

PURDUE EXTENSION SHOWCASE

Bringing World-Class Education to Rural and Urban Communities

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Extension



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Foreword

Purdue Extension's Showcase report reflects accomplishments, outcomes and activities that impacted Hoosiers across Indiana.

Extension specialists and educators deliver educational programs and research-based knowledge that help families, individuals and communities prosper and thrive. Here are some of their efforts:

- Delivering practical climate-smart applications to Indiana farmers, ranchers and landowners.
- Sharing expertise in sustainable agriculture practices reaches across state boundaries.
- Supporting Indiana communities that are facing complex land-use planning decisions, specifically in regard to renewable energy.
- Building natural resources conservation efforts, including:
 - prescribed fires for grasslands,
 - improved water quality to protect wildlife,
 - tree and shrub identification and planting,
 - connecting landowners and professional foresters, and
 - helping farmers implement practices for improved on-farm sustainability for soil health; nutrient, herbicide, and insecticide applications; resilience to extreme weather events; and more steady and predictable yields.
- Preparing Indiana's youth today for their future of tomorrow by contributing to their growth in personal and social skills, healthy living, animal science, engineering, and college and career readiness.
- Connecting Indiana communities through local coalitions and partners to positively impact health.
- Providing research-based resources and educational programs for professionals, government officials, citizen planners and residents on land use issues impacting their communities.
- Training via Spanish and English for adults working in the restaurant and food service industry that contribute to needed certification.

Our efforts meet the changing needs of residents in every Indiana county, across this nation, and around the globe. We hope you'll find this compilation interesting and helpful as you communicate with stakeholders about potential collaborations.

Together, we do great things.



Jason Henderson, Senior Associate Dean, Director of Purdue Extension, Purdue University

Acknowledgments

This report spotlights our Extension work in Agriculture, Horticulture and Natural Resources; Food, Nutrition, Families and Health; Youth Development, and Community and Business Development. Here are a few examples:

- Providing valued and practical information and resources for farmers via Purdue Agricultural Centers across the state.
- Sharing meat processing training during the pandemic-induced supply crisis.
- Encouraging adoption of practices and building networks among urban and small-scale farmers.
- Supporting beginning farmers as they grow their operations, create plans and analyze finances, and assisting families to prepare for the next generation.
- Sharing 17-year cicada outbreak information and resources with thousands of Hoosiers.
- Assisting turfgrass practitioners with climate-durable integrated pest management.
- Delivering research-based information through the Vegetable Farming webinar series to those interested in safe vegetable production, and encouraging adoption of recommended practices/technologies for horticulture and the environment.

Our land-grant mission challenges us to build a sustainable future for our local communities, our state and beyond.

I thank Jason Henderson, Senior Associate Dean and Director of Purdue Extension, for his leadership, and all faculty, researchers, specialists, educators, staff and volunteers who deliver unbiased information and resources.

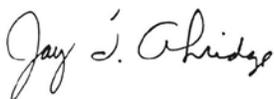


Karen Plaut, Glenn W. Sample Dean of Agriculture, Purdue University

Purdue Extension plays a vital role in our university's efforts to put science into practice. For decades Indiana residents have regarded Extension as a trusted source of education and information. Our faculty, specialists and educators work closely with communities and stakeholders, creating lasting collaborations and partnerships that address important opportunities and concerns.

Today's Extension assists people where they live and equips them with life-changing education, knowledge and support.

During challenging times, our outreach is of especially great value – and the benefits are available to all. By engaging with, and listening to, the stakeholders we serve, we can focus our efforts on the most pressing needs in our state and beyond. The stories in this showcase of accomplishments present powerful examples of how we bring our research to help communities become healthier and stronger, and enhance the lives and livelihoods of people throughout the state, this nation and the world.



Jay T. Akridge, Provost and Executive Vice President for Academic Affairs and Diversity, Purdue University

Climate, Sustainable Energy, and the Environment

Building Climate Expertise in Extension



Climate change has become a primary topic of discussion and research in the agricultural sector and among agricultural producers. Extension professionals in the North Central Region (NCR) are well

situated to be purveyors of climate science relating to agriculture and production systems.

Loy et al. (2013) shows that about two-thirds of farmers in the U.S. Corn Belt believe climate change is occurring, due to either human or natural causes, or both. Only 40% believe human causes can be attributed. The National Climate Assessment (NCA, 2018) and Intergovernmental Panel on Climate Change (IPCC, 2014) both detailed strong agreement, and high likelihood, of human-caused climate change globally, which is not consistent with farmer beliefs.

Most Extension and Agriculture advisors do not have educational backgrounds in meteorology or climatology. This may be the root of their discomfort with the topic, as Wilke et al. (2015) found in surveys of agriculture advisors. In general, Extension and Agriculture advisors have similar climate change beliefs as the producers they serve.

USDA and other federal agencies are studying climate change and its impacts on all sectors of the economy (agriculture, energy, commerce, transportation, etc.), and making strides to follow the President's Climate Action Plan (2013). Many federal agencies established regional centers to address concerns at local or regional scales. USDA's Regional Climate Hubs are among those groups, and focus on using Extension to provide knowledge and advice to agriculture producers. Three USDA Regional Climate Hubs are active in the NCR. For these reasons, it is important that Extension professionals become familiar, and comfortable, with climate science pertaining to agriculture production.

NCR SARE has been a benefactor to climate curriculum in the past (ENC11-127, ENC12-136). Research and training opportunities provide Extension Educators with basic knowledge and allow some to specialize programming to address climate change issues.

In 2017, the North Central Climate Collaborative (NC3) was established as an initiative with Extension Educator and/or Specialist representation in all 12 states. This group provided regional in-person trainings to other Educators and provided webinars on climate change and agriculture topics every other month. In months when webinars were not provided, the team met to discuss issues impacting the states and opportunities for the region. The NC3 received funding in past efforts through the North Central Region Water Network.

Within the NC3, expertise varies greatly. All Educators have some expertise in agriculture, although some are more versed in livestock, field crop, or horticulture than others. All Educators have a basic understanding of climate change principles. This project endeavors to identify and analyze gaps in advanced knowledge of climate change and agricultural principles, and to address them by creating state or regional Specialists in climate change and sustainable agriculture.

Ongoing webinars are held on climate and climate change projects. A three-day virtual conference, "Advanced Climate Change Topics: North Central Climate 201," was held on in-depth topics: new climate "normals," climate projections and models, climate assessments, National Weather Service Climate Projection Center Outlooks, climate justice, community climate risk and planning, climate indicators on agriculture, adaptation through conservation, and climate's impact on habitat, conservation, wildlife and fisheries.

Webinars have generated favorable responses. Almost all survey respondents show knowledge gained, with over 90% intending to initiate action or share information. More than 600 people have attended a webinar since October 2019.

The 430 registrants of the North Central Climate 201 Conference were sent a post-survey via email. Of 29 who responded, they indicated they work in Extension (20.0%), state or federal agencies (17.1%), local government (17.1%), or the USDA (14.3%). All indicated they work in states across the Midwest and beyond.

Respondents indicated they most valued the speaker and presentation about climate justice, stating: "Wonderfully presented and full of information I plan to use." "Being an EPA employee working with smaller rural communities, climate justice has significant overlap with environmental justice, which is an EPA focus. It helps to better understand that overlap." "As an agency employee, we slip easily into acronyms and jargon. It's good to be pushed toward engaging the public, and the speaker

provided good suggestions on how to do this effectively." "This was new information for me and provided information that I could incorporate into my work." "It had a lot of useful information that I can use in my climate presentations to make them more effective."

As a result of attending, most (82.4%) felt somewhat, or much more, comfortable doing climate-related education. They reported increased awareness about people located in other states who are working on climate issues, and on where to find information and resources about climate. They also reported increased understanding of climate research and outreach happening across the region.

Respondents reported they expect to use information they learned for their professional development, regulation/policy discussions, community planning, and educational curricula. For actions, respondents indicated, as a result of the conference, they would use more climate information in their work, do more climate-related programs, make updates to existing climate-related programs, and recommend changes to agricultural operations.

Despite the conference being virtual, over half (55.2%) felt they developed connections/contacts with out-of-state experts they could consult with about climate questions.

Extension's North Central Climate Collaborative (NC3) opportunities are building climate change expertise in Extension personnel to enhance delivery of educational programs to those in agriculture and the community.

Turfgrass Practitioners Earn Continuing Certification Hours for Climate-Durable Integrated Pest Management



Managed turfgrass covers more than 20 million hectares of U.S. land and generates more than \$40 billion in annual economic activity, making it one of the fastest growing agriculture segments.

Insect management represents a significant portion of efforts by turfgrass and landscape professionals, homeowners, and property managers to produce functional, aesthetically acceptable, and environmentally and economically sustainable turf. However, potential environmental and human impacts associated with turfgrass management have garnered scrutiny from

regulatory agencies, environmental organizations, and local governments.

Purdue Extension's Turfgrass Integrated Pest Management (IPM) integrates applied research and Extension on biology, ecology and management of insects in turfgrass environments. The program addresses very important challenges facing the industry through translational science, supporting development and implementation of sustainable, climate-durable, insect management strategies that stand up to Indiana and Midwestern climate change effects – warmer, wetter, and increased frequency of extreme precipitation events.

Extension programs are delivered, and materials, training tools, mobile apps (e.g., TurfDoctor for homeowners and land managers to diagnose and address common turfgrass problems), websites, Extension publications, bulletins, newsletters, and social media are created, distributed, and posted. Research activities examine biological and chemical treatments for efficacy and climate durability for preventing turfgrass insects.

Turfgrass IPM serves a large and varied group of Indiana stakeholders, including leadership and staff for 550 golf courses, 600 professional lawn care businesses, 20 sod producers, hundreds of athletic fields (university, high school, and municipal), grounds managers for schools, parks, cemeteries, and hospitals, professional and semi-professional sports teams, product manufacturers, and distributors. All efforts enhance certification and training opportunities for turfgrass industry practitioners. The Turfgrass IPM Correspondence and Online Course addresses cool- and warm-season turfgrass, chemical pesticides and the environment, equipment and calibration, and management of weeds, diseases, insects, and vertebrate pests, and is designed for turf professionals, golf course groundskeepers, landscape pest management professionals, chemical industry personnel, lawn care applicators, commercial sod growers, and sports turfgrass managers.

The turfgrass IPM research efforts provide the backbone for in-person and remote-learning sessions that reached 850 individuals who completed Commercial Applicator Category 3b Turf Management continuing certification hours. In the last year, digital Extension materials were accessed by more than 19,000 individuals, the TurfDoctor mobile app was downloaded to 530 new devices, and 12 students enrolled in the Turfgrass IPM online course.

Turfgrass IPM supports workforce development via continuing certification hours, increases knowledge of climate-durable turfgrass insect management, and places timely, accessible, science-based diagnostic and decision-making tools in the hands of turfgrass practitioners.

Indiana Professionals, Government Officials, Citizen Planners, and Residents Apply Land Use and Renewable Energy Information and Tools for Community Planning



Land use planning decisions made by Indiana plan commissions, city and town councils, boards of zoning appeals (BZA), and municipalities are influenced by multiple factors (e.g., federal,

state, and local regulations, community values, and economic and environmental considerations). Indiana communities face many complex decisions related to land use planning, particularly for renewable energy. State agencies guide policies and utility regulations, but oversight of renewable energy development and land use planning processes currently occurs locally.

While state government provides the authority to city and county government units to pursue self-determined goals through comprehensive planning, it is up to each body to develop plans that achieve community goals. Additionally, municipal and county governments are responsible for protecting public health, safety, and welfare within their jurisdiction through regulation of land use, spatial patterns, and regulation of development, investment in infrastructure for water resource management, and conservation strategies for green space.

Indiana is the only state in the U.S. where Extension Educators may be required by legislative mandate to serve on Area and Advisory Plan Commissions. Therefore, Purdue University is uniquely positioned to leverage this mandate to support programs that address current and emerging land use issues in Indiana. Similarly, the Indiana Land Resources Council (ILRC) collects information and provides educational assistance, technical assistance, and advice to local governments regarding land use issues and policy across the state.

Purdue Extension's Land Use Team and Indiana Land Resources Council collaborate to offer the Indiana Land Use Summit every two years. The 2021 summit, held virtually over two days, provided land use tools and resources relevant for Indiana local land use planning. Participants could convene and share perspectives on innovations and implementation of agricultural and natural resources planning initiatives in communities. Sessions explored how agriculture and natural resources

planning initiatives fit into broader land use objectives in local communities. Practical land use tools, resources, and connections for community planning were provided.

A policy panel provided key outcomes from the 2021 legislative session. Panelists from Indiana Farm Bureau, the Nature Conservancy, American Planning Association-Indiana, and ISDA provided overviews of how various bills impact land use, local decision-making, and community planning. Speakers discussed community-specific public projects integrating new forms of civic participation and social engagement into the built environment, and land use considerations of solar energy, especially for the largest installations, and the positive and negative local impacts of these projects. Attendees chose from concurrent sessions about climate change and renewable energy community planning, community engagement processes for land use planning, and innovations in environmental planning. Of the 115 summit attendees representing government agencies, nonprofit organizations, plan commissions and planning departments, private sector consultants, natural resource professionals, universities, media, and interested community members, 52 responded to the feedback survey.

To address a statewide need for research-based information on the intersection of renewable energy, land-use decision making, and ordinance development, Purdue Extension, with support from Hoosiers for Renewables and Indiana Farm Bureau, completed a comprehensive study to examine land use policies and strategies that Indiana communities have adopted to plan renewable energy. Electronic surveys were sent to 161 contacts in county and municipal planning departments and plan commissions, and 84 survey responses were received. Survey questions addressed provisions in zoning ordinances specific to climate change and renewable energy, factors considered when adopting or rejecting policies, and the level of public participation and conflict. Community perception questions of renewable energy addressed types of conflict and conflict resolution, factors influencing policy changes, and resources needed to make informed decisions about renewable energy planning.

Nearly all (97%) summit attendee respondents indicated the summit met or exceeded expectations for building connections to land use planning resources. Most (90%) reported they were somewhat to extremely likely to use information from the summit for future planning efforts.

Land-use study findings were shared in the Indiana Renewable Energy Community Planning Survey and Ordinance Inventory Summary, reporting about land-use regulations for wind and solar energy, and providing snapshots of renewable energy land use regulations in each county.

The study identified commercial solar and wind development and zoning ordinances for unincorporated areas. Of the 82 counties with planning and zoning, 56% had county zoning ordinances with standards for commercial solar energy systems, and 62% for commercial wind energy conversion systems. Eight counties did not permit commercial wind in any zoning districts. Ordinances were found to vary in the tools used to regulate renewable energy and define commercial solar and wind uses.

Concerns from neighbors were indicated most frequently (34%) as greatly influencing changes in regulations or ordinances, and concerns about climate change and energy availability (60%) did not influence changes. Community conflicts resulted in changing policies with

eight solar ordinances, 11 wind ordinances, four solar development projects, and seven wind development projects. Planning representatives (26%) indicated needing help with the impact on property values when making decisions for developing or amending renewable energy regulations/ordinances.

Purdue Extension Land Use Team provides research-based resources and educational programs, including the biannual Land-Use Summit, to inform and support land use and renewable energy planning for Indiana professionals, government officials, citizen planners, and residents.

Conservation of Natural Resources

Purdue Extension Shared 17-Year Cicada Outbreak Information and Resources with Thousands Across Indiana



Once every 17 years, millions of cicadas per acre crawl out of the ground and climb into trees, where they spend an entire month screaming louder than a lawnmower, mate, and lay their eggs on the tips of branches.

Cicadas are not harmful to humans, provide a feast for wildlife, and mostly cause only cosmetic injury to trees. However, some trees will need protection to survive. Female cicadas cause damage when they puncture or slit 3/16" to 7/16" diameter twigs of trees and shrubs to lay their eggs. Infested branches appear as if the eggs have been stitched in by a sewing machine. These branches will turn brown, die, and sometimes break off.

Although cicadas do not cause long-term harm to trees, many people unfamiliar with them refer to these insects as a plague of locusts and attempt unnecessary or unsafe approaches to killing them. The goal of Purdue University's multidisciplinary Cicada Outreach Team was to promote public safety and prevent panic with an education campaign that framed the cicada emergence as a wonder to be enjoyed and not a plague to be endured.

Purdue Extension developed a coordinated system to create and share education resources to support existing county and campus-led programs across multiple departments. Specific messages were crafted and shared for tree producers, nurseries, landscapes, and specialty crops. Information delivery occurred via county Extension Master Gardener groups, commodity newsletters ([Facts for Fancy Fruit](#), [Purdue Landscape Report](#) and [Indiana Woodland Steward](#)) and activities (Entomology's [Virtual Bug Bowl](#), Forestry and Natural Resources' [Ask the Expert](#)). Cicada slides were developed and shared in more than 35 hours of live and recorded programs by Extension Educators that reached over 1,500 youth and adults.

"Emergence of the 17-Year Cicada," the Team's website <https://extension.entm.purdue.edu/cicadas/>, introduced this insect to prevent panic spraying of insecticides, or the hiring of contractors selling false promises of protection. Website visitors were encouraged to sign up for a newsletter to stay informed of the cicada emergence, and to participate in [Indiana Cicada Emergence Trackers](#), a community science effort to report and map cicada activity on smartphones via i-Naturalist. Community science programs were divided for two audiences: [general public](#) and Extension [Master Gardeners](#). In addition, a variety of activities, videos, and resources were featured, including a specially designed poster for use in state parks, youth education activities, origami, and cookie recipes.

The Cicada Team generated a buzz strong enough to experience an extraordinary amount of media coverage, reaching nearly 30 local and national news outlets,

including the Indianapolis Star, South Bend Tribune, NBC, CBS, ABC, NPR, Disney Plus, and National Geographic. The team lead conducted 47 media interviews and local Extension Educators and Specialists added many more.

“Emergence of the 17-Year Cicada” had nearly 23,000 unique views, with more than 950 downloads of posters and 120 downloads of youth education activities. Videos deployed by the team on Facebook and YouTube were viewed more than 12,000 times. Zombie Cicadas, the most popular video, was downloaded 6,095 times. The social media campaign reached nearly 85,000 individuals.

Community science efforts resulted in 75 observers across the state reporting more than 360 observations of cicadas and other Indiana species. These observations are currently being analyzed to refine understanding of the seasonal biology of the cicada in Indiana. In consultation with leaders in the tree care industry, the Cicada Team worked with AES (formerly Indianapolis Power and Light), Indy Parks, and the Indiana Arborist Association to distribute information about how to protect newly planted trees during the annual tree giveaway. A thousand information sheets were distributed during the one-day event.

Purdue Extension’s coordinated and multidisciplinary efforts for the 17-year cicada provided helpful insect, tree, and shrub information, resources, and education that reached thousands across Indiana.

Landowners Learn About Prescribed Fire for Grassland Conservation



Many of Indiana’s natural areas, prairies, savannas, and oak-hickory forests are dependent on natural disturbances, such as fire, to flourish. With more than 97% of Indiana’s land in private ownership,

private landowners are the stewards of a majority of the landscape. More than 200,000 acres of Indiana cropland are enrolled in the USDA’s Conservation Reserve Program. These acres require management, including prescribed fire, to fulfill contractual obligations and enhance plantings for wildlife. However, most landowners lack awareness of prescribed fire benefits to wildlife and natural areas, and may have preconceived notions about risks. Providing landowners with information about prescribed fire benefits and safety, and demonstrating safe application, can help them make informed decisions for their property.

Purdue Extension leads annual “Learn-N-Burn Prescribed Fire” workshops. The most recent workshop focused on prescribed fire in grassland ecosystems. The workshop had a classroom portion about prescribed fire laws and regulations, managing grasslands for wildlife, how to use fire to enhance wildlife habitat, how to safely conduct a prescribed fire, and prescribed fire ignition techniques. This was followed by an outdoor, hands-on field portion addressing equipment, and providing a demonstration of a live prescribed fire.

There were 22 participants. Participants were landowners, college biology students, and public natural area managers. Eleven completed the program evaluation. Most reported they were non-Hispanic (80%), White (72.7%), male (64%), and 40 years or older (60%). Participants reported they owned or managed a total of 12,750 acres.

Participant knowledge ratings (5-point scale) improved from before to after the workshop. Average knowledge scores increased for: how seasons of fire (fall vs. spring) impact vegetation (96.6%), benefits of conducting a prescribed fire for wildlife (80%), how to improve grasslands for wildlife (59.7%), equipment used in conducting prescribed fire (47.2%), and safety considerations when conducting fire (43.1%).

Participants indicated the workshop was useful in providing new knowledge to help them take action (100%) or make future decisions (91%) on their property. The Net Promoter Score®, a measure of customer loyalty, was 45, and is considered a good rating, indicating most participants would recommend the workshop to family, friends or colleagues.

Based on information presented, participants plan to take the following actions in the next 12 months: conduct a prescribed fire (64%), seek more information about managing grasslands for wildlife (45%), and seek assistance in conducting a prescribed fire (45%).

Purdue Extension’s “Learn-N-Burn Prescribed Fire Workshop” helped landowners learn how to conduct prescribed fires for conserving grasslands.



Purdue Extension Helps Indiana State Parks Teach Families to Improve Water Quality to Protect Wildlife



The Eastern Hellbender is a rapidly declining species throughout the eastern U.S. Government agencies and universities have spent considerable funding to recover the species. The primary

cause of decline is poor water quality, which affects all members of the public.

Purdue Extension trained 60 Indiana Department of Natural Resources state park naturalists in presenting the program, Hellbender Conservation: Saving the Slimy Salamander. These naturalists then presented this program 18 times at their state parks throughout the year. State park visitors of all ages attended the programs. State park naturalists administered pre- and post-knowledge surveys to all families attending. These state park programs reached about 125 families with a minimum estimated attendance of 298 individuals.

On pre/post scores, there was an average knowledge gain of 157.2%. Topics assessed were "hellbender habitat and biology," "hellbender adaptations," how water quality and human actions affect amphibians and other aquatic life ("amphibians and water pollution," "threats to aquatic ecosystems," "reasons for hellbender decline") and "what you can do to help hellbenders," focusing on simple actions the public can take to protect water quality and improve habitat for hellbenders and other aquatic organisms.

By partnering with the state parks, Purdue Extension leverages the ability to share information and actions for improving water quality and habitat for hellbenders, other amphibians and aquatic life across Indiana.



Indiana Conservation Partnership Employees Learn Tree and Shrub Identification for Sharing with Their Clients



Purdue Extension is a member of the Indiana Conservation Partnership (ICP), <http://icp.iaswcd.org/>, and one responsibility is to provide science-based information and training for partnership

members (including USDA, Indiana State Department of Agriculture, Soil and Water Conservation District, and Indiana Department of Natural Resources), who work with Indiana landowners and managers. Providing natural resources training to these ICP members leverages the capacity of Purdue Extension to reach more citizens. Survey results of ICP members revealed the need for tree and shrub ID training.

Early in the year, Purdue Extension presented two live webinars, "How to Identify Trees in Indiana" and "How to Identify Shrubs in Indiana". Recordings were posted on the Purdue Forestry and Natural Resources Extension YouTube channel and made accessible by ICP members and the general public. In the fall, four Regional Tree ID Field Programs were held. About 140 webinar and 70 field program attendees were employees of the ICP organizations. There have been more than 1,000 views of the posted videos.

Webinar (38.6%) and Regional Tree ID Field Program (65.7%) participants, in post-survey responses, rated their training knowledge (5-point scale) about parts of the trees and shrubs used for ID, resources for tree and shrub ID, and tree and shrub ID principles. Webinar average scores improved 1.5 points, and Regional Tree ID Field Program average scores improved 1.2 points.

Webinar (88%) and Regional Tree ID Field Program (93%) participants indicated they plan to take action steps in their job in the next year using information learned. Webinar participants commented: "This was great ... not sure I've even been actually 'taught' this. Now I just need to somehow retain all this." "I found both the tree and shrub webinars very fascinating! Would love to see more like this in the future." Regional Field Program participants commented: "Totally awesome, learned a ton, great training, thank you!!" "Great program - loved the hands-on approach." "I already know a lot about tree ID, but learned a lot about more advanced ID using bud and twig characteristics." "I learned a lot of things that I

was out of practice on, and new things that I never knew before." "Highly recommend this and would do it again in another area to learn even more!"

Purdue Extension's Tree and Shrub ID Webinars and Tree ID Field Programs helped increase the knowledge of ICP employees, who will use that knowledge for instruction and engagement with clients across Indiana.

Improving Conservation Tree Planting with Increased Knowledge and Connection to Professional Foresters



Conservation tree planting is important for restoring habitats, reducing erosion, regenerating forests, and sequestering carbon. Indiana landowners have access to tree seedlings from state

and private nurseries, but may not have experience or knowledge of best practices to improve tree planting success. A Purdue study found that 75% of surveyed conservation tree planters were first-timers, and that working with a professional forester more than doubled tree planting success. Directing landowners considering tree planting to professional assistance and sources of science-based information can lead to improved success of conservation tree plantings.

Purdue Extension has provided in-person conservation tree planting clinics for more than 40 years. Due to pandemic restrictions, the program was held via webinar, as well as one small in-person program. A two-hour presentation was provided on conservation tree planting science and practical experience, and included access to reference materials and contact information for resource professionals available to assist landowners.

Purdue Extension publications, and research from Purdue's Forestry and Natural Resources, and Hardwood Tree Improvement and Regeneration Center, informed recommendations. Professional foresters from Indiana Department of Natural Resources and the private sector also attended to assist with questions and to discuss services for landowners. The in-person program was held in cooperation with LaGrange County Extension and Soil and Water Conservation District offices.

The online program was advertised to individuals who had purchased seedlings from the Indiana DNR state tree nurseries and to the general public. The in-person program was advertised to general audiences through

Purdue Extension and LaGrange County contacts. There were 114 participants for the webinar, and 15 for the county program. Most were landowners planning to do conservation tree plantings.

Participants responded on post-surveys (webinar 20.6%, in-person 60.0%) rating their before/after knowledge (5-point scale) related to conservation tree planting. Average scores were calculated for site evaluation and preparation, planting techniques, weed control, and post-planting management. Webinar participant averages increased from 2.87-3.26 to 4.33-4.52, and LaGrange County participant averages increased from 2.78-3.33 to 4.22-4.78. Also, participants (91%) indicated they plan to take at least one action for conservation tree planting in the next year.

Some participants stated the program value: "This webinar especially helped me think about planning (soil testing), planting (rows or not), watering (not necessary), weed control (not mowing but find other ways), and deer (I think I will now build a fence of some sort)." "Very, very good presentation, I will try to steer others toward this resource."

Train-the-Trainer Activities for Conservation Professionals Help Indiana Farmers Improve Agricultural Sustainability



Healthy and functional soils support productive agroecosystems while providing essential ecosystem services. Unfortunately, mismanagement of soil resources has led to multiple soil

resource concerns in Indiana, including soil erosion, loss of soil organic matter, poor water infiltration and impaired nutrient cycling. These resource concerns result in on-farm (e.g., decreased/variable crop yields, increased need of fertilizer inputs) and off-farm (e.g., impaired water quality, decreased soil carbon stocks) impacts.

Conservation practices are needed to preserve soil and water. Indiana is a national leader in conservation, in part due to long-standing cooperation and work by the [Indiana Conservation Partnership \(ICP\)](#). Purdue Extension is one of eight partners sharing a common goal of promoting conservation. Annual input from staff and field offices shows that soil health and cover crops have consistently ranked in the top five annual needs for professional development training.

To address professional development and continuing education, ICP representatives, a panel of experts, and the [Conservation Cropping Systems Initiative \(CCSI\)](#) provide training, outreach and soil health education support for partners across Indiana. These professional partnerships bring together similar goals, staff with a variety of roles, and complementary, but not duplicative or competitive, efforts for Indiana. Purdue Agricultural Centers conduct research on cover crops, nutrient management and cropping systems. Purdue Extension contributes on-farm research and soil health education. Annual conservation trainings are supported with SARE professional development funds. These efforts build consistency for Indiana professionals working in agencies, counties, and regions of the state to provide information, tools, and resources to support farmer implementation of cover crop practices. Train-the-trainer activities also provide opportunities for Indiana professionals seeking [Natural Resources Conservation Service \(NRCS\) Certified Conservation Planner](#) status.

Due to the pandemic, programs had to be adapted to a hybrid environment while maintaining effectiveness of in-person experiences when safe to do so. “Core Cover Crops and Soil Health Systems Training” was held as a series of three virtual events (aka Virtual Core Series) of two hours weekly for three weeks, with resources and supplemental content made available in between. Nine modules were presented: Sustainable and Regenerative Soil Health Systems, Cover Crop ID, Deep Dive into Cover Crops, Benefits and Selection, Indiana Seed Laws, Cover Crop Strategies and Equipment, Soil Health Cropping Systems and Equipment, Insect Pests and Beneficials Management Considerations in Soil Health Systems and Cover Crops, Seeding Tools and Calculators, and Weed Management Considerations for a Soil Health System and Basic Cover Crop Termination. Participants learned about identification and management of cover crops, nutrient management of soil health systems, when and where to use cover crops, pest management, and beneficial insect management.

“Soil Health and Sustainability for Midwestern Field Staff” became a three-day hybrid series with two days in the field and a day of interactive webinars and virtual activities. Nine modules were presented: Soil Health Basics, Linking Soil Biology to Soil Health, Soil Health Planning Principles, Strategizing and Implementing a Soil Health System, Resource Concerns and Soil Health Indicators, Ecological Management, Cover Crop Management, Grazing Management to Improve Soil Health, and Social and Economic Considerations. Participants learned about in-field troubleshooting, diagnostics, example problems shared by farmers, zones of soil habitat, and crop system approaches where practices could be used and stacked to implement a soil health system. Nationally and internationally

known farmers help with training, participants visit their farms for an in-person immersion experience of a fully functioning soil health system, and Purdue researchers, Extension and NRCS partner to enhance this unique training agenda.

“Advanced Trainings” and “In-field Diagnostics Trainings” were canceled, so a panel of training, education, and content experts convened to evaluate the program series and update content and delivery methods. The panel identified one training that no longer fits current stakeholder needs and will be redesigned; one training series had too much overlap with other trainings, so new learning objectives are being identified and modules redirected. The rest of the series remains valid and needed, and will continue as planned. The Curriculum Advisory Committee, an action team delivering training, drawing from the panel of experts’ recommendations, reviewed the training and identified key concept areas with delivery methods. A remodeled plan for the future included new learning objectives for more impactful training programs.

There were 77 participants in the Virtual Core Series. For the Midwestern Field Staff training, because of pandemic restrictions to maintain social distancing, participant numbers were limited to 25.

Of 19 survey respondents (24.7% response rate) for the Virtual Core Series, 94.7% were somewhat or very satisfied with the training, and 89.5% were likely or very likely to recommend the training to a friend or colleague. Participants rated the nine topic presentations as good to excellent. Participants liked the volume of resources, links and tools to use, that recordings were available for later review, and the wealth of knowledge from speakers. With virtual delivery, some participants indicated parts could have been better as in-person or hands-on experiences, but they understood pandemic limitations. One respondent stated, “I love these workshops because they are helping me talk to the producers in our District.”

For 10 survey respondents (40.0% response rate) of the Midwestern Field Staff training, 90.0% indicated they will likely use the information learned in their day-to-day work activities “all the time, every day” or “maybe once a week or a few times every two weeks”. All respondents were somewhat or very satisfied with the training. Participants rated the nine modules as good or very good.

Purdue Extension, ICP, and CCSI, working together, provided effective training for conservation professionals to help Indiana farmers implement conservation practices for improved on-farm sustainability by increasing soil health, reducing total nutrient, herbicide, and insecticide applications, increasing resilience to extreme weather events, and producing more steady and predictable yields.

Agriculture - Crops and Livestock

Purdue Extension and Agricultural Centers Events are Valued Resources for Indiana Farmers



There are 56,800 farming operations in Indiana. Some 97% of Indiana's farms are family-owned. Of Indiana's roughly 23.3 million acres of land, 84% of it is farms, forests and woodland. Corn

(\$3.16 billion) and soybeans (\$2.84 billion) account for the largest value of sales for Indiana's commodities. Successful and sustainable production requires attention to a vast array of variables, including but not limited to soil health, water availability and access, prevalence of weeds, insects, invasive species, and diseases, and seasonal and weather variability. The need for access to, and understanding of, new technologies and management is great for Indiana's producers and the future of crop production. It is prudent for Indiana to protect its resources and support productivity of the land, farms, and operations.

There were 67 hours of instruction provided by Purdue Extension at nine events held at the [Purdue Agricultural Centers \(PACs\)](#) for commodity producers, crop/livestock advisers, and others seeking knowledge in crop and produce production, farm management, land use, and small-scale farming/gardening. Most events returned to in-person events as pandemic safety guidance opened up more opportunities for gathering, although there was one event that provided virtual programming. These PAC events were: Indiana Grazing Schools at SIPAC and Cutler, Pinney PAC Crop Diagnostic Training, NEPAC Crop Diagnostic Workshop, SWPAC Virtual Field Day, NEPAC Organic Field Day, Pinney PAC Vegetable Field Day, Pinney PAC Field Day Morning Session and Twilight Program, NEPAC Field Day, and Pinney PAC Crop Diagnostic Training.

Topics addressed in these events included:

- **Livestock:** Animal nutritional needs and forage quality; extending the grazing season; fencing and watering; forage types, growing forage, grazing systems; integrating livestock into cropping systems; paddock design pasture evaluation and recordkeeping; and plant-induced forage disorder.

- **Crops:** Agriculture economy outlook; farm budget update; corn and soybean updates; early season growth and development; late season development and harvest; manure, manure application field research, and manure and fertilizer regulations for Indiana; marketing for organic grain, and preparing for organic inspections; soil care, fertility, testing, and nutrient management; strategies for reduction of nutrient losses; sulfur and boron fertilizer considerations in corn; and stored grain management.
- **Diseases, Pests, and Weeds:** Cover crops for weed management in organic sweet potato and in the home garden, and management after winter rye cover in no-till systems for corn and pumpkin; cover crops and soil health; crop diseases update; disease management in organic field crops, and in corn and soybeans; efficient crop scouting using drone assistance; managing resistance of fungicides; minibulk regulations and pesticides; pros and cons of insurance pest management; the new IPM; weed management; and wildlife damage of crops.
- **Produce:** Making and using compost in the garden; managing two spotted spider mites on cucumbers in high tunnels; soil health practices and compost amendments for pepper production; vegetable storage and cooking winter squash; and winter squash culture and varieties.
- **Safety:** Basic first aid/CPR; farm truck regulations; grain entrapment/bin simulator; pulling out stuck trucks and equipment safely.

A total of 792 participants attended the nine PAC events. There were 329 participants who completed post-surveys, a 41.5% response rate. Participants reported they were White (92.5%), non-Hispanic (88.8%), male (85.9%), and age 50 or older (62.7%). At these PAC events 556 participants were informed about field crops, 590 participants were informed about crop production issues, 619 participants were informed about agronomic management practices, and 677 participants were informed about agronomic issues.

Participants answered the Net Promoter Score® items: On a scale of 0 to 10, how likely are you to recommend this program to a friend, colleague, or family member? and What is the primary reason for your score? The NPS is a measure of customer loyalty that helps inform decision-makers of the experiences they are providing.

Loyal, passionate customers engage more, are willing to pay more, contribute suggestions, and share praise of the organization to friends and colleagues.

For all events combined, the NPS calculated score was +37 (on a scale from -100 to +100) and is considered a good rating. Promoters (those selecting 9 or 10) shared these reasons for their scores: Events were very informative and provided excellent information (always good/excellent, good/great); they learned new things, learned a lot, or gained a lot of knowledge; they liked the content that was provided and listed specific topics of interest; the presenters were knowledgeable and amazing, enthusiastic, excellent, good, great; the events provided practical, useful, helpful, and valuable, advice, tools, resources and information; they enjoyed it and indicated it was an interesting experience; and, they liked networking and connecting with their neighbors and other farmers.

These Extension and Purdue Agricultural Centers events contribute valuable and practical information for farmers across Indiana. These activities are very informative opportunities, provide practical, useful, helpful and valuable tools and resources for learning, feature knowledgeable, amazing, enthusiastic, and excellent experts, are enjoyable events, and support and enhance networking and connections among farmers.

Butcher Basics Participants Learned Meat Processing During Pandemic-Induced Supply Crisis



The pandemic revealed and exacerbated supply chain management between meat animal production and meat harvest facilities. When large meat packing facilities were forced to halt

production, producers had no outlet to harvest their meat animals. This placed an overwhelming demand and significant strain on smaller-scale meat processors. As a result, small-scale processors significantly increased their capacity, livestock and poultry producers moved to direct marketing, or others developed their own processing facilities. However, lack of skilled labor in meat science, food safety, and economic development limited these activities. Meat science education is generally not available outside of university settings. Lack of meat science education results in poorly prepared meat industry workers, inexperienced meat animal

producers, and under-educated consumers in animal harvest, carcass fabrication, meat quality, and food safety.

Purdue Extension and the [Purdue Boilermaker Butcher Block](#) developed an interactive, hands-on meat lab program. It included speaker presentations and videos on the science and procedures of harvest, food safety, fabrication, and processing of red meat and poultry species. The “Boiler Butcher Basics” series was implemented with two-day programs each for beef, pork, and lamb/goat, and a one-day program for poultry.

In this hands-on training, participants learned how to:

- harvest meat animals (beef, pork, lamb/goat, and poultry) for food production,
- execute proper carcass cutting techniques into wholesale and retail cuts, and
- produce processed meat products (e.g., sausage, ground meats, bacon, jerky).

They learned about:

- biochemical reactions occurring during production,
- factors contributing to meat palatability and methods to enhance palatability,
- food safety hazards associated with meat products and the procedures to mitigate these hazards, and
- small business management fundamentals for meat processing.

Each session started with personal and food safety information in the classroom. Then participants went into the meat lab harvest floor where animals were harvested and processed. Carcasses were chilled, then later that day for poultry, or on the second day for all other species, participants completed fabrication, breaking the carcasses (or previously harvested carcasses) into cuts of meat, sausages, and ground meat.

Participants could choose which sessions to attend. A total of 47 participants took part in the series, and some attended multiple sessions, with: 12 attendees for beef, 9 for pork, 12 for lamb/goat, and 14 for poultry. Participants were non-Hispanic (87.5%), White (82.6%), male (63.0%), and age 40-49 (30.4%). They reported attending to be able to have higher quality or healthier meat, to do meat processing for themselves, to add meat processing on their own farm, or to expand or increase production at existing processing facilities.

Participants completed pre- and post-surveys to report their knowledge of, and confidence to perform, animal harvest techniques, carcass processing techniques, food safety procedures, and species-specific processing (beef, pork, lamb/goat, and poultry).

Participants rated their knowledge (0-Not Knowledgeable to 10-Extremely Knowledgeable) and their confidence to perform (0-Not Confident to 10-Extremely Confident) for these topics:

- general animal harvest techniques,
- general carcass processing techniques,
- food safety procedures, and
- species specifics.

Knowledge average scores increased for all topics: animal harvest techniques (93%), carcass processing techniques (104%), food safety procedures (97%), and species-specific (159%). Participant increases in knowledge ratings (10-point scale) varied from pre- to post- by species. Participants in the beef session (pre 5.3-post 7.9) started with higher levels of knowledge and increased that rating over 2 points. Participants in all other species sessions started with ratings at 3 or 4 and increased by 3 to 5 points (pork 4.4- 7.4, lamb/goat 3.4- 8.1, poultry 3.0- 8.5).

Confidence to perform average scores increased for all topics: animal harvest techniques (81%), carcass processing techniques (81%), food safety procedures (83%), and species specifics (104%). Participant confidence to perform ratings started a bit higher than their knowledge ratings, but ended up with similar ratings (beef 5.6-8.0, pork 5.0-7.4, lamb/goat 4.1-8.2, poultry 3.4-8.5).

Participants reported that they intend to use knowledge and skills gained to seek out opportunities to expand livestock/meat operations (44.7%), adopt meat quality and food safety skills to livestock/meat operations (38.3%), maintain a career in meat industry (19.2%), and seek a career (14.9%).

Purdue Extension contributed to increased knowledge and confidence for those interested in processing meat for themselves, their farm, or their processing facility, to increase meat processing during pandemic challenges of supply chain availability and costs.

Agriculture - Urban, Small-Scale, and Beginning Farmers

Indiana Small Farm Conference Impacts Knowledge, Networking, and Adoption of Practices



Small farms, based on area (acres), are significant in Indiana. In the last 30 years, according to the U.S. Census of Agriculture, the number of Indiana farms has decreased from 70,506 in 1987 to 56,649 in 2017.

During that time, the only farms to increase in number, other than farms of 2,000 acres or more, are farms with 49 acres or less, which increased from 20,544 to 26,287. Furthermore, farms with fewer than 180 acres represent 71% of Indiana farms. The only types that increased in number were vegetable, fruit, some livestock farms, and organic farms. Additionally, according to the 2017 census, Indiana has 23,262 producers who identify as new or beginning, defined by USDA as having farmed for 10 years or less. These numbers indicate there is a market for small-scale agriculture production in Indiana and there are farmers filling this demand. The Indiana Small Farm Conference provides education and an opportunity

for peer networking for these small and beginning farms in a state that has traditionally lacked these resources.

Now in its ninth year, the [Indiana Small Farm Conference](#) is the annual education and farmer-to-farmer networking event for the small-scale and diversified farming community. The event features nationally recognized keynote speakers, all-day workshops and tours, concurrent sessions on research and practices, a trade show and a poster session. Conference goals are: 1) educating and increasing awareness among attendees on a variety of topics in agriculture, 2) increasing the adoption of best practices, and 3) bringing a variety of people together, creating a space for networking, and increasing collaboration.

Due to pandemic restrictions, the conference was modified to virtual delivery via Microsoft Teams. Pre-conference activities included six prerecorded farm tours. Conference sessions were from 9 to 5 on two days, with the first and last hours reserved for the virtual trade show. There were two-hour topic sessions and hour-and-a-half sessions for keynotes. Topics presented were regenerative agriculture, crop and livestock production, business and marketing, and urban agriculture. Based on feedback from previous participants, separate sessions offered beginning or advanced information. Youth engagement options were available. Sessions were recorded and made available, allowing participants to see

all content. A mental health channel provided resources to all, even those who had not registered.

A total of 285 adult and 7 youth attendees took part. A post-survey was sent to 313 email addresses for adult attendees, exhibitors/vendors/sponsors, poster presenters, and Purdue Extension personnel. There were 98 post-surveys received. Half of survey respondents were attendees. Participants reported they were non-Hispanic (89.2%), white (81.9%), female (57.8%), age 30-39 (22.9%), and had bachelor's degrees (34.9%). Over half indicated they currently farm (62.7%), and farm less than 10 acres (57.7%). Over a third (35.8%) reported being affiliated with a minority- or women-led organization, farm, operation or group. They reported their farming skill level as intermediate (33.8%), advanced beginner (25.4%) and experienced (21.1%). Over half (58.5%) had attended the conference in the past.

As a result of the conference, adult participants reported they learned about: sustainable practices and technologies (72.3%), diversified farming (57.8%) and crop production (54.2%). Most (67.4%) reported learning about available assistance and/or technical support, Purdue Extension (86.2%), and USDA/NRCS (69.0%). Even though this was an online conference, over half (52.3%) developed relationships, interacted, or connected with other farmers, producers, participants, or people interested in specialty crop farming.

Three-quarters (72.1%) agreed/strongly agreed they had learned about opportunities for small-scale farmers, producers, and operations/organizations, and 79.1% planned to apply one or more ideas learned. Participants (53.9%) reported plans to include information learned into their developing business plan. There were 14.0% who indicated plans to start a new business within the next year. Despite the virtual setting, many (43.7%) reported they developed relationships, interacted or connected with other farmers, producers, participants, and/or people interested in specialty crop farming during the conference. Participants rated their satisfaction with a +11 Net Promoter Score, which is considered a good rating. Most (75.0%) indicated the conference was inspiring.

In a 9-month follow-up evaluation from 2020 (71 surveys received), a majority (69.2%) reported adopting recommended practices related to farming, producing crops, raising livestock, and sustainable practices and technologies. Results experienced from those adopted practices were conservation of resources, increased yields, and increased efficiencies. Some (35.4%) reported adopting recommended practices related to business planning, finances, or marketing, and most (53.4%) reported those practices were very or extremely helpful. Over half (56.7%) reported they shared relevant information learned at the conference with others.

There were 22 previous participants with paired data for the 2020 post- and 9-month follow-up surveys related to adoption of practices. Most (86.4%) who **intended to adopt** recommended farming practices, reported they **did adopt** these practices for farming, producing crops, raising livestock, and sustainable practices and technologies. Previous participants (41.7%) who **planned to adopt** recommended business practices, reported they **did indeed adopt** those practices.

Results show the Indiana Small Farm Conference is reaching its goals and contributing to knowledge, networking, and adoption of practices for small-scale farming operators and enthusiasts across the state.

Beginning Farmers Learn to Grow Their Operations



The average age of Indiana farmers is increasing as documented by the USDA Census of Agriculture (55.5 years old in 2017 vs. 53.9 years old in 2012). Beginning farmers replacing retiring

producers need additional knowledge to effectively manage agricultural production systems, understand risk management tools, and use business management skills.

A statewide team of Purdue Extension Educators adapted an agronomic/farm management program from the University of Nebraska Extension, "Grow Your Farm Operation", targeting farmers with less than five years of experience. The eight-session virtual series taught farm principles, including 1) Drones, yield maps and precision soil mapping; 2) Financial management of my farm business – how to manage your farm operation with resources, profit + loss reports, balance sheets, overall planning; 3) Corn, Beans, and Eyes in the Sky - Identifying Crop yield limiting factors; 4) Commodity Marketing – reading trend lines, basics and goals; 5) Integrated Pest Management – Weeds, Insects, and Plant Disease Management; 6) Communication – Conflict modes, learning how you and others handle conflict; 7) Legal Do's and Don'ts – 90 useful tips for risk management and planning; and 8) Diversification in farming operations – Farmers share how they diversified their operations. Twenty-four individuals across Indiana participated in the series.

Between 8 and 20 participants responded to on-screen polls during the virtual series. With average scores of 8.0 or higher (10-point scale) they indicated increased

knowledge of: basic estate plans (8.83), financial threats from death taxes and nursing home care (8.75), farm rental contracts (8.75), succession planning (8.58), identifying corn yield limiting factors (8.5), establishing goals for marketing my grain (8.38), precision soil mapping (8.35), commodity futures and futures trading (8.13), soil measurement techniques (8.05), and maximizing corn plant populations (8.0).

Participants indicated they had gained at least one new idea to improve the financial management of their farm business (8.73), and overall management of their farm business (8.73). All respondents indicated they plan to learn the conflict styles of others and use different conflict-handling modes accordingly, and most (71.4%) better understand how to use all five conflict-handling modes in their business and family.

In a two-week follow-up survey, nine respondents indicated these sessions were the most useful: Commodity Marketing, Financial Management, and Legal Do's and Don'ts. Participants shared the benefit they experienced. Commodity Marketing's "discussion of strategies on when to sell grain was useful." In Commodity Marketing, "the presenter's use of current ag charts was a great way to illustrate some fundamentals of grain market trends. This again was a session focused on mentoring me as a farmer through a specific task." Financial Management "was one of the most beneficial sessions to me. I am trying to do a good job maintaining my financial records, and this helped me fill in the gaps in my process. This session was directly related to activities I am doing or need to do on the farm." Legal Do's & Don'ts "was one of the best. Would also have been good to focus on cash rent contracts, but these items were well integrated into the presentation. Not sure how he used random points to pull together such a wide range of details down to the farm level activity. Great presentation!" Legal Do's & Don'ts "tips on estate planning were very helpful."

With the information from Purdue Extension's Grow Your Farm Operation virtual series, beginning farmers across Indiana increased their knowledge of farm financials, commodity marketing, and legal issues for managing their operations.

Beginning Farmers Create Plans, Analyze Finances, and Connect with Other Farmers

In Indiana, more than 23,000 farmers self-identified as beginning farmers, having less than 10 years of experience producing food, feed, fuel and/or fiber. These farmers were in rural and urban areas, were young or old, and often used myriad production systems.

Numerous people who farm on small acreage lands struggle to make ends meet and often begin farming without spending intentional time understanding the realities of what it means to own (and be successful on) a farm or ranch. Beginning farmers need to better understand their goals and objectives, assets and challenges, and how to move forward, to address uncertainties and lead to better success.

A seven-week virtual Beginning Farmer program was delivered to more than 30 participants. The program covered topics to help aspiring and beginning farmers better define their objectives, understand their assets and challenges – including issues related to land, finances and social capital – access and analyze markets and create action plans. In addition to instruction, participants had the opportunity to connect with a number of supporting agencies and interact directly with farmers to hear about their experiences developing and evolving their farms.

Program evaluation respondents indicated that, based on their participation in the program, they planned to apply the following practices: create a farm plan (29.2%), create a business plan (29.2%), analyze potential markets (20.8%), and analyze farm finances (20.8%). Additionally, 44% indicated that, as a result of attending the program, they developed relationships and connections with farmers, producers, participants and people interested in diversified farming and food systems.

The virtual Beginning Farmer program helped new farmers create a farm plan and business plan, analyze potential markets and farm finances, and developed connections with farmers and producers.



Indiana Families Prepare the Next Generation for the Future of Their Farm Operations



As Indiana farm families face the issue of transferring the farm to the next generation of operators, the need for information and resources has become crucially important for the smooth transition

of the business. For the incumbent generation, it's scary to inherit farmland without any plans for the future.

To help those facing inheriting farmland, Purdue Extension adapted a program from the University of Nebraska Extension – “So You Inherited a Farm, Now What?” – via two online, evening sessions. Presentations addressed land values and trends, types of leases, communication strategies, succession planning, and legal issues (provided by an attorney). Some 84 participants attended live sessions, 25 viewed the first session recording, and 45 viewed the second. By offering this online program, absentee landlords owning property within the state, but who were not located in Indiana, could participate.

Within nine months after the program, five participants reported they had developed a succession plan, two had completed risk assessments of their business, and one had adopted formal written land leases.

Participants (43.8%) revealed that they had made additions or changes to their farming operation or land rental, including these: in process of gifting land to family members, transferring ownership to grandson who works on the farm and cash renting from him as an income source, lease changes, more frequent communication, in process of changing the trustee, and changed some land titles.

Most (83.3%) stated changes they made led to improved financial outcomes for their farming operation or land rental. A quarter (21.4%) estimated financial impact of the program to their farming operation was greater than \$10 per acre.

Purdue Extension’s “So You Inherited a Farm, Now What?” helped Indiana families prepare for the next generation to take on farm operations. As one participant stated, “We had inherited the farm several years before I attended the seminar. The result was that many of the topics discussed were ones we had already addressed or had already researched. The seminar did give me some resources for future reference and did hammer home the importance of communication and family cohesiveness.”

Food Safety

ServSafe Contributes to Certification for Adults in the Restaurant and Food Service Industry



Foodborne illness is a common, costly yet preventable public health problem. CDC estimates that one in six Americans gets sick from contaminated foods or beverages and 3,000 die each year. The

U.S. Department of Agriculture (USDA) estimates that foodborne illnesses cost \$15.6 billion each year. Reducing foodborne illness by 10% would keep 5 million Americans from getting sick each year. Preventing a single fatal case of E. coli infection would save an estimated \$7 million.

Purdue Food Safety and Purdue Extension collaborate with the National Restaurant Association to offer

ServSafe in Spanish and English for food safety management certification and provide education and training materials for staff and volunteers in the restaurant and food service industry. Extension Educators are certified to provide training by completing the exam at a proctored site, two tutorials, and two online exams, to become a certified instructor and exam proctor.

Face-to-face ServSafe training and exam proctoring were put on hold for part of the year during the pandemic. Proctoring exams could continue as needed but were required to follow Purdue Extension safety guidelines. For the year there were proctor-only events, training with exam events, and hybrid events that had training plus proctor-only participants. A total of 25 counties were involved in ServSafe activities. There were 124 sessions (96 proctor only, 28 training and hybrid events) for more than 286 hours of instruction. A total of 405 direct contacts participated in training or proctoring activities.

During the pandemic limitations, there were 54 proctor-only events held for 141 participants. With the return to in-person activities, there were 42 proctor-only events

held for 75 participants, and 28 training and hybrid (training with addition of proctor-only) events held for 189 participants. Of the 264 participants who attended training or took the exam without training, 148 completed the post-survey for a response rate of 56.1%. Three-quarters (74.1%) were training participants. There were 16 counties that incorporated the post-survey with training and proctor-only events. These evaluation-participating counties had 26 unique National Restaurant Association-assigned exam numbers for events.

Post-survey participants reported their race, ethnicity, gender and age. Most were non-Hispanic (79.5%), female (78.4%), 49 years and younger (74.0%), and White (73.2%).

There were 223 ServSafe training and proctor-only participants who passed (minimum score of 75%) the certification exam. Post-survey respondents indicated they learned “a lot” about monitoring time and temperature, and the flow of food: service (holding and serving).

Over half indicated they would adopt these practices at work: assess areas for activities that risk microbial contamination (64.5%), use proper time and temperature controls (60.7%), and take steps to reduce cross-contamination risks (52.3%). Over half (63.3%) indicated they already do the recommended handwashing practices. Nearly half indicated this was their first time to attend training (45.6%), or take the exam (46.9%).

Purdue Extension ServSafe training via Spanish and English and exam proctor-only activities contribute to the knowledge and certification needed for adults working in the restaurant and food service industry.

Purdue Extension Encourages Practices for Safe and Effective Vegetable Production

Specialty crop growers face difficulties with insects, diseases, and weeds. They may have unique growing scenarios with greenhouses, fields, and high tunnels. Crops vary in nutrient requirements, equipment needs, and handling for food safety. Vegetable farming is diverse by nature, and it can be difficult to stay on top of the most recent research and recommendations.

The annual Indiana Horticultural Conference has been an important resource for vegetable growers across the state. With the uncertainty of the pandemic, Purdue Extension Specialists and Educators teamed up to offer a Vegetable Farming webinar series. The series provided 2 hours of instruction every Wednesday for the month of February.

Numerous topics and tips relevant to vegetable growers were presented, providing attendees with the most current research-based information on pest control, soil health and nutrient management, food safety for fresh produce, and production methods. There were 420 registered across all four webinar sessions. The majority of registrants were non-Hispanic (82.3%) and male (52.6%).

A post-survey was completed by 74 survey respondents across all sessions. Most respondents (78.9%) indicated, as a result of the Vegetable Farming webinar series, they learned something they didn't know before. Respondents indicated they plan to adopt recommended food and farm safety/security practices (29.6%) and recommended assessments of critical control points for contamination – chemical, physical, and/or biological (25.4%). Respondents indicated they plan to adopt recommended practices/technologies for horticulture and the environment (43.7%), increased yields (43.7%), increased efficiencies (35.2%), and conservation of resources (35.2%).

About one-fifth of respondents reported they had attended the previous year's in-person conference. Since that event, they had adopted recommended practices for farming, producing crops, and sustainable practices and technologies (69.2%). As a result of those adopted practices, they experienced conservation of resources (53.8%) and increased yields (46.2%).

The Vegetable Farming webinar series was an effective event for delivering information to those interested in safe vegetable production, and for encouraging adoption of recommended practices/technologies for horticulture and the environment. Previous year's attendees adopted practices that had resulted in conservation of resources and increased yields.



Youth, Health, and Communities

Indiana 4-H Programs Lead to Positive Youth Development



4-H began over 100 years ago and has since grown into the largest youth development program in the nation. 4-H prepares young people to be leaders in their community and around the world

through hands-on experiences alongside their peers and caring adults. Backed by a network of more than 6 million youth, 540,000 adult volunteers, 3,500 professionals, and more than 60 million alumni, 4-H delivers research-based programming around positive youth development. 4-H is delivered through America's 109 land-grant universities and the Cooperative Extension Service, reaching every corner of our nation.

In Indiana, 4-H can be found in all 92 counties delivered through Purdue Extension. Community clubs, afterschool programs, school enrichment, camps/workshops, and special interest programs are all ways youth across Indiana can be involved with the 4-H program.

In 105 4-H programs held across 46 Indiana counties, areas, multi-county collaborations, statewide, and virtually, there were 1,784 youth (grades 4-12) who completed Common Measures 2.0 post-surveys. Over half (59.1%) reported they were female. For grade levels, 12th grade had the largest percentage (14.4%), followed by 5th grade (14.0%), and 4th grade (13.5%). The largest number were 11 years old (15.4%), age 10 (13.6%), and age 13 (11.2%). Two-thirds (67.9%) reported their race as White or Caucasian.

Program evaluation efforts focused on core concepts: 4-H experience, universal skills, including personal mindset, social and leadership, animal science, civic engagement, healthy living, science and engineering, and college and career readiness.

Focusing on the 4-H experience, 485 youth in 14 programs reported (4-point scale) that 4-H is a place where they feel safe (3.80), they learn about ways to help their community (3.77), it's okay for them to make mistakes (3.76), and adults care about them (3.76).

For universal skills, 249 youth in 16 programs reported (4-point scale): I am willing to work hard on something

difficult (3.68), I try to learn from my mistakes (3.56), I treat others the way I want to be treated (3.55), and I like to learn new things (3.50).

In animal science, 82 youth in three programs reported (3-point scale) that they learned the right way to store and handle feed (2.49), they practice safe animal handling (2.48), and they learned about housing/shelter for their animal (2.45). Youth reported aspirations toward animal science, showing they would like a career caring for animals (2.35), raising animals (2.33), and training animals (2.14).

Looking at civic engagement, 138 youth in 10 programs reported that they (99.3%) like helping people in their community, they (92.0%) had met community leaders because of 4-H, they (87.7%) had encouraged others to volunteer in the community, they (92.6%) feel a responsibility to help their community, and they (97.1%) were inspired by 4-H to volunteer in their community.

In healthy living, 169 youth in 16 programs reported they (98.4%) learned about healthy food choices at 4-H, they (71.0%) have given their family ideas for healthy meals or snacks, they (83.3%) encourage friends to be active with them, and they (70.0%) talked about ways to be active at 4-H.

With science and engineering, 341 youth in 30 programs (4-point scale) reported learning about robotics (3.22), engineering (3.19), and animal science (3.17). Youth expressed positive attitudes about science, with nearly all (96.8%) reporting that they like science. Most (86.0%) responded that they would like a job that uses science.

Focusing on college and career readiness, 388 youth (grades 8-12) in 16 programs reported (4-point scale) that it is important to be trusted by an employer (3.99), arrive to work on time (3.97), do their job well (3.96), and show respect for others (3.93). Youth reported that 4-H helped them to think about the amount of education they might need in the future (98.7%), identify things they are good at (95.7%), and explore future career options (92.4%).

In current 4-H activity, youth reported spending less than one hour to five or more hours each week on 4-H activities. For past 4-H involvement, youth reported they are in, or have been in, a 4-H Club (67.6%), participated in county-level competitive events (54.7%), and attended 4-H camp or another overnight 4-H experience (42.1%). Just 21.4% of youth reported that this was their first 4-H event. Looking ahead to future 4-H participation, youth were interested in activities with animals, will not participate/am not active in 4-H, becoming a teacher,

leader, counselor, or volunteer, advancing grade levels for participation, attending meetings/having in-person meetings, and projects/fair activities.

Indiana 4-H contributed to positive youth development, to growth in personal and social skills, to gains in knowledge and skills, and to positive attitudes through civic engagement, healthy living, animal science, science and engineering, and college and career readiness programs.

Purdue Extension Connecting Indiana Communities Through Local Coalitions and Partners to Positively Impact Health



In 2020, America's Health Rankings had Indiana listed 36th in overall health outcomes. Of particular concern were drug use, mental health, tobacco use, infant mortality, obesity, diabetes,

and physical inactivity.

To address health concerns in Indiana communities, Purdue Extension and partnering organizations have come together to form local community coalitions to address health needs. Purdue Extension found coalition success with staff working across program areas to bring the variety of strengths to the community. Purdue Extension reported coalition involvement in 76 of 92 counties, an increase of 43.4% from the previous year, and activities were reported for 170 coalitions, an increase of 59.3%. Top areas of focus for coalitions were substance use, wellness, tobacco, local foods, wellness and chronic disease prevention, systems of care, and mental health.

Of 76 participating counties, the status of coalition activities included actively conducting interventions (40%), involvement in health interventions to improve health knowledge and outcomes with evaluations in place (26.5%), and activity in the county with key partners with health goals in place but not yet conducting interventions (17.6%). Coalition activities are captured on [this map of Indiana counties](#).

Pandemic conditions impacted local coalitions in different ways: 97 coalitions changed their approach, pausing activities or going virtual (some virtual meetings allowed more people and groups to be involved), 30 coalitions changed their focus to urgent community

needs, such as hunger, by taking on activities to elevate food distribution, or to trauma and mental health issues.

Coalition activities included trainings/workshops, health fairs, town halls, and events for food distribution and school backpacks. Some communities supported syringe exchanges or provided naloxone training, and others conducted health equity discussions. Some coalitions formed partnerships to provide educational programs to inmates, and others to increase awareness of substance use and mental health.

Purdue Extension successfully leveraged national and state programs fostering interdisciplinary work and partnerships. One example was Well Connected Communities, a 10-year nationwide effort to cultivate wellness led by the National Cooperative Extension System in partnership with the National 4-H Council and supported by the Robert Wood Johnson Foundation. Indiana was one of 13 pilot states for Wave One (2017-19). Wave Two (2019-2021) now focuses on three Indiana counties: Fayette, Greene, and Scott. Key initiatives included development of, or strengthening, community-led coalitions or health councils, engaging youth as equal partners in coalitions, addressing issues of health equity, and establishing youth and adult health/wellness volunteers.

Purdue Extension involvement enhanced the work of local coalitions by building new or improved networks or relationships, increasing awareness of the community for an issue, increasing member knowledge and skills, bringing new and diverse faces to the coalition, and facilitating the group to work together toward a common goal. With county Extension office involvement in local coalitions, the effectiveness of Purdue Extension was improved in these ways: enhancing the role of Extension in the community, helping broaden networks of community partners and increasing new partners for programs, awareness of health issues in the community, and access to new audience groups. Due to Purdue Extension involvement in coalitions, 413 new networks, partnerships or collaborations were created, averaging 2.7 per coalition.

Purdue Extension reported 2,959 active groups or agencies (community, health systems, education, social services, government, and business) across the coalitions. Some 559 groups were new to the coalitions, and 286 were introduced to the coalitions by Purdue Extension. Focusing on grants, funding, and donations, over \$5,021,000 was obtained for 47 coalitions, ranging from \$50 to \$1 million.

There were 58 coalitions involved with policy, systems and environmental work. For 30 health policies enacted, examples were changes in smoke-free policies, implementing Mobile Integrated Response Teams,

allowing distribution of food to community sectors not being served, updating school wellness policies to include comprehensive tobacco policies, and improving worksite wellness. Some 88 health-related systems were developed, including distributing mental health provider lists and the suicide prevention hotline to all schools, developing food pantries systems to protect volunteers and clients to remain open during the pandemic, mapping Recovery Oriented System of Care (for substance abuse and mental health services), and creating scholarships and sponsorships for health and positive image programs for girls. There were 67 environmental strategies achieved, including installing bike racks, increasing tobacco free sites, a walking challenge measuring minutes not steps, installing security cameras at two local parks for safety, creating a new Story Trail (combining walking, literacy, and time in nature), developing a Seed to Store Initiative linking local growers directly with grocery stores, and promoting local trails.

Purdue Extension played a major role in connecting communities through local coalitions and partnerships that positively impact and support the health of all throughout Indiana.

American Citizen Planner – Indiana: Community Leaders Earn Certification for Public Planning



Indiana plan commissions, city and town councils, boards of zoning appeals, and county commissions make land-use planning decisions that impact their communities. These decision-makers need

to have a grasp of federal, state, and local regulations, community values, land use decision-making, and economic, social, and environmental considerations. Indiana provides authority to city and county governments to pursue self-determined goals through comprehensive planning and locally developed land use regulations; therefore, it is up to local jurisdictions to develop plans, implement public engagement processes, and make decisions that achieve community goals. Indiana has a unique state statute that requires Purdue Extension Agriculture and Natural Resource Educators to serve on most county plan commissions. Those serving their communities as decision-makers on a planning-related board or commission come from a wide variety of backgrounds, as do those who are interested in becoming more involved in local planning issues.

Both need education to grasp the foundational aspects of local planning and the nature of serving as a public official to better understand the important role they play in planning and land-use decisions.

In partnership with the Extension Foundation, Michigan State University, and the Purdue Land Use Team, Purdue Extension adapted the American Citizen Planner curriculum for Indiana audiences. The program goal is to prepare citizens to serve their communities by building understanding of planning processes, land-use regulations, zoning, decision-making with the public, and incorporating public input. There are two online courses covering fundamentals of comprehensive planning, public engagement, and land use regulation. Content addresses ethics for public planning officials, moving from issue to future land use policy, and enhancing equity in planning. Participants build knowledge of theories, tools and legal aspects related to planning and working with the public and, thus equipped, help shape plans that guide the future of their communities. Participants learn the role and duties of the plan commissioner and current and emerging issues in planning. Participants complete the first online course, then they attend a workshop (in-person or via webinar) led by ANR Educators. Next, they complete the second online course, and attend a second workshop. These workshops expand on course content and cover an additional, locally relevant topic selected by the host ANR Educator with input from their local plan commission. A guest speaker is invited to present on the topic. Past presentations have included renewable energy, invasive species management/natural resource planning, public health and planning, and public participation strategies for planning. To advance equity in planning practice as a response to the historic racial justice events of 2020 and the lack of training available to public planning officials in Indiana, Educators delivered the enhancing equity in planning content during workshops. A total of 35 workshops were delivered from 14 Indiana host counties for 67 hours of instruction. Upon completion, participants may take the comprehensive online exam, and those obtaining at least a 70% earn a Master Citizen Planner Certificate.

Since 2020, there were a total of 124 program participants who indicated they were citizen planners serving, or planning to serve, on area or advisory plan commissions, interested residents, elected officials, and municipal, county, or nonprofit staff. There were 32 who responded on the post-survey (25.8% response rate). They were white (100%), non-Hispanic (100%), female (55.2%), ranging in age from 27 to 72. They had master's degrees (50.0%), and annual incomes between \$100,00 and \$149,999. About one-third were plan commission members (34.4%), local planning staff (28.1%) and Purdue Extension staff (28.1%). Over half (56.3%) were associated with county government units.

Three-quarters (73.1%) completed all course requirements and passed the exam and earned the Master Citizen Planner Certificate. For knowledge levels before and after the program, participant average scores increased the most for access to continuing education resources for land use planning, and legal, regulatory, and constitutional powers related to land use planning and zoning.

With average scores 3.9 (5-point scale), participants indicated that as a result of the program their confidence increased the most for their ability to: 1) apply concepts of public land use and development in your community, and 2) communicate about plan commission activities with residents. Participants indicated with an average 4.2 (5-point scale) that they are likely to “use information from this program for future community planning efforts.”

Participants indicated how and when they will apply what they learned. Most common themes on how they will apply what they learned were improving work with and understanding of the comprehensive plan, improved abilities in my role as a commission/committee member,

and better engagement with others/community. Three-quarters (76.7%) indicated they would apply what they learned immediately. Participants indicated their most significant takeaways from the program was the importance of the comprehensive plan, openness and communication, and greater understanding of how all the parts relate and interact. Most (86.2%) participants would recommend the program to others and indicated that it was very informative, valuable and provided good and comprehensive content. In a one-year follow-up with participants, 10 respondents (15.9% response rate) indicated that in the year since completing the program they had used the data or resources provided in their decision-making, knowledge gained to develop or modify a plan, policy, or ordinance, and knowledge gained to improve resident and partnership engagement in the planning process.

The American Citizen Planner – Indiana prepares individuals with knowledge and resources to make decisions, work with policies, and improve engagement in local planning for Indiana communities.



Collaborators

Climate, Sustainable Energy, and the Environment

Building Climate Expertise in Extension

Hans Schmitz, Lead Conservation Cropping Systems Agronomist, Purdue Extension & Conservation Cropping Systems Initiative

Linda Prokopy, Department Head, Horticulture & Landscape Architecture, Professor, Forestry & Natural Resources and Horticulture & Landscape Architecture, Co-Director, Natural Resources and Environmental Science

Melissa Widhalm, Operations Manager, Purdue Climate Change Research Center

North Central Region Partners

Aaron Wilson, Ohio State University Extension State Climatologist

Ashley Mueller, former University of Nebraska Lincoln Extension Educator

Dennis Todey, USDA, Midwest Climate Hub

Julie Doll, former Michigan State University Extension Specialist

Katharine Gehl, North Central Climate Collaborative (NC3) Program Manager, Kansas State University

Laura Edwards, South Dakota State Climatologist

Melissa Bartels, University of Nebraska Lincoln Extension Educator

Miranda Meehan, North Dakota State University Extension Livestock Specialist

Monica Jean, Michigan State University Extension, Field Crops Educator

Peter Tomlinson, Kansas State University Grazing Specialist

Tonya Haigh, University of Nebraska Lincoln, National Drought Mitigation Center, Rural Sociology Research Specialist

Trent Ford, Illinois State Climatologist

Tyler Williams, former University of Nebraska Lincoln Extension Educator

Turfgrass Practitioners Earn Continuing Certification Hours for Climate-Durable Integrated Pest Management (IPM)

Douglas S. Richmond, Professor, Entomology

Indiana Professionals, Government Officials, Citizen Planners, and Residents Apply Land Use and Renewable Energy Information and Tools for Community Planning

Kara Salazar, Assistant Program Leader and Extension Specialist for Sustainable Communities

Tamara Ogle, Regional Community Development Educator

Amanda Mosiman, Agriculture & Natural Resources Educator, Warrick County

Daniel Scott Gabbard, County Extension Director, Agriculture & Natural Resources Educator, Shelby County

Daniel Walker, Senior Community Planning Extension Specialist, Forestry & Natural Resources

Jeffery Pell, Agriculture & Natural Resources and Community Development Educator, Hendricks County

Melissa Widhalm, Operations Manager, Purdue Climate Change Research Center

Conservation of Natural Resources

Purdue Extension Shared 17-Year Cicada Outbreak Information and Resources with Thousands Across Indiana

Elizabeth Barnes, Exotic Forest Pest Specialist, Entomology

Cliff Sadof, Professor, Entomology



Amy Thompson, County Extension Director, Agriculture & Natural Resources Educator, Monroe County
Ashley Adair, Extension Organic Agriculture Specialist, Horticulture & Landscape Architecture
Elizabeth Jackson, Walnut Council/IFWOA/HTIRC Engagement Lead, Forestry & Natural Resources
Elizabeth Long, Assistant Professor, Entomology
Gwen Pearson, Outreach Coordinator, Entomology
Jarred Brooke, Extension Wildlife Specialist, Forestry & Natural Resources
John Orick, Purdue Master Gardener State Coordinator, Horticulture & Landscape Architecture
Kenneth Eck, Agriculture & Natural Resources Educator, Dubois County
Kyle Daniel, Nursery & Landscape Outreach Specialist, Horticulture & Landscape Architecture
Laura Ingwell, Assistant Professor, Entomology
Lenny Farlee, Sustaining Hardwood Extension Specialist, Forestry & Natural Resources
Matthew Ginzl, Professor, Entomology and Forestry & Natural Resources/Director HTIRC
Phillip Cox, Agriculture & Natural Resources Educator, Vermillion County
Timothy Gibb, Clinical Professor, Entomology
Valerie Clingerman, County Extension Director, Agriculture & Natural Resources Educator, Knox County

Landowners Learn about Prescribed Fire for Grassland Conservation

Jarred Brooke, Extension Wildlife Specialist, Forestry & Natural Resources
Phillip Cox, Agriculture & Natural Resources Educator, Vermillion County
Tabatha Flinn, Agriculture & Natural Resources Educator, Vigo County

Purdue Extension Helps Indiana State Parks Teach Families to Improve Water Quality to Protect Wildlife

Nicholas Burgmeier, Project Coordinator/Research Biologist & Extension Wildlife Specialist, Forestry & Natural Resources
Rod Williams, Assistant Vice Provost for Engagement, Forestry & Natural Resources
Veronica Yager, Extension Associate and Research Technician, Forestry & Natural Resources

Indiana Conservation Partnership Employees Learn Tree and Shrub Identification for Sharing with their Clients

Lenny Farlee, Sustaining Hardwood Extension Specialist, Forestry & Natural Resources

Improving Conservation Tree Planting with Increased Knowledge and Connection to Professional Foresters

Lenny Farlee, Sustaining Hardwood Extension Specialist, Forestry & Natural Resources
Steve Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County

Train-the-Trainer Activities for Conservation Professionals Help Indiana Farmers Improve Agricultural Sustainability

Joseph Rorick, Soil Health Statewide Coordinator, Agronomist, Agronomy
Anna Morrow, Midwest Cover Crops Council Senior Program Manager, Agronomy
Corey Gerber, Clinical Associate Professor, Agronomy
Daniel Quinn, Assistant Professor, Corn Production, Agronomy
Eileen Kladviko, Professor, Agronomy
John Obermeyer, Integrated Pest Management Specialist, Entomology

John Scott, Senior Digital Agriculture Extension Coordinator, Agriculture Administration

Lexie Wilson, Graduate Program Administration Specialist, International Students & Scholars Liaison, Agronomy

Linda Prokopy, Department Head, Horticulture & Landscape Architecture, Professor, Forestry & Natural Resources and Horticulture & Landscape Architecture, Co-Director, Natural Resources and Environmental Science

Walt Sell, Assistant Program Leader, Agriculture & Natural Resources

Agriculture – Crops and Livestock

Purdue Extension and Agricultural Centers Events are Valued Resources for Indiana Farmers

Adam Shanks, County Extension Director, Agriculture & Natural Resources Educator, Boone County

Amanda Mosiman, Agriculture & Natural Resources Educator, Warrick County

Andrew Westfall, County Extension Director, Agriculture & Natural Resources Educator, White County

Ann Kline, County Extension Director, Agriculture & Natural Resources Educator, Noble County

Annetta Jones, County Extension Director, Health & Human Sciences Educator, Porter County

Azad Chahal, Agriculture & Natural Resources Educator, LaPorte County

Brad Kohlhagen, Agriculture & Natural Resources Educator, Adams County

Brad Sewell, Program Measurement & Evaluation Coordinator, Agriculture Administration

Brian MacGowan, Wildlife Extension Specialist, Forestry & Natural Resources

Bruce Bordelon, Sr. Extension Specialist, Temporary Service, Horticulture & Landscape Architecture

Bryan Overstreet, County Extension Director, Agriculture & Natural Resources Educator, Jasper County

Crystal Van Pelt, former Agriculture & Natural Resources and Community Development Educator, Steuben County

Daniel Quinn, Assistant Professor, Corn Production, Agronomy

Daniel Egel, Assistant Professor, Clinical Engagement Professor, Botany & Plant Pathology

Darcy Telenko, Assistant Professor, Botany & Plant Pathology

Dennis Nowaskie, Superintendent, Southwest Purdue Agricultural Center (SWPAC)

Edward Farris, County Extension Director, Agriculture & Natural Resources Educator, Huntington County

Elizabeth Maynard, Clinical Engagement Associate Professor, Horticulture & Landscape Architecture

Elysia Rodgers, County Extension Director, Agriculture & Natural Resources Educator, DeKalb County

Fred Whitford, Clinical Engagement Professor, Purdue Pesticide Programs, Botany & Plant Pathology

Grant Burcham, Heeke Animal Disease Diagnostic Laboratory, College of Agriculture

Hans Schmitz, Lead Conservation Cropping Systems Agronomist, Purdue Extension & Conservation Cropping Systems Initiative

James Camberato, Professor, Agronomy

James Wolff, County Extension Director, Agriculture & Natural Resources Educator, Allen County

Jason Tower, Superintendent, Southern Indiana Purdue Agricultural Center (SIPAC)

Jeffrey Burbrink, Agriculture & Natural Resources Educator, Elkhart County

Joseph Rorick, Soil Health Statewide Coordinator, Agronomist, Agronomy

John Scott, Senior Digital Agriculture Extension Coordinator, Agriculture Administration

John Woodmansee, Agriculture & Natural Resources Educator, Whitley County

Kathryn Weiss, Agriculture & Natural Resources Educator, Newton County

Keith Johnson, Professor, Agronomy

Kelly Heckaman, Area 11 Director, Agriculture & Natural Resources Educator, Kosciusko County

Kenneth Eck, Agriculture & Natural Resources Educator, Dubois County
Klein Ileleji, Professor, Laboratory of Renewable Resources Engineering, Agriculture & Biological Engineering
Laura Ingwell, Assistant Professor, Entomology
Marcelo Zimmer, Weed Science Program Specialist, Botany & Plant Pathology
Mark Kepler, County Extension Director, Agriculture & Natural Resources Educator, Fulton County
Michael Langemeier, Professor, Agricultural Economics
Nathan Shoaf, Urban Agriculture Coordinator, Agriculture Administration
Nicholas Minton, Beef Systems Specialist, Animal Sciences
Nicole Witkowski, Agriculture & Natural Resources Educator, Porter County
Petrus Langenhoven, Horticulture/Hydroponic Crop Specialist, Horticulture & Landscape Architecture
Phil Woolery, Interim County Extension Director, Marshall & Starke counties, Agriculture & Natural Resources Educator, Pulaski County
Rachel Rawls, former County Extension Director, Agriculture & Natural Resources Educator, St. Joseph County
Robert Kelly, County Extension Director, Agriculture & Natural Resources and 4-H Youth Development Educator, Elkhart County
Robert Yoder, Agriculture & Natural Resources Educator, Marshall County
Scott Monroe, Regional Agriculture & Natural Resources and Food Safety Educator
Shaun Casteel, Associate Professor, Agronomy
Stephen Boyer, Superintendent, Northeast Purdue Agricultural Center (NEPAC)
Stephen Meyers, Assistant Professor, Horticulture & Landscape Architecture
Steve Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County
Tamara Benjamin, Assistant Program Leader & Diversified Agriculture Specialist, Agriculture Administration
Valerie Clingerman, County Extension Director, Agriculture & Natural Resources Educator, Knox County
Wenjing Guan, Clinical/Engagement Associate Professor, Horticulture & Landscape Architecture
William Horan, County Extension Director, Agriculture & Natural Resources and Community Development Educator, Wells County
William Johnson, Professor, Botany & Plant Pathology

Butcher Basics Participants Learned Meat Processing During Pandemic-Induced Supply Crisis

Stacy Zuelly, Assistant Professor, Animal Sciences
Amanda Mosiman, Agriculture & Natural Resources Educator, Warrick County
Blaine Brown, Meat Lab Manager, Animal Sciences
Cora Carter, County Extension Director, Agriculture & Natural Resources and Community Development Educator, Bartholomew County
Elysia Rodgers, County Extension Director, Agriculture & Natural Resources Educator, DeKalb County
Mark Kepler, County Extension Director, Agriculture & Natural Resources Educator, Fulton County
Miranda Edge, former County Extension Director, Agriculture & Natural Resources Educator, Harrison County
Sadie Davis, former County Extension Director, Agriculture & Natural Resources Educator, Greene County
Steve Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County

Agriculture – Urban, Small-Scale, and Beginning Farmers

Indiana Small Farm Conference Impacts Knowledge, Networking, and Adoption of Practices

Tamara Benjamin, Assistant Program Leader & Diversified Agriculture Specialist, Agriculture Administration
Alexandria Pettigrew, former Agriculture & Natural Resources, Urban Agriculture Educator, Marion County
Amy Thompson, County Extension Director, Agriculture & Natural Resources Educator, Monroe County
Andrew Westfall, County Extension Director, Agriculture & Natural Resources Educator, White County
Ashley Adair, Extension Organic Agriculture Specialist, Horticulture & Landscape Architecture
Azad Chahal, Agriculture & Natural Resources Educator, LaPorte County
Brad Sewell, Program Measurement and Evaluation Coordinator, Agriculture Administration
Brooke Alford, Agriculture & Natural Resources Educator, Marion County
Christopher Adair, Student Farm Manager, Horticulture & Landscape Architecture
Elysia Rodgers, County Extension Director, Agriculture & Natural Resources Educator, DeKalb County
James Wolff, County Extension Director, Agriculture & Natural Resources Educator, Allen County
Jeffery Pell, Agriculture & Natural Resources and Community Development Educator, Hendricks County
John Hawley, former Agriculture & Natural Resources and Community Development Educator, Dearborn County
Joseph Rorick, Soil Health Statewide Coordinator, Agronomist, Agronomy
Julie Huetteman, Strategic Initiatives Coordinator, Agriculture Administration
Karen Mitchell, Consumer Horticulture Extension Specialist, Horticulture & Landscape Architecture
Lais McCartney, Agriculture & Natural Resources Educator, Hancock County
Laura Ingwell, Assistant Professor, Entomology
Lori Hoagland, Professor, Horticulture & Landscape Architecture
Lupe Valtierra, Community Development Educator, Lake County
Maria Marshall, Professor, Agricultural Economics
Marion Welsh, former Administrative Assistant, Agriculture & Natural Resources
Mathias Ingle, Agriculture & Natural Resources Associate Educator, Howard County
Michael Langemeier, Professor, Agricultural Economics
Nathan Shoaf, Urban Agriculture Coordinator, Agriculture Administration
Mark Kepler, County Extension Director, Agriculture & Natural Resources Educator, Fulton County
Petrus Langenhoven, Horticulture/Hydroponic Crop Specialist, Horticulture & Landscape Architecture
Phillip Cox, Agriculture & Natural Resources Educator, Vermillion County
Rebecca Koetz, Agriculture & Natural Resources and Home Horticulture Educator, Lake County
Renee Wiatt, Family Business Management Specialist, Agricultural Economics
Sarah Hanson, Agriculture & Natural Resources Educator, Johnson County
Steve Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County

Beginning Farmers Learn to Grow Their Operations

Kelly Heckaman, Area 11 Director, Agriculture & Natural Resources Educator, Kosciusko County
Adam Shanks, County Extension Director, Agriculture & Natural Resources Educator, Boone County
Andrew Westfall, County Extension Director, Agriculture & Natural Resources Educator, White County
Ann Kline, County Extension Director, Agriculture & Natural Resources Educator, Noble County
Austin Pearson, Service and Outreach Climatologist, Agronomy



Christian Krupke, Professor, Entomology

Darcy Telenko, Assistant Professor, Botany & Plant Pathology

Fred Whitford, Clinical Engagement Professor, Purdue Pesticide Programs, Botany & Plant Pathology

Jason Ackerson, former Assistant Professor, Soil Science, Agronomy

Jason Henderson, College of Agriculture Senior Associate Dean and Director of Extension

Jenna Nees, Agriculture & Natural Resources Educator, Putnam County

John Woodmansee, Agriculture & Natural Resources Educator, Whitley County

Kenneth Eck, Agriculture & Natural Resources Educator, Dubois County

Kyle Weaver, County Extension Director, Agriculture & Natural Resources and 4-H Youth Development Educator, Switzerland County

Lais McCartney, Agriculture & Natural Resources Educator, Hancock County

Maria Marshall, Professor, Agricultural Economics

Mathias Ingle, Agriculture & Natural Resources Associate Educator, Howard County

Phil Woolery, Interim County Extension Director, Marshall & Starke counties, Agriculture & Natural Resources Educator, Pulaski County

Renee Wiatt, Family Business Management Specialist, Agricultural Economics

Robert Kelly, County Extension Director, Agriculture & Natural Resources and 4-H Youth Development Educator, Elkhart County

Robert Nielsen, Professor, Agronomy

Robert Yoder, Agriculture & Natural Resources Educator, Marshall County

Shannon Chipman, County Extension Director, 4-H Youth Development and Health & Human Sciences Educator, Ohio County

Shaun Casteel, Associate Professor, Agronomy

Steve Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County

William Johnson, Professor, Botany & Plant Pathology

Beginning Farmers Create Plans, Analyze Finances, and Connect with Other Farmers

Amy Thompson, County Extension Director, Agriculture & Natural Resources Educator, Monroe County

Amanda Baird, former Agriculture & Natural Resources Educator, Tipton County

Ashley Adair, Extension Organic Agriculture Specialist, Horticulture & Landscape Architecture

Beth Vansickle, Agriculture & Natural Resources Educator, Madison County

Brooke Alford, Agriculture & Natural Resources Educator, Marion County

Jeffery Hermes, Agriculture & Natural Resources and Community Development Educator, Dearborn County

John Hawley, former Agriculture & Natural Resources and Community Development Educator, Dearborn County

John Woodmansee, Agriculture & Natural Resources Educator, Whitley County

Jonathan Ferris, County Extension Director, Agriculture & Natural Resources Educator, Wayne County

Karen Mitchell, Consumer Horticulture Extension Specialist, Horticulture & Landscape Architecture

Laurynn Thieme, County Extension Director, Agriculture & Natural Resources Associate Educator, Delaware County

Mathias Ingle, Agriculture & Natural Resources Associate Educator, Howard County

Michele Jones, Agriculture & Natural Resources Educator, Morgan County

Richard Beckort, Agriculture & Natural Resources Educator, Jackson County



Sara Dzimianski, Agriculture & Natural Resources Educator, Perry County

Sarah Hanson, Agriculture & Natural Resources Educator, Johnson County

Tamara Benjamin, Assistant Program Leader & Diversified Agriculture Specialist, Agriculture Administration

Indiana Families Prepare the Next Generation for the Future of their Farm Operations

Jenna Nees, Agriculture & Natural Resources Educator, Putnam County

Abigail Heidenreich, County Extension Director, 4-H Youth Development Educator, Orange County

Adam Shanks, County Extension Director, Agriculture & Natural Resources Educator, Boone County

William Horan, County Extension Director, Agriculture & Natural Resources and Community Development Educator, Wells County

Robert Yoder, Agriculture & Natural Resources Educator, Marshall County

Curt Emanuel, former County Extension Director, Agriculture & Natural Resources Educator, Boone County

Edward Farris, County Extension Director, Agriculture & Natural Resources Educator, Huntington County

Kathryn Weiss, Agriculture & Natural Resources Educator, Newton County

Kelly Heckaman, Area 11 Director, Agriculture & Natural Resources Educator, Kosciusko County

Kyle Weaver, County Extension Director, Agriculture & Natural Resources and 4-H Youth Development Educator, Switzerland County

Mark Carter, Agriculture & Natural Resources, Precision Ag, Educator, Blackford County

Nicholas Held, County Extension Director, Agriculture & Natural Resources and Community Development Educator, Spencer County

Paul Marcellino, former Assistant Program Leader, Agriculture & Natural Resources

Michael Langemeier, Professor, Agricultural Economics

Food Safety

ServSafe Contributes to Certification for Adults in the Restaurant and Food Service Industry

Amanda Deering, Associate Professor, Food Science

Tari Gary, Extension Administrator, Food Science

Rhonda Taylor, former Food Science Extension Outreach Specialist and Research Associate, Food Science

Abigail Sampson, Health & Human Sciences Educator, Putnam County

Abigail Creigh, Health & Human Sciences Educator, Noble County

Amanda Bullion, Health & Human Sciences Educator, Jay County

Amber Broughton, former Health & Human Sciences Educator, Marion County

Andrew Hays, County Extension Director, Health & Human Sciences Educator, Gibson County

Annette Lawler, former Community Development and Health & Human Sciences Educator, Harrison County

Atina Rozhon, Area 1 Director, County Extension Director, Health & Human Sciences Educator, Jennings County

Christopher Fogle, Interim County Extension Director, Health & Human Sciences Educator, Decatur County

Denise Schroeder, Area 9 Director, Health & Human Sciences Educator, White County

Esmeralda Cruz, Health & Human Sciences Educator, Clinton County

Jacklyn Franks, former County Extension Director, Health & Human Sciences Educator, Kosciusko County

Janet Steffens, County Extension Director, Health & Human Sciences Educator, Floyd County

Jennifer Stefancik, Health & Human Sciences Educator, Daviess County

Jo Gilreath, Health & Human Sciences Educator, Warrick County



Karen Richey, Health & Human Sciences Educator, Marshall County
Kidane Sarko, Health & Human Sciences Educator, Allen County
Linda Curley, Health & Human Sciences Educator, Lake County
Luis Santiago, County Extension Director, Community Development Educator, Daviess County
Marilyn Sink, former County Extension Director, Health & Human Sciences Educator, Scott County
Mindy Mayes, Health & Human Sciences Educator, Wabash County
Molly Hoag, Health & Human Sciences Educator, Wells County
Monica Nagele, County Extension Director, Health & Human Sciences Educator, Montgomery County
Olivia Western, former Health & Human Sciences Educator, St. Joseph County
Rachel Dillhoff, Health & Human Sciences Educator, Adams County
Sarah Richer, former Health & Human Sciences Educator, Lawrence County
Shannon Chipman, County Extension Director, 4-H Youth Development and Health & Human Sciences
Sonya Mitchell, Health & Human Sciences Educator, Washington County
Tonya Short, Health & Human Sciences Educator, Knox County

Purdue Extension Encourages Practices for Safe and Effective Vegetable Production

Petrus Langenhoven, Horticulture/Hydroponic Crop Specialist, Horticulture & Landscape Architecture
Amanda Deering, Associate Professor, Food Science
Ann Kline, County Extension Director, Agriculture & Natural Resources Educator, Noble County
Ariana Torres Bravo, Associate Professor, Agricultural Economics and Horticulture & Landscape Architecture
Brad Kohlhagen, Agriculture & Natural Resources Educator, Adams County
Brad Sewell, Program Measurement and Evaluation Coordinator, Purdue Extension
Daniel Egel, Assistant Professor, Clinical Engagement Professor, Botany & Plant Pathology
Elizabeth Long, Assistant Professor, Entomology
Elizabeth Maynard, Clinical Engagement Associate Professor, Horticulture & Landscape Architecture
Hans Schmitz, Lead Conservation Cropping Systems Agronomist, Purdue Extension & Conservation Cropping Systems Initiative
Jeff Burbrink, Agriculture & Natural Resources Educator, Elkhart County
Joseph Rorick, Soil Health Statewide Coordinator, Agronomist, Agronomy
Lais McCartney, Agriculture & Natural Resources Educator, Hancock County
Laura Ingwell, Assistant Professor, Entomology
Lori Jolly-Brown, Extension Events & Communication Coordinator, Horticulture & Landscape Architecture
Phil Woolery, Interim County Extension Director, Marshall & Starke counties, Agriculture & Natural Resources Educator, Pulaski County
Rachel Rawls, former County Extension Director, Agriculture & Natural Resources Educator, St. Joseph County
Rebecca Koetz, Agriculture & Natural Resources and Home Horticulture Educator, Lake County
Robert Yoder, Agriculture & Natural Resources Educator, Marshall County
Sara Hanson, Agriculture & Natural Resources Educator, Johnson County
Scott Monroe, Regional Agriculture & Natural Resources and Food Safety Educator
Stephen Meyers, Assistant Professor, Horticulture & Landscape Architecture



Steven Engleking, County Extension Director, Agriculture & Natural Resources Educator, LaGrange County
Wenjing Guan, Clinical/Engagement Associate Professor, Horticulture & Landscape Architecture

Youth, Health, and Communities

Indiana 4-H Programs Lead to Positive Youth Development

Abby Morgan, 4-H Youth Development Educator, Montgomery County
Alicia Criswell, 4-H Youth Development Educator, Wayne County
Allison Finzel, Nutrition Education Program, Community Wellness Coordinator, Vigo, Vermillion, Sullivan, and Knox counties
Allison Keen, 4-H Youth Development Educator, Jay County
Angie Riffle, County Extension Director, 4-H Youth Development Educator, Franklin County
Anna Balas, former 4-H Youth Development Educator, Elkhart County
Becky Holbert, County Extension Director, 4-H Youth Development Educator, Vermillion County
Britt Copeland, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Jefferson County
Brooke Stefancik, 4-H Youth Development and Agriculture & Natural Resources Educator, Sullivan County
Carla Kidwell, County Extension Director, 4-H Youth Development Educator, Warrick County
Carly Holland, County Extension Director, 4-H Youth Development Educator, Rush County
Cathy Boerste, 4-H Youth Development Educator, Perry County
Danielle Sands, 4-H Youth Development Extension Specialist
Dustin Homan, former 4-H Youth Development Educator, Marion County
Elisabeth Eaton, 4-H Youth Development Educator, Bartholomew County
Heather Dougherty, 4-H Youth Development Educator, Johnson County
Heather VonDielingen, County Extension Director, 4-H Youth Development Educator, Jackson County
Jennifer Logue, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Union County
Jill Andrew-Richards, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Ohio County
JP Pietrowski, 4-H Youth Development Educator, Huntington County
Julie Wilson, County Extension Director, 4-H Youth Development Educator, Randolph County
Kathleen Bohde, 4-H Youth Development Educator, Hamilton County
Kati Sweet, 4-H Youth Development Educator, Hendricks County
Katie Finney, 4-H Youth Development Educator, Brown County
Katie Whiteford, County Extension Director, 4-H Youth Development Educator, Clark County
Kelsey Meyers, County Extension Director, 4-H Youth Development and Health & Human Sciences Educator, Henry County
Kelsey Younce, former 4-H Youth Development Educator, Allen County
Kris Goff, 4-H Youth Development Educator, Grant County
Kyle Weaver, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Switzerland County
Lesley Lodmell, County Extension Director, 4-H Youth Development Educator, Lawrence County
Lisa Wilson, Area 3 Director, County Extension Director, 4-H Youth Development Educator, Dubois County



Liz Beiersdorfer, County Extension Director, 4-H Youth Development Educator, Dearborn County
Lynn Korniak, County Extension Director, 4-H Youth Development Educator, Cass County
Mark Evans, County Extension Director, 4-H Youth Development Educator, Putnam County
Megan Hoffherr, 4-H Youth Development Educator, Vanderburgh County
Megan McNeely, County Extension Director, 4-H Youth Development Educator, Scott County
Melessa Wiesehan, former 4-H Youth Development Educator, Jennings County
Molly Marshall, 4-H Youth Development Educator, Jackson County
Monica Nagele, County Extension Director, Health & Human Sciences Educator, Montgomery County
Rachael Smith, 4-H Youth Development Educator, Marion County
Rena Sheldon, County Extension Director, 4-H Youth Development Educator, Morgan County
Robby Kelly, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Elkhart County
Sam Williams, 4-H Youth Development Educator, Pulaski County
Samm Johnson, former 4-H Youth Development Educator, Allen County
Sara Dunlap, former 4-H Youth Development Educator, Decatur County
Sara Haag, 4-H Youth Development Educator, Vigo County
Sara Richer, former Health & Human Sciences Educator, Lawrence County
Shannon Chipman, County Extension Director, 4-H Youth Development and Health & Human Sciences Educator, Ohio County
Tami Mosier, County Extension Director, 4-H Youth Development Educator, Steuben County
Tony Carrell, 4-H Youth Development Specialist

Purdue Extension Connecting Indiana Communities Through Local Coalitions and Partners to Positively Impact Health

Donna Vandergraff, Extension Specialist, Department of Nutrition Science, College of Health and Human Sciences
Tanya Hall, Regional Community Development Educator
Abbi Sampson, Health & Human Sciences Educator, Putnam County
Abigail Creigh, Health & Human Sciences Educator, Noble County
Allison Hillis, County Extension Director, Health & Human Sciences Educator, Howard County
Amanda Bullion, Health & Human Sciences Educator, Jay County
Amanda Veenhuizen, 4-H Youth Development Educator, Johnson County
Amber Broughton, former Health & Human Sciences Educator, Marion County
Amber Noll, former County Extension Director, Health & Human Sciences Educator, Tippecanoe County
Annetta Jones, County Extension Director, Health & Human Sciences Educator, Porter County
Annette Lawler, former Community Development and Health & Human Sciences Educator, Harrison County
Annie Eakin, Nutrition Education Program, Community Wellness Coordinator, Lawrence, Brown, and Monroe counties
Ashlee Sudbury, Nutrition Education Program, Community Wellness Coordinator, Dubois, Orange, Martin, and Daviess counties
Atina Rozhon, Area 1 Director, County Extension Director, Health & Human Sciences Educator, Jennings County
Beth Switzer, County Extension Director, Health & Human Sciences Educator, Hendricks County
Betsy Coffing, Nutrition Education Program, Community Wellness Coordinator, Tippecanoe, Carroll, Fountain,



and Warren counties

Brittney Schori, Health & Human Sciences Educator, Whitley County

Brooke Goble, 4-H Youth Development and Health & Human Sciences Educator, Pike County

Carmen Fortney, Health & Human Sciences Educator, Jasper County

Caroline Arnett, Nutrition Education Program, Community Wellness Coordinator, LaPorte, Kosciusko, and Noble counties

Caroline Everidge, Health & Human Sciences Educator, Huntington County

Chelsea Brewer, County Extension Director, Health & Human Sciences Educator, Dubois County

Chelsie Jaramillo, Nutrition Education Program, Community Wellness Coordinator, Madison and Henry counties

Cheri Brown, Co-County Extension Director, Community Development Educator, Blackford County

Cheryl Casselman, County Extension Director, 4-H Youth Development and Health & Human Sciences Educator, Sullivan County

Cheryl Jones, former Health & Human Sciences Educator, Hancock County

Claire Rivron, Nutrition Education Program, Community Wellness Coordinator, Shelby, Rush, and Decatur counties

Danielle Scott, Health & Human Sciences Educator, Madison County

Debbie Mix, Nutrition Education Program, Community Wellness Coordinator, Starke, Pulaski, and White counties

Denise Schroeder, Area 9 Director, Health & Human Sciences Educator, White County

Donny Gill, former 4-H Youth Development and Health & Human Sciences Educator, Fountain County

Elisa Worland, Community Development and Health & Human Sciences Educator, Wayne County

Eric Hillis, Nutrition Education Program, Community Wellness Coordinator, Tipton, Howard, and Clinton counties

Erin Slevin, Nutrition Education Program, Community Wellness Coordinator, Johnson and Morgan counties

Esmeralda Cruz, Health & Human Sciences Educator, Clinton County

Gail Wright, Health & Human Sciences Educator, Vigo County

Harriet Armstrong, Health & Human Sciences Educator, Bartholomew County

Heather Caldwell, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Fayette County

Jaclyn Franks, former County Extension Director, Health & Human Sciences Educator, Kosciusko County

Jane Horner, Health & Human Sciences Educator, Cass County

Janet Steffens, County Extension Director, Health & Human Sciences Educator, Floyd County

Jay Christiansen, former Health & Human Sciences Educator, Vigo County

Jennifer Stefancik, Health & Human Sciences Educator, Daviess County

Jessica Koons, 4-H Youth Development and Health & Human Sciences Educator, Jefferson County

Jo Gilreath, Health & Human Sciences Educator, Warrick County

Kanza Zafar, Health & Human Sciences Educator, Greene County

Kara Hammes, County Extension Director, Health & Human Sciences and Agriculture and Natural Resources Educator, Brown County

Karen Richey, Health & Human Sciences Educator, Marshall County

Katelyn Kutemeier, Nutrition Education Program, Community Wellness Coordinator, Washington, Bartholomew, and Jackson counties

Kelsey Meyers, County Extension Director, 4-H Youth Development and Health & Human Sciences Educator, Henry County

Kidane Sarko, Health & Human Sciences Educator, Allen County



Kristen Lowry, County Extension Director, Health & Human Sciences Educator, Posey County
Kyle Weaver, County Extension Director, Agriculture & Natural Resources and 4-H Youth Development Educator, Switzerland County
Linda Curley, Health & Human Sciences Educator, Lake County
Lisa Cangany, former Health & Human Sciences Educator, Boone County
Lori Bouslog, Health & Human Sciences Educator, Vermillion County
Malea Huffman, 4-H Youth Development Educator, Greene County
Marcia Parcell, Health & Human Sciences Educator, Dearborn County
Marilyn Sink, former County Extension Director, Health & Human Sciences Educator, Scott County
Meagan Brothers, County Extension Director, Health & Human Sciences Educator, Vanderburgh County
Megan Jaspersen, County Extension Director, Health & Human Sciences Educator, Perry and Spencer counties
Megan McNeely, County Extension Director, 4-H Youth Development Educator, Scott County
Miles Payne, 4-H Youth Development and Health & Human Sciences Educator, Ripley County
Mindy Mayes, Health & Human Sciences Educator, Wabash County
Molly Hoag, Health & Human Sciences Educator, Wells County
Molly Hunt, Area 7 Director, County Extension Director, Health & Human Sciences Educator, Delaware County
Molly Marshall, 4-H Youth Development Educator, Jackson County
Monica Nagele, County Extension Director, Health & Human Sciences Educator, Montgomery County
Olivia Western, former Health & Human Sciences Educator, St. Joseph County
Rebecca Marvel, Nutrition Education Program, Community Wellness Coordinator, Fayette, Wayne, Union, and Franklin counties
Rhonda Friend, former 4-H Youth Development and Health & Human Sciences Educator, Fayette County
Sarah Richer, former Health & Human Sciences Educator, Lawrence County
Sonya Mitchell, Health & Human Sciences Educator, Washington County
Steve McKinley, 4-H Youth Development Extension Specialist
Susan Peterson, County Extension Director, Health & Human Sciences Educator, Hamilton County
Terri Saltzman, Nutrition Education Program, Community Wellness Coordinator, Lake and Porter counties
Tonya Short, Health & Human Sciences Educator, Knox County
Virginia Aparicio, former Health & Human Sciences Educator, Elkhart County

American Citizen Planner - Indiana: Community Leaders Earn Certification for Public Planning

Daniel Walker, Senior Community Planning Extension Specialist, Forestry & Natural Resources
Adam Tyler, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Fountain County
Amanda Mosiman, Agriculture & Natural Resources Educator, Warrick County
Amy Thompson, County Extension Director, Agriculture & Natural Resources Educator, Monroe County
Annie Cruz-Porter, Community and Regional Development Specialist
Austin Pearson, Service and Outreach Climatologist, Agronomy
Beth Vansickle, Agriculture & Natural Resources Educator, Madison County
Brad Kohlhagen, Agriculture & Natural Resources Educator, Adams County
David Osborne, County Extension Director, 4-H Youth Development and Agriculture & Natural Resources Educator, Ripley County



Gina Anderson, Community Development and Agriculture & Natural Resources Educator, Floyd County
Hans Schmitz, Lead Conservation Cropping Systems Agronomist, Purdue Extension & Conservation Cropping Systems Initiative
Indraneel Kumar, Principal Regional Planner and Interim Assistant Director for Research, Purdue Center for Regional Development
Jeffery Pell, Agriculture & Natural Resources and Community Development Educator, Hendricks County
Kara Salazar, Assistant Program Leader and Extension Specialist for Sustainable Communities
Kurt Lanzone, -H Youth Development and Agriculture & Natural Resources Educator, Parke County
Nikky Witkowski, Agriculture & Natural Resources Educator, Porter County
Phillip Cox, Agriculture & Natural Resources Educator, Vermillion County
Sarah Hanson, Agriculture & Natural Resources Educator, Johnson County
Tamara Ogle, Regional Community Development Educator
Valerie Clingerman, County Extension Director, Agriculture & Natural Resources Educator, Knox County
William Horan, County Extension Director, Agriculture & Natural Resources and Community Development Educator, Wells County