and Knox County Soil and Water Conservation District in which a board of directors was appointed to oversee future updates and nationwide expansion of the smartphone application.

Jackson-Vinton counties: A multicounty fertilizer applicator certification training class will help participants learn about the newest information and research and become certified to apply fertilizer on their farms.

Gallia County: Farm Bureau members are able to rent a no-till drill at a discounted rate for the next three years to put in cover crops, which help keep nutrients in the ground and reduce runoff. In 2016, cover crops were put in more than 747 acres.

Scioto County: Area Farm Bureau members were able to rent a lime spreader at a significantly discounted rate. In the past, the equipment was unavailable to rent anywhere in the county. All equipment renters received information about the 4R Nutrient Program — applying nutrients at the Right source, Right rate, Right time and Right place.

Fayette County: A canoe float down the Paint Creek Watershed let county residents explore local rivers while learning about water quality through educational stops along the way.



Working together to protect water quality
and food production in Ohio is just part of the work
Ohio Farm Bureau members do every day.
That work is supported by membership dollars
and member engagement. We invite you to support our
effort by joining, renewing or inviting others to join.
Visit **GrowWithFB.org** to learn more.



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