

2026 IHSFC Poster Descriptions

Floral Resources and Predatory Midges Improve Pollination for High Tunnel Strawberries

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High tunnels are a cost-effective season extension tool that allows for year-round crop production in temperate areas. Despite their widespread adoption on farms, the ecology of beneficial insect communities is poorly understood. Here we evaluated how companion plantings of sweet alyssum impacts the production of strawberry, including pollination and pest dynamics. This research examines management regimes that promote beneficial insects and maximized yields for growers accessing early-season produce markets.

Understanding Aquaponics: How Food Safety Concerns and Label Recognition Shape U.S. Consumer Acceptance

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Aquaponics, which integrates hydroponics and aquaculture, has gained attention in small farm and local food systems as a sustainable food production system. Yet consumer awareness remains limited, and concerns about food safety persist.

This study explores U.S. consumers' perceptions of aquaponics grown food, focusing on their understanding and food safety concerns. It further assesses consumers' recognition of existing food certification logos and their attitudes toward a hypothetical aquaponically grown logo.

A nationwide online survey was conducted in

October 2025 in the U.S. using Qualtrics. Participants were U.S. adults, primary grocery shoppers who had purchased fish and/or leafy greens in the past year. Descriptive statistics were computed using RStudio (version 4.5.1) to determine response frequencies and distributions.

Among 2,011 respondents, 70% had never heard of aquaponics. After receiving a definition, 66% expressed food safety concerns, primarily related to bacterial contamination and chemical use. Limited familiarity with aquaponics appeared to contribute to these concerns. Regarding labeling, 58% reported paying attention to certification logos, and 69% considered them moderately to extremely important during grocery shopping. When presented with a hypothetical "aquaponics grown" logo, it was commonly associated with sustainability (61% agree or strongly agree), or safety (57%), and 71% indicated that additional information on the logo's meaning should be provided at the point-of-sale.

This study illustrates major gaps in U.S. consumers' awareness and perceptions of food safety related to the aquaponics food production method and suggests that communication and clear labeling could help build consumers' trust and support aquaponics producers.

Advancing Food Safety and Food Security for Small-scale Growers and Processors: A Behavioral Approach to Capacity Building

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Small-scale growers and processors are key contributors to global food and nutrition security.

Yet many face overlapping challenges including limited infrastructure, unclear regulatory guidance, labor constraints, and lack of access to tailored training. These barriers increase food safety risks and limit economic opportunity. To address these issues, multiple studies were conducted to explore behavioral drivers and barriers to food safety among three target groups: 1) small-scale produce growers, 2) U.S. military veteran farmers and 3) small-scale food processors. This abstract demonstrates the capabilities of human factors in food safety to strengthen training and educational strategies that support engagement, decision-making, and practice adoption among small producers and small processors. These studies utilized the Theory of Planned Behavior (TPB) as a guiding framework and employed a mixed-method approach, incorporating qualitative and quantitative tools including focus groups, interviews, and surveys. Research revealed that while small-scale growers and processors prioritize food safety, they struggle to meet compliance with food safety standards including insufficient training and resources. These findings underscore the need for more accessible and practical food safety training programs and suggest innovative tools, such as virtual reality technology for hands-on learning that can enhance training experience and the implementation of food safety practices. Lessons from these studies can inform global capacity-building and strengthen food systems from farm to table through collaboration. By understanding their motivations, constraints, and preferences, we can design better support systems that enhance both food safety and food security globally.

Low-Cost Portable Handwash Stations for Fruits and Vegetables Growers

Doriane Sossou, Amanda Deering, Tari Gary, & Scott Monroe
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Preharvest and postharvest contamination of produce has been linked to a growing number of

foodborne illness outbreaks, with major sources including contaminated soil and water, animal fecal matter, inadequately treated manure, poor worker hygiene, and insect activity near livestock operations. Pathogens such as *E. coli* O157:H7, *Salmonella*, and *Listeria monocytogenes* can be transferred to produce through workers' hands during harvesting, handling, and packing, most commonly via the fecal oral route. Proper handwashing and hygiene training for workers and visitors are therefore essential practices to prevent contamination, reduce the spread of disease, and protect produce farms. Regular worker training, monitoring, and enforcement of hand hygiene practices are critical to reducing contamination risks. While handwashing infrastructure is often perceived as costly, affordable and effective portable handwashing stations provide practical alternatives to plumbed systems. These low-cost, easily assembled solutions enable farms to meet regulatory requirements, reduce cross-contamination, and improve overall food safety without imposing significant financial burdens.

Third Party Audit Preparation: A Farm Example

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Third-party food safety audits play a critical role in verifying compliance with regulatory requirements and buyer expectations, particularly under Good Agricultural Practices (GAPs) and FSMA standards. This video-series project focuses on preparing a produce farm for a successful Harmonized GAP Plus third-party audit by strengthening on-farm food safety practices and documentation. Activities will include a pre-audit assessment to identify gaps related to worker hygiene, handwashing facilities, water use, soil amendments, harvest practices, and record-keeping. The project will prioritize corrective actions aligned with Harmonized GAP Plus requirements, including updating the farm food safety plan, SOPs, and training records. Targeted

worker training and a mock audit will ensure consistent implementation and audit readiness. This video series preparation will help fruit and vegetables growers reduce contamination risks, support certification, and maintain market access for the farm while reinforcing compliance with FSMA Produce Safety Rule expectations.

The Role of Managed Bumblebees in Commercial Watermelon Fields

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Managed bees are routinely used in seedless watermelon production to provide pollination and secure yields. Honey bees are the most widespread managed pollinator but their foraging capacity is limited under adverse weather conditions (e.g., cold, wind). To supplement pollination, growers also use the common eastern bumble bee, which can forage when the weather is not favorable for honey bees. Thus, growers invest money in this pollinator, but they are concerned about bumble bees not visiting enough watermelon flowers.

To investigate the role of managed bumble bees in watermelon pollination, we used six commercial watermelon fields in southwestern Indiana in summer 2025. All fields were supplemented with honey bees, but three were also stocked with bumble bees, whose hives were deployed at the field edge. We investigated visits by different bees at the field edge and field center. Then, we sprayed fluorescent powder into the bumble bee hives and examined whether flowers had fluorescent powder traces after being visited. We also harvested pollen loads from bumble bees to identify the proportion of watermelon pollen. Finally, we compared yields across fields.

Bumble bees were only relatively frequent near their hives, but did not travel into the field center. Only ~2% of flowers had fluorescent powder traces, whilst ~1% of pollen of the pollen loads belonged to watermelon. Yields were marginally

lower in fields supplied with bumble bees. Collectively, our data suggests that supplying watermelon fields with managed bumble bees does not significantly increase visits to flowers nor improve yield profitability.

Transference of Salmonella Typhimurium to Tomatoes (*Solanum lycopersicum* 'Micro-Tom') using Different Contamination Routes with Poultry Manure Amended Soil

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Introduction: Foodborne illness outbreaks are reported annually, with many associated with the consumption of fresh produce, including tomatoes. Tomatoes are particularly susceptible to contamination from multiple sources, such as irrigation water, soil, wild-animal feces, and the use of manure as a fertilizer. Preharvest interventions are crucial for controlling pathogenic bacteria, prompting research into the effects of agricultural practices that lead to the contamination of fresh produce with foodborne pathogens.

Methods: Two hundred and twenty pots with amended soil (poultry manure: 80, commercial fertilizer: 80, control: 60) were used to grow seeds and seedlings of tomato var. Micro-Tom under greenhouse conditions. Inoculated amended soil was used to assess the transference of *Salmonella Typhimurium* to tomatoes over a 70-day post-inoculation period. Analyses were conducted at eight time points (0, 7, 14, 21, 28, 42, 56, and 70 days post-inoculation) to determine *Salmonella* persistence in soil for up to 70 days. Data were analyzed using one-way ANOVA (0.05).

Results: Poultry manure led to significantly lower bacteria survival in soil compared to commercial fertilizer at multiple time points during analysis. Although *Salmonella Typhimurium* was found in soil throughout the 70-days period, no bacterial presence was detected in tomatoes.

Contamination at different stages of tomato plant growth did not increase the likelihood of Salmonella internalization in the fruit.

Significance: These findings provide insights into controllable agricultural practices that may lead to the reduction of human pathogenic bacteria on fresh produce.

Assessing Biochar for Vegetable Production

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Taylor University

Biochar has been used in agriculture for over 2,000 years, starting with indigenous tribes in the Amazon. It can be created by burning woodchips without oxygen to become charcoal, which is resistant to decomposition. The use of biochar improves poor soil by providing storage for nutrients and habitat for soil microbes, which interact with plant roots to access soil nutrients. Our research assessed the impact of biochar on vegetable yields as well as on the micronutrient content of the harvest. We compared vegetable production by splitting each row of the garden across treatments, where we added the same volume of either biochar or compost to half of our 40ft rows. We also compared micronutrient content of zucchini and cucumber across treatments. Vegetable production was slightly higher on biochar than store bought compost (tomatoes and zucchini) but was lower than the on-site produced compost (cucumbers).

The biochar compost contained more phosphorus, potassium and zinc and the zucchini grown with that biochar contained significantly more of those minerals too. The biochar compost had less sulfur, iron and manganese than the store-bought compost. However, these nutrients still had higher concentration in the produce from the biochar zucchini, suggesting a possible biological benefit from the microbes living in the biochar.

Creating biochar and overwintering it in the worm bin produced a satisfactory input relative to store-bought compost in terms of both production and the nutrient density of those vegetables. Combining it with on-site composted food waste could have even better results.

Landscape and Crop Diversification Consequences for Insect Biodiversity in High Tunnel Systems

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High tunnels (HTs) are a valuable horticultural tool used broadly across the U.S. for extending the season and allowing increased crop production time. These HTs can be located in a variety of landscapes, including urban areas. Sticky cards were used monthly to collect insects for a period of 2 years from 33 HTs in the Indiana, Illinois and New Hampshire regions. These direct-to-consumer commercial farms also vary in crop production and management techniques, which may result in different insect communities. We calculated crop diversity metrics for each farm during the duration of the study, which is compared to the insect diversity metric during the same time period. A PCA of landscape factors surrounding the HTs at 1,5,10,20 km was completed for each site to analyze their effect on insect diversity inside the HT, including ratios of pests:beneficial. Results will be presented.

Quantifying the relationship between HT factors and insect biodiversity, can help to identify the most important factors in improving pest management in HTs.

Engineering Projects in Community Service - Urban Farming

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Purdue University, ¹Purdue Extension

Purdue University's Engineering Projects in Community Service (EPICS) Urban Farming team consists of seventeen undergraduate students with the goal of promoting food security in the Indianapolis area through sustainable urban agriculture. The team has partnered with Jovial Family Farm to design and build three indoor hydroponics systems for a laboratory space on their property, as well as optimize the outdoor growing area. Jovial Family Farm is a nonprofit organization based out of Broad Ripple, Indiana founded by Drs. Bobbie and Brian Jellison. The Farm's mission is to provide senior citizens and their families with meaningful engagement opportunities on an intergenerational scale. By combining food production with community connection, Jovial Family Farm promotes both the physical and mental health of the partner community. The laboratory space allows year-round food production, and each of the hydroponics systems are built with volunteers and community members in mind. When they are not working on a design or testing a prototype, EPICS Urban Farming students get involved by working with senior volunteers and teaching cooking classes using fresh produce. Jovial Family Farm's continued support and involvement in this project have created an environment focused on experimentation, experiential learning, and hands-on engagement that reveals the invaluable experience of service-learning.

Soil Texture and Temperature Impact the Persistence of Entomopathogenic Nematodes in the Absence of Insect Hosts

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Entomopathogenic nematodes (EPNs) are roundworms used for biological control in specialty crop systems for the management of different soil-dwelling insect pests. However, their persistence can vary under field conditions, since environmental factors such as soil texture and temperature play a critical role in the expected outcomes. Using a 3 x 3 x 2 factorial design, we evaluated the influence of EPN species (*Heterhabditis bacteriophora* (Hb), *Steinernema feltiae* (Sf), and an Indiana-mint field endemic strain), soil texture (loamy sand, silty clay and play sand), and temperature (21°C and 25°C) on the persistence of these natural enemies in growth chambers without insect hosts for five months. Plastic snap-cap containers were filled with 90 g of each soil and inoculated with 2,000 infective juveniles of each EPN species, with each treatment replicated three times. Soil moisture was maintained at 75% field capacity and persistence was assessed every 4 weeks by placing incubated soils into plastic deli containers and baiting EPNs using greater wax moth larvae, *Galleria mellonella*, for 7 days.

We found a significant interaction between soil texture and temperature ($F_{4, 36} = 5.65, 0.001$) on EPN persistence, as measured by infection of *G. mellonella* larvae at the end of five months. EPN persistence was highest in clay and loam soils at 21°C, and lowest in play sand at 25°C. These results support findings from previous studies that EPN persistence can vary with soil texture and temperature and should be considered when implementing these enemies into a biocontrol strategy.

Weather Memories & Farm Futures: How Memories of Extreme Weather Events Shape Farm Decisions

Shivika Aggrawal & Aaron Thompson
Purdue University

The poster presents early findings from an ongoing study on how farmers' memories of extreme weather events shape farm decision-making. We ask: "Which particular weather event in the past has changed the most about farming for you or your family?"

We conducted semi-structured interviews with 11 farmers in Indiana and Illinois, across diverse production systems including viticulture, floriculture, and diversified vegetable and livestock operations. We also did farm walks with farmers to see how past events may be expressed in on-farm practices and material changes.

Early results suggest that certain extreme events remain vivid because of their perceived severity and ongoing relevance. For many participants, the 2012 drought is still fresh in memory, and continues to shape how they plan for drought risk and what changes they make to adapt. By contrast, memories of earlier similar events, like the 1986 drought, often came up as a point of comparison. These are useful for sense-making today's conditions but appear less influential for decision-making among those who did not directly experience them. Across interviews and farm walks, the events described as most consequential were often linked to visible changes on the farm (new practices or infrastructure) and to learning shared over time through social and institutional networks. Farmers especially emphasized conferences and workshops as places where ideas spread and changes persist.

We invite feedback from conference attendees on additional questions or themes to explore and invite farmers to share their own farm adaptation story.

Using *Hermetia illucens* to Manage Organic Waste and Build Healthy Soils

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Despite agricultural practices advancing and production of crops becoming more efficient and reliable, several issues in agriculture remain to be addressed. Of these issues, waste management and soil health are pressing and consistent problems that we haven't fully solved. A very promising solution to both issues is the life cycle and digestive process of *Hermetia illucens* or the Black Soldier Fly (BSF). They are a species whose larvae are ravenous detritivores that can be grown on a variety of organic waste. While the larvae themselves can serve as a protein dense animal feed, two nutrient dense soil amendments in the form of frass and exuviae are also produced. This study focused on two aspects of this system; the first was an attempt at quantifying the rates of conversion, and the second involved comparing the frass and exuviae to other, more frequently used, amendments. We found that one gram of BSF eggs needs $5.36\text{kg} \pm 3.24\text{kg}$ of waste to reach maturity and will produce $650.74 \pm 485.38\text{g}$ of soil amendment in the form of frass (insect excrement) as well as $1190.96 \pm 591.62\text{g}$ of BSF pupal cases (or exuviae). The application of these amendments to various vegetable production systems revealed that they can support the same, or in some cases better, growth compared to granular fertilizers.

Describing Insect Assemblages on Overwintering Strawberries in Cold Season High Tunnel Production

Jack Howard, Laura Ingwell, & Robert Grosdidier
Purdue University

High tunnels have become an increasingly popular cultivation method for temperate region farms to extend their growing season and allow for shoulder season crop production. Despite their growing use, little information is available on the assemblages of insects that occur within

high tunnels during winter. Although the low temperatures decrease overall insect activity, certain species still remain active, and high tunnels provide them with favorable conditions for overwintering. Identifying which pest and beneficial insects remain during the cold season is critical for developing effective crop management strategies. Through repeated active insect scouting during the shoulder season, we seek to document and quantify the composition of insect assemblages on overwintering strawberries in high tunnels and to further identify the beneficial and pest insects that are relevant to winter high tunnel production.

BIONIC Carrots: Biochar-Inoculum Used for Optimization of Nutrient Integration in the Cultivation of Carrots

Miné van der Berg & Lori Hoagland
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Soil microbes play essential roles in nutrient cycling, plant growth promotion, and the stabilization of heavy metals in soils. To support these functions in soils, microbial inoculants are increasingly explored as soil amendments to improve plant health. However, introduced microbes often struggle to establish themselves, as they are outcompeted by native soil microbial communities.

Research suggests that co-applying biochar with microbial inoculants can enhance microbial survival in soil and colonization of plant roots. To test this, a study is being conducted at Purdue University's Horticulture Greenhouse to evaluate microbial colonization on plants, the effects of microbial inoculants on native soil microbes, and the nutritional values of the crops. Building on this work, a field trial will be established this year on urban farms across Indiana to assess the performance of microbial inoculants applied alone or in combination with biochar.

Carrots will be grown in amended and control plots, with a commercially available arbuscular

mycorrhizal fungi (AMF) inoculant applied either alone or with biochar. The study will measure inoculant survival, impacts on native microbial communities, and changes in carrot nutrient content and uptake of toxic elements. Findings from this research aim to help Indiana growers determine if combining biochar with microbial inoculants can provide a more reliable method for applying microbial inoculants to soils.

Impacts of Pollenizer Diversity on Floral Availability, Pollen Flow, & Yields in Seedless Watermelon

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Seedless watermelon (*Citrullus lanatus*) is a functionally dioecious crop that requires pollen transfer from a diploid pollenizer plant to a separate triploid recipient plant for fruit production. Current recommendations advise growers to mix a variety of pollenizers to ensure flower production encompasses the entirety of the growing season. Additionally, this practice is believed to compound the attributes of each variety in an effort to increase pollen flow and availability. The ongoing development of pollenizer cultivars must take floral abundance into account as it is considered a key trait for fruit production in addition to efficient vining patterns and unobtrusive fruits. Given that *C. lanatus* is completely dependent on pollinators for proper in-field pollen distribution, these factors have direct influences on crop yields. Modern pollenizer production has led to ample options for growers, with some of the common varieties used in Indiana being SP7, Wingman, Wildcard Plus, and Estrella (a seeded pollenizer). There is limited knowledge regarding the comparison between these modern varieties and the pollinator communities that they attract, or information on the juxtaposed results of planting either a single, notably effective pollenizer or a combined mixture. This study aims to remedy this knowledge gap by co-planting the earlier proposed varieties together, as well as SP7 alone (a pollenizer known for

ample flower production, small fruits, and fast-growing, thin vines). By comparing these planting styles, as well as the attributes and pollinator communities seen in common varieties, recommendations can be given to growers on pollinizer selection and planting methods.

The Current State of Tomato Pinworm (*Keiferia lycopersicella*; Family: Gelechiidae) Biology and Behavior in High Tunnel Tomato

Sydney Territo & Laura Ingwell
Purdue University

Tomato pinworm (TPW) is a type of tiny moth or microlepidopteran native to Central and South America, where they are a common pest found in tomato. As larvae, they burrow into leaves and feed on the tissue within the leaf, creating blotchy mines through their feeding. At the end of their third instar, they emerge from their mines and use webbing to fold leaves over their bodies as they continue to feed until they pupate. Their pupation lasts 2-4 weeks in the soil, after which they emerge as adults to look for mates. These behaviors in low densities cause minimal damage to the plants. However, when populations are left unchecked, they can cause enough damage to reduce the photosynthetic capacity of the plant and potentially reduce yields. Additionally, when the plants have less leaf material for the larvae to feed on, they may burrow into the stems or fruits of the tomato plants, further affecting the yield. TPW has historically been confined by their thermal limits; however, they have started expanding outside of their native range and have been found consistently in high tunnel tomato systems in Indiana. This poster aims to examine the biology of TPW outside of their native range, particularly within protected culture growing conditions, to reduce the impact they have on tomato growers across Indiana.

Effects of Sweet Alyssum Companion Planting on Insect Assemblages in High Tunnel Systems

Charles Fox, Robert Grosdidier, & Laura Ingwell
Purdue University

High tunnels are an affordable form of protected crop production that is becoming increasingly popular across the Midwest. While the composition of insect communities that inhabit high tunnels is still poorly understood, current evidence suggests that high tunnels support low numbers of beneficial pollinators and biological control species while allowing many soft-bodied, pestiferous insects to thrive. To improve the efficacy of high tunnels, methods of balancing the insect populations within these tunnels should be explored. Companion planting is one way of doing this, in which a plant that is attractive to beneficial insects is grown alongside the crops. Sweet alyssum is commonly used for this purpose because it produces many flowers that are known to attract various pollinators and natural enemies of insect pests. To determine whether sweet alyssum can influence insect communities in high tunnels, we planted it alongside tomatoes and compared insect assemblages in tunnels with and without sweet alyssum. The insect populations were monitored throughout the growing season with multiple scouting methods including pitfall traps and active scouting of insects present on the tomato plants. The results of this study will provide high tunnel growers with an understanding of the effects sweet alyssum will have on insect community composition in tomato high tunnel systems.

Building Resilience: Purdue Extension's Role in Indiana Disaster Preparedness

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Sadly, bad things happen to good people. Disasters or emergencies can affect any of us at any time. Fortunately, effective and appropriate preparation and response strategies by

individuals, families, and communities can help to mitigate the impacts and lead to more efficient recovery from such events.

Purdue Extension can play a critical role in that process. Whether it's a tornado, a flood, or an industrial fire, our communities turn to us for reliable, research-based information and our robust network.

The good news for you as a farmer, homeowner, or Extension professional? You don't have to figure it out alone!

What Are EDEN and INPREP?

The Extension Disaster Education Network (EDEN) is a national collaborative effort within the Cooperative Extension System focused on reducing the impact of disasters through research-based education. EDEN covers all hazard types, including agricultural/zoonotic, natural, and human-caused. EDEN provides a one-stop shop of resources at extensiondisaster.net, including fact sheets, toolkits, webinars, and response notes from educators who've been through it before.

Here at Purdue, we connect to EDEN through Indiana PREPared (INPREP). Established in the ABE Department about six years ago, INPREP focuses specifically on Indiana and serves as a resource for Extension professionals and community members across the state. Our website offers news articles, teaching materials, and timely information you can adapt for your local needs. As a colleague in Nebraska likes to say, "Every disaster is local," so our goal is to supplement what you have and provide what you need in your community when the time comes.

Indiana AgrAbility – Cultivating Accessible Agriculture

Ed Sheldon, Bill Field, & Chuck Baldwin
Purdue ABE / Indiana AgrAbility

In 1979, a farmer with severe disabilities asked Purdue's Department of Agricultural and Biological Engineering for help with modifying his tractor so he could continue farming. His request ultimately led to the establishment of the Breaking New Ground (BNG) Resource Center, now an internationally recognized source of information on assistive technology for agricultural worksites.

Soon after it started, the BNG Resource Center established the Breaking New Ground Outreach Program to serve rural Indiana residents affected by disabilities. The BNG Outreach Program, a part of Purdue Extension, became a model for the USDA AgrAbility Program that now supports similar projects in more than 20 states, including Indiana.

The Indiana AgrAbility Project serves farmers and other rural residents with disabilities through a collaborative effort between the USDA, the BNG Outreach Program, and several disability and agriculture-related organizations, including Easterseals Crossroads, Indiana Vocational Rehabilitation Services, and more. The program works with individuals impacted by all types of disabilities, and there is no charge for AgrAbility services.

Indiana AgrAbility's poster presentation focuses on services provided to Indiana farm families and agricultural workers, including:

- One-on-one in-person consultations, farm visits, and site assessments for worksite or home modifications, self-employment, and enterprise development.
- Referrals to other sources of information and assistance, including potential funding sources

- Underserved populations outreach (veterans, socially disadvantaged farmers, migrant and seasonal farmworkers, Old Order)
 - Partnership with Easter Seals Crossroads – Assistive Technology Expo, assistive technology lending library
 - Bridging Horizons Community Service contest
 - Partnership and collaboration with Purdue Extension
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Orchard Floor Management

Clay Slaughter

Slaughter Orchard & Cidery

This USDA research grant worked on improving orchard floor plant and soil health through implementing multiple regenerative orchard floor practices. Multiple practices were used including minimizing soil disturbance, planting cover crops, and cover crop mowing without termination. Steps were taken to prepare the regenerative orchard floor for the introduction of silvopasture.

These practices were implemented in the orchard and demonstrated on in-orchard tours, industry event posters, industry event presentations, and online meetings.

Additional research should focus on minimizing vegetative height through species and cultivar selection, flame weeding, and silvopasture to avoid the near constant need to mow when actively managing 55 acres. Education of staff, neighbors, and the public could allow for greater acceptance of taller vegetation, but excessively tall vegetation will continue to restrict air flow and potentially cause and increased fungal pressure.

Ground Harvest for Hard Cider

Tara Slaughter

Slaughter Orchard & Cidery

This ongoing study focuses on hand harvesting ground fruit for the purpose of making value added products, specifically hard cider. The mid-study findings will be discussed including the change to a 3 Phase Harvesting protocol. In the second year of the study, time was spent determining how long ground harvest fruit can be held before pressing without substantial quality issues.

Field days will be held in 2026 to demonstrate the ground harvest process. Interested stakeholders can sign up to receive a model HACCP plan and position paper educating stakeholders on the process of ground harvesting for hard cider production. Future research needs conducted on hold times for ground harvested traditional cider varieties.

Thank you to all of
the poster presenters
for their work with
small farms & local
food systems!