

Empowerment *Through* Education 2014 Annual Report



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

We connect with people in all stages of life, from young children to older adults. We work with families and children, farmers and business owners, and community leaders and elected officials to build better lives, better businesses and better communities that make Ohio great. We do this through a focus on four impact areas:



Strengthening families and communities

OSU Extension teaches people how to apply research in their daily lives in order to make informed choices about everything from finances to healthy living to food safety.



Preparing youth for success

OSU Extension's 4-H youth development program delivers skills in leadership, communications, math, science and research to nearly 250,000 young Ohioans. 4-H extends its reach through special in-school, afterschool and summer programs.



Enhancing agriculture and the environment

Ohio's diverse agricultural, horticultural and forestry industries contribute \$105 billion to the state's economy every year. OSU Extension assists with technology, marketing and educational support, protecting Ohio's position in the global marketplace. OSU Extension also works to enhance the environment, water quality and natural areas in the state — balancing economic progress with environmental sustainability.



Advancing employment and income opportunities

OSU Extension's economic, small business and job development programs are tailored to local community needs in every county, whether metropolitan, rural or a combination of both.

Our partners and the people we serve tell our story.

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“Farmers are committed to protecting and improving our waters, but they need help through information-sharing, learning opportunities and education on the latest research and best nutrient management practices. OSU Extension is a key partner in providing these valuable services.”

— **Adam Sharp**, *vice president of public policy, Ohio Farm Bureau Federation*



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“Eliminating food deserts and including fresh fruits and vegetables at convenience stores are some strategies being developed by the Northwest Ohio Food Council in partnership with Ohio State University Extension and other organizations designed to increase access to local, healthier foods in urban areas.”

— **Carol Contrada**, *Lucas County commissioner*



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“OSU Extension is not only giving us guidance, but they’ve been in touch with other states that have already been through shale development, and they’re providing us with that experience and expertise. It’s been invaluable.”

— **Norm Blanchard**, *president, Cambridge-Guernsey County Community Improvement Corporation*



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“The whole idea of STEM is not just taking a rigorous engineering or mathematics course. STEM is a whole different process of looking at things. You present students with a problem, and they use their creativity and critical thinking skills to figure it out.”

— **Josh Jennings**, *director, Global Impact STEM Academy, Springfield, Ohio*

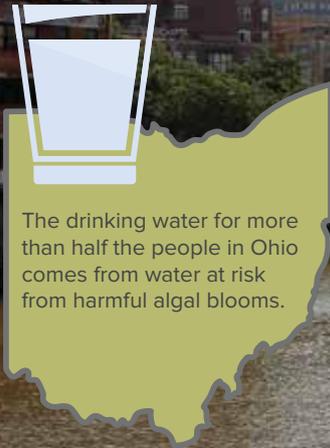


Helping farmers protect water quality

In summer 2014, Lake Erie and Grand Lake St. Marys, among others, again suffered harmful algal blooms. An ongoing problem in recent years, the blooms are mainly caused by excess phosphorus runoff, including fertilizer and manure from farms. OSU Extension, teaming with state agencies and Ohio farmers, is delivering crucial science-based educational programs to put new solutions to work. Among other efforts, specialists are developing and will provide the fertilizer certification training required by Ohio's new nutrient management law, Senate Bill 150.

Other efforts include teaching nutrient management sessions at Ohio's yearly Conservation Tillage and Technology Conference, and updating nutrient recommendations — also based on college research — for growers of the state's major crops.

More: go.osu.edu/NutrientStewardship



The drinking water for more than half the people in Ohio comes from water at risk from harmful algal blooms.

Extension and Certified Crop Advisers: A winning formula

Collaborating with your partners increases your impact. That's why OSU Extension works year-round to continually educate 540 Certified Crop Advisers (CCAs) through agronomic workshops, presentations, schools and conferences — providing them with the information they need to help farmers increase yields and income, reduce environmental impact and boost the state's overall economy. CCAs need this unbiased, reliable training to retain their certification, and OSU Extension offers it either for free or at a nominal charge. As a result, each CCA consults on an average of 40,000 to 50,000 acres of Ohio farmland, generating an economic impact on farms that can be easily \$100 per acre.

More: corn.osu.edu

Training CCAs is an excellent return on investment for tax dollars, and also supports a private-sector business model by providing science-based education to CCAs as small business operators.



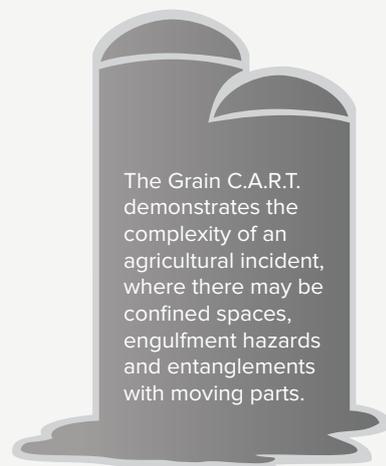
Pictured left to right: Dr. Andrew Michel, entomologist, and Certified Crop Adviser Carl DeBruin of Lancaster, Ohio

DIVERSITY EXTENSION:



Helping farmers and first responders boost grain bin safety

In the past 10 years, 14 Ohio farmers have died in grain bin-related accidents. Training is needed to avoid these tragedies. Ohio's first grain rescue simulator trailer — designed by faculty and students from the College of Food, Agricultural, and Environmental Sciences — helps educate first responders, grain industry employees and farm families about the hazards of flowing grain. The Grain C.A.R.T. (Comprehensive Agricultural Rescue Trailer) is used with the Ohio Fire Academy's agricultural rescue direct-delivery training modules and with OSU Extension's grain bin rescue outreach education program. The Extension outreach program has reached approximately 12,000 participants.



The Grain C.A.R.T. demonstrates the complexity of an agricultural incident, where there may be confined spaces, engulfment hazards and entanglements with moving parts.

More: agsafety.osu.edu

Promoting healthy, local foods in urban areas

Many Ohio urban neighborhoods are turning to community gardens and small city farms to use vacant land, create new businesses and improve access to fresh produce. OSU Extension provides technical support and marketing education to help urban farmers make the most of their land, including instruction on season-extending techniques that allow food to be grown almost year-round in Ohio. Efforts are ongoing to increase students' access to healthy foods in schools, and to create local food councils similar to the Northwest Ohio Food Council in Toledo. Extension also supports 239 community gardens in Cuyahoga County that yield nearly \$3.1 million in fruits and vegetables each growing season.

LOCALLY GROWN

The Northwest Ohio Food Council is just one example of OSU Extension's efforts to improve consumers' access to local foods.



More: localfoods.osu.edu

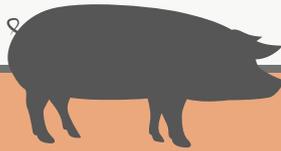
EMPOWERMENT *THRO*



Safeguarding the pork industry from new diseases

In 2013, a new swine disease showed up in the U.S. Very quickly, porcine epidemic diarrhea virus (PEDv) spread across the country, killing 50 to 100 percent of piglets at hundreds of farms in at least 30 states, including Ohio. OSU Extension has worked with hog producers across the state to keep them updated about biosecurity measures they must follow to minimize the spread of the disease, and technologies that can help them make better decisions. Because the virus has proven to be very persistent and difficult to contain, continued research and educational efforts are needed to help the industry fend off PEDv and secure an adequate supply of pork products to consumers.

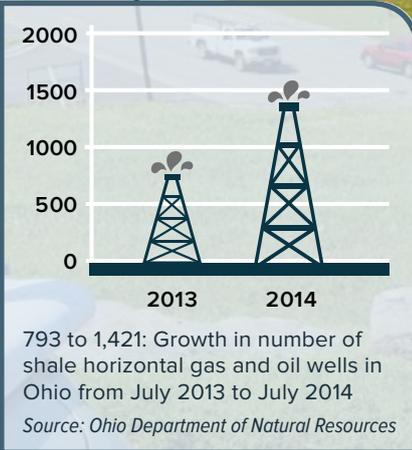
More: go.osu.edu/nkx



“There are fewer pigs because of PEDv. Prices at the producer level are already showing significant increases, which are likely going to show up in the retail case as well.” — Steve Moeller, OSU Extension swine specialist



ROUGH EDUCATION



Planning for shale-related impacts

Guernsey County's unemployment rate was 14.7 percent in 2010. Thanks to shale development, it tumbled to 5.7 percent by May 2014. While this is great news, Ohio communities experiencing shale-related booms can also face a variety of impacts, including rapid population growth and declines in revenue. To help, OSU Extension is tapping a \$200,000 grant from the Economic Development Administration (EDA) to work with four regional EDA offices representing 25 eastern Ohio counties. Together they are examining shale's economic, social and environmental impacts and developing plans for sustainable development.

More: go.osu.edu/shalecommdev

Inspiring youth to seek STEM career paths



In 2012, the President's Council of Advisors on Science and Technology predicted that over the next decade, U.S. industries will need one million more STEM graduates than the nation will have. That's why, in 2013, OSU Extension created the STEM Pathways signature program to spark enthusiasm in young people about science, technology, engineering and math. In its first year, the program developed a dozen 30- to 60-minute challenges and attracted an estimated 8,500 participants across Ohio. Another program called Youth Outdoors helped nearly 5,000 Cleveland children and teens learn a lifelong appreciation of nature and understanding of natural resources.

More: ohio4h.org/STEM-Pathways



STEM =

Present a problem.
+
Provide the tools.
+
Challenge young people to find an answer.





College of Food, Agricultural, and Environmental Sciences

The Ohio State University College of Food, Agricultural, and Environmental Sciences is a large, diverse college supporting 10 academic units, the Ohio Agricultural Research and Development Center, Ohio State University Extension, and two-year degree programs offered by the Agricultural Technical Institute. The college has campuses in Columbus and Wooster, and has a presence in all 88 Ohio counties.

It serves as the home for 330 faculty members, more than 3,700 undergraduate and graduate students, and 1,230 staff members.

Ohio State University Extension

OSU Extension brings the resources of The Ohio State University to every county. See extension.osu.edu for locations and contact information for all of our offices.



OSU Extension Administration

Keith L. Smith, Associate Vice President, Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Gist Chair in Extension Education and Leadership

3 Agricultural Administration Building
2120 Fyffe Road
Columbus, Ohio 43210
614-292-4067

smith.150@osu.edu
twitter.com/dirkeithsmith

[youtube.com/user/osuextension](https://www.youtube.com/user/osuextension)
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u.osu.edu/cfaesimpact
extension.osu.edu



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