

## Summary and Resources - BearFruit & Grow July 2025 OAK Farmer Field Day



### Conservation on An Urban Farm

#### Event Summary

Since 2020, Louisville farmer LeTicia Marshall has been a leading voice in urban agriculture and food justice initiatives. In her second season at [BearFruit & Grow](#)'s four-acre property in southwest Louisville, LeTicia has integrated land conservation into her farming work - planting riparian buffers, creating wildlife corridors and pollinator habitat, using cover crops and biochar and centering soil health in her crop production.

This OAK Farmer Field Day explored some of these conservation practices, with local partners from the USDA's Natural Resources Conservation Service (NRCS), Jefferson County Soil and Water Conservation District, Beargrass Thunder and OAK presenting their specialty areas while LeTicia shared her on-farm experience.

#### Managing Waterways and Invasive Plants

with Mariah Corso, [Beargrass Thunder](#)

Mariah Corso's Louisville landscaping company, Beargrass Thunder, is working with LeTicia to design and establish a [native riparian buffer](#) along the banks of Pond Creek, which runs along a perimeter of BearFruit & Grow's property. Riparian buffers act as a filter for sediment, nutrients, pesticides and other pollutants on the land before they reach the water. These buffers may also help reduce erosion, improve water quality, provide habitat for wildlife and stabilize stream banks.

LeTicia intentionally planted the riparian area to increase the native vegetation and wildlife habitat along Pond Creek. She also established an adjacent area of orchard and improved forage for pasture (sheep, chickens). She is continuing to manage the riparian area with Beargrass Thunder to build successional plantings expanding into a larger area. Within the forested land along Pond Creek, they're working to add "live stakes" and seeds of desired native plants while managing and improving conditions for existing natives and removing unwanted non-natives, like Bradford pear. During the July Field Day, Mariah shared her expertise on restoring native riparian buffers and invasive plant control in an urban environment.

Non-native plants lack natural controls in our environment, like diseases and predators, so they can spread quickly and out-compete native plants. This causes an imbalance in the ecosystem and threatens the biodiversity of the area. Non-native plants have a hierarchy of management, Mariah explained, which allows landowners to prioritize which non-native plants to manage first, or most aggressively. "Naturalized plants" are plants that have been introduced to a new geographic area but are not invasive or damaging in that area. Some of these plants may even be helpful to farm and land management goals, like red clover, which was introduced from Europe but supports honeybees - also from Europe. "Restricted" weeds are plants that are objectionable in Kentucky, but can be controlled using conventional methods, like wild onions/garlic. More important for management priorities are what botanists refer to as "noxious weeds." The NRCS-KY [Invasive Species Advisory List](#) lists plants that are invasive in Kentucky and identifies some as noxious. (Additional resources are listed below.) Mariah provided demonstration and guidance on removing multiple invasive plants of concern for urban agriculture, including vines like poison ivy and winter creeper, and lawn/sod invasives like creeping charlie or Johnsongrass.

When cutting invasive vines from a tree trunk (example: [winter creeper \(\*Euonymus fortunei\*\)](#), which can be a vine or a bush), Mariah uses a hand-pruning saw or large clippers to make a large cut (while avoiding damage to the tree bark) near the base of the vine and again five to six feet high. If dealing with poison ivy (leaves of three, let it be), Mariah advises getting rid of it as soon as possible as it will continue to spread and grow stronger. Even when vegetation is dead, the vine can contain oils that cause allergic reactions. Allergies to poison ivy increase with continued contact, so handling it with the assumption that one is not allergic may lead to allergies later in life. Once the cuts are made, Mariah paints herbicide onto the cut. Preventing aggressive plants through [non-chemical controls](#) is a priority for ecologically-minded landowners. When herbicides are used to remove invasive plants, Mariah recommends 100% glyphosate and apply it directly to the woody cut of the plant. This chemical can persist in an environment for about two weeks, much shorter than the newer version of Roundup, which no longer contains glyphosate but has a much longer active timeframe. NOTE: From an organic certification perspective, it is important to leave a buffer between organically certified crop fields and non-organic-certified pesticides (like glyphosate) if they are to be applied for invasive management.

Invasive plants in a lawn can be removed by solarization (read more below) or “sheet mulched” with cardboard (remove glossy sections, avoid/remove tape/plastic film, etc); however, sheet mulching won’t work for weeds like Bermuda grass and Creeping Charlie. Instead, these pervasive weeds can be removed by hand in smaller areas: gripping the top of the vegetation, use a sod cutter (Mariah recommends Astron brand) at a 45-degree angle to continually slice along the sod while pulling the plants up to release the creeping plants and shallow-rooted plants from the soil. For most lawn weeds, Mariah “scalps” vegetation with a weed-trimmer or lawnmower down to the “nub,” then [flame-weeds](#) it once the vegetation is cut back as far as possible to reduce smoke (green/damp plant matter produces more smoke than dry/dead). NOTE: Flameweeding is different from a Prescribed Burn, which might be done for a field of Johnsongrass. Training and certification are necessary for Prescribed Burns; check out the [Kentucky Prescribed Burn Council](#) for landowner resources.

For removal of larger grasses like Johnsongrass or wide-spreading grasses like Japanese stiltgrass (NOTE: fire will strengthen this problem plant!), bunch them up with your hand and use a sickle to cut while pulling grasses quickly towards yourself. Serrated blades work best with really large stalks. For uprooting, use a spade at a 30-degree angle - not vertical - to uproot/access larger taproots.

### Getting a Scope on Soil Health

with Dave Nichter, [Jefferson County Soil and Water Conservation District](#)



Dave gathered Field Day participants around a microscope to take a better look at the underground ecosystem that supports our terrestrial life. Comparing soil samples from a healthy field and overworked garden soil allowed participants to understand the inner workings of a healthy soil biome and how farm and land practices impact those systems.

Building healthy soil aggregate and biology supports a healthier plant, making the plant less palatable for pests (e.g. harlequin bugs, vine borers), as their larvae are not as able to eat healthy plant structures. Similarly, downy mildew spores can land on a leaf and not have a good habitat to spread if the plant structure is healthy.

The microscope image was presented on a computer screen to visually illustrate the difference between management in different soil samples. One sample from a garden tilled 2-3 days before showed some aggregate, but not as much as from a sample of no-till farmland which had a rich aggregate structure showing the complexity of root-zone “habitat” for soil biology.



This soil biology is what we feed or water when we tend to garden/farm plants - by supporting those rhizosphere residents, we support the relationship between plant roots and hyphae and the fungi, nematodes, etc. Many organic amendments are not plant-available (they depend on a healthy fungal ecosystem in the soil), so a rich soil biology will help plants use those applied amendments.

Winter cover crops provide healthy maintenance (photosynthetic growth/food production, soil exudates) for soil, making spring soil tillage less destructive to overall soil health by restoring soil structure and nurturing soil biotic life through winter.

To support the soil biome, LeTicia raises earthworms at BearFruit & Grow and considers worms an essential tool for her farm production. She sells worm castings (“worm poop”) as a market item. While worm farming is currently minimal as she continues to establish her new land, Leticia hopes to scale it back up.

Establishing Production Spaces With Tillage, Occultation and Solarization  
with Mad Marchal, [OAK Conservation Outreach Coordinator](#)  
([Presentation](#) prepared by Sarah Geurkink, [OAK Organic Production Specialist](#))

When creating new garden beds in a lawn or sod setting, tillage is often the first option considered. Initially, tilling will make soil easier to work with and form beds in, but it will not kill sod and can bring up new weed seeds that have been waiting for soil disturbance to help them germinate. Occultation or solarization can help terminate/kill the existing vegetation and any new weeds before, after or instead of tillage.

- Solarization (top image): A UV-rated clear plastic (such as old greenhouse plastic) is used to amplify solar energy/heat to kill plants growing under the plastic. Solarization can be implemented before or after tilling (or both). It can also be used to suppress disease and pests that accumulate over time (such as sclerotinia or root-knot nematodes in high tunnels).
- Occultation (bottom image): A UV-rated opaque black plastic (silage tarp or “tobacco floatbed liner”) is used to block sunlight and prevent the vegetation underneath from photosynthesizing, eventually killing it. After tillage or once garden beds are established, occultation creates a warm, moist environment, encouraging weed seed to germinate and eventually die from lack of sunlight. (Note: Occultation does not kill



weeds that need sunlight to germinate, such as purslane.) Occultation, like solarization, can be used to help slow-to-germinate seeds outcompete weed seeds in the soil: After the initial occultation period that successfully terminates weeds, slow-to-germinate seeds, such as carrots, can be sown and re-covered. Beds are checked daily and the tarp is removed when the crop begins to germinate. Other weed control methods can be combined with occultation, such as flame weeding after removing the tarp.

Additional thoughts to consider when establishing a new crop production space:

- Bed orientation in a flat/level field is optimal when running N-S for maximal sunlight. If the field is sloped, build beds in a direction that encourages drainage.
- Establishing garden blocks and beds of the same size and dimensions will simplify crop rotation planning, bed infrastructure and amendment application calculations. Beds that are the same length will allow you to have universally useful row cover and drip tape without having to sort through a pile for one that “fits.”
- Bed width should correspond to the tools and equipment you will use on them. Wider beds can fit more crop rows but will have more surface area for weeds to establish; narrow beds (30”) are easy to straddle and jump over.

## Partners

Without partners and allies, this work would be nearly impossible! Several partner organizations shared their resources at the July Field Day, including University of Kentucky’s Department of Horticulture ([Cindy Finneseth](#)) and Cooperative Extension Office ([Kristen Dillon](#)), Kentucky State University’s Organic Agriculture Program ([Linelle Rivera Rodriguez](#)) and Urban Growers/Local Food Systems Justice ([Kelly Rawalt](#)). Find resources they shared in the listings below.

## Reach out!

If you have additional questions about the Field Day at BearFruit & Grow or would like to learn more about conservation practices and the Natural Resources Conservation Service programs, please reach out to Mad Marchal, [OAK’s Conservation Outreach Coordinator](#). You can also directly contact NRCS by finding your [local NRCS office](#).

## Gratitude

OAK is grateful to LeTicia Marshall, Nathan Lind, Dave Nichter and Mariah Corso for their time and efforts for this Field Day, to USDA’s Natural Resources Conservation Service (NRCS) and Grow Appalachia for providing essential participant support and conservation guidance, and to all the farmers and ag professionals who took time out of their busy schedules to share in the learning and conversation.

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NOTE: All links and program information were verified in July 2025 and may not reflect future updates

## Related Resource Links:

### OAK Resources:

- [Annual Organic Farming Conference](#) - Save the date and watch for registration and agenda details in October 2025 for OAK's 15th Annual Organic Farming Conference, January 30-31, 2026, in Frankfort, KY.
- [Upcoming OAK Farmer Field Days](#) - Hosted on working farms, these events highlight organic practices used in crop and livestock systems and best practices in production, marketing, business and resilience on Kentucky farms. Register today to learn from and with other farmers!
- [OAK Conservation Program](#): Conservation Outreach Coordinator provides one-on-one assistance for Kentuckians interested in adding conservation practices to their land or farm management on owned or leased land. Eligible participants are Kentucky farmers and landowners with production or subsistence farms, urban or rural growing spaces, community-run projects or privately managed lands.
- [OAK Transition Program](#) - Organic Transition Specialists assist farmers who are interested in transitioning to USDA-certified organic production. Organic Specialists are available for one-on-one consultations, providing a personal level of service and technical assistance on-site, at the farmer's convenience.
  - The [Midwest Transition to Organic Partnership Program \(TOPP\)](#) is a coalition of partners across 11 states providing mentorship, technical assistance, and wrap-around support for transitioning and existing organic producers. With TOPP support, OAK connects farmers transitioning to organic with local, experienced organic mentors in the [Organic Farmer Mentorship](#) program.
- [Organic Production Assistance Program](#) - The organic production consultation services provide dedicated organic technical assistance to Kentucky farmers who are currently using or interested in adopting or expanding organic practices.
  - [OAK Farming Tools and Templates](#)
- [Kentucky Farm Share Coalition](#) (KYFSC) creates market opportunities for Kentucky farms growing for community supported agriculture (CSA), a weekly box subscription of the farm's harvest. KYFSC partners with farms and employers to facilitate workplace CSA programs that incentivize employees to purchase CSA. Learn more today!
- [Join OAK today!](#) The sustainable food and farming network in Kentucky is growing, and together, we can create a thriving local food system. Your support and participation helps OAK deliver educational programming, provide community outreach and enhance market opportunities for growers across Kentucky! Receive discounts on OAK events and other member benefits!
- [Sign up for OAK newsletters](#) - For farmers and consumers, OAK offers a variety of regular communications to stay connected to Kentucky food and farming news, research and events.
- [OAK YouTube](#) - View recordings, snapshots and lessons learned from host farmers in past conference and field day playlists.
- Check out [Suppliers and Farm Resources](#) on OAK's Find-A-Farm Directory

## OAK - BearFruit and Grow 2025 Field Day Resources:

- Conservation Resources:
  - [OAK Conservation Program](#): Conservation Outreach Coordinator provides one-on-one assistance for Kentuckians interested in adding conservation practices to their land or farm management.
  - [2025 Bearfruit and Grow FD Conservation Practices](#)
    - Nutrient Management ([590](#))
    - Cover Crops ([340](#))
    - Conservation Cover ([327](#))
    - Mulching ([484](#))
    - Residue and No Till ([329](#))
    - Riparian Forest Buffer ([391](#))
    - Riparian Herbaceous Cover ([390](#))
    - Tree and Shrub Establishment ([612](#))
    - Tree and Shrub Preparation ([490](#))
    - Brush Management ([314](#))

## Partner Resources:

- [Grow Appalachia](#) addresses food insecurity throughout central Appalachia through home and community garden initiatives, foodways, farming, and hunger relief programming. As a [Strategic Initiative of Berea College](#), Grow Appalachia provides an engaging [Beginning Farmer Series](#) and supportive [Garden Grants](#), as well as [High Tunnels and Growing Supplies](#) through its [Social Enterprise](#) work: contact [Kayla Preston](#)
- Kentucky State University (KSU)
  - [Organic Farmer Survey](#) - The Organic and Conventional Farmer survey will support KSU's cooperative extension services to understand the challenges, research needs, and insights to improve organic farming in Kentucky.
  - [KSU Small-Scale Farm Grant](#) and [Beginning Beekeeper grant](#)
- University of Kentucky (UK) [Department of Horticulture](#):
  - New Extension Associate for Beginning Farmers: [Shari Dutton](#)
  - [Shared Use Equipment Map](#) - click "Features" at top right to access key to map and toggle preferred category
  - [Horticulture BioQuiz](#)
  - [KY Fruit and Vegetable Conference](#), January 2026, Bowling Green - details coming soon
- Louisville/Jefferson County:
  - [Jefferson County Soil and Water Conservation District](#)
  - [Beargrass Thunder](#)
  - [Jefferson County Cooperative Extension office](#)
  - [KSU Community Resource Development office](#), west Louisville

#### Native and Invasive Plant Resources:

- [Invasive Plant Threats](#) - Kentucky Energy and Environment Cabinet
- [Invasive Species Fact Sheets](#) - [Kentucky Invasive Plant Council](#)
- [Native Plant Suppliers & Service Providers](#) - Kentucky Native Plant Society
- [Kentucky's Native Alternatives to Invasive Plants](#) - If looking to replace invasives with other plants, this a great place to start.

#### Cover Crop Resources:

- [Cover Crops for Sustainable Crop Production](#) - Sustainable Agriculture Research and Education (SARE)
- [Managing Cover Crops Profitably](#) and [Building Soils for Better Crops](#) - SARE
- [Covers Under Cover: Managing Cover Crops in High Tunnels](#) - University of Kentucky (UK)
  - [Cool-Season Cover Crops for High Tunnels in the Southeast](#)
  - [Warm-Season Cover Crops for High Tunnels in the Southeast](#)

#### Soil Health Resources:

- Soul Fire Farm's [How Alive Is My Soil?](#)
- [Cornell Soil Health Manual](#) - Cornell University's College of Ag and Life Sciences
- [Building Soil Health in the South](#) - Organic Farming Research Foundation (OFRF)

#### Crop Production Resources:

- [OAK Farming Tools and Templates](#)
- [General Production Resources | Center for Crop Diversification](#)
- [Organic Agriculture | Center for Crop Diversification](#)
- [Crop Rotation on Organic Farms | SARE](#)
- [Community Supported Agriculture \(CSA\) Production Manual](#) - UK Organic Farming Unit
- Post-Harvest Infrastructure: [Shipping Container DIY cold storage](#) - U VT. Ag Engineering
- Suppliers:
  - [High Tunnels and Growing Supplies](#) - Grow Appalachia, Berea KY
  - [Walk-Behind Tractors and Hand Tools](#) - Earth Tools, Owenton KY
  - [Farm/Garden Supplies](#) - Martin's Produce, Liberty KY
  - [Farm/Garden Supplies](#) - Shrock's Garden/Farm Supplies, Crab Orchard, KY
  - [Farm/Garden Supplies](#) - Deerfield Supplies, LLC, Elkton, KY
  - [Organic Farm And Garden Supplies](#) - Fresh Start Growers Supply, Louisville, KY



## Solarization and Occultation Resources

- [The Benefits of Soil Solarization](#)
- [Additional Benefits of Solarization for Weed & Insect Management](#)
- [How to Solarize Soil](#)
- [High Tunnel Solarization Trial Introduction](#)
- [High Tunnel Solarization for Management of Sclerotinia](#)
- [Using the sun to kill weeds and prepare garden plots | UMN Extension](#)
- [Silage Tarps for Small Farm Weed Management | Purdue University Vegetable Crops Hotline](#)
- [Tarping and Occultation Techniques in Gardening and Farming | VCE Publications](#)
- [Cover Crop Termination | USDA Natural Resources Conservation Service \(NRCS\)-Indiana](#)

## Funding /Technical Assistance Resources and Service Providers:

- Kentucky Center for Agriculture and Rural Development ([KCARD](#))
  - Free [business planning](#) for Kentucky farms and agribusinesses
  - [Funding assistance and grant information](#) (Kentucky and beyond)
  - Sign up under “GET UPDATES” on [KCARD website](#) to receive e-newsletters
- U.S. Department of Agriculture (USDA)
  - Read this first! [A Guide to USDA Resources for Historically Underserved Farmers](#)
  - USDA [Farm Service Agency \(FSA\)-Kentucky](#)
    - [How to Start a Farm: Beginning Farmers and Ranchers](#)
    - Find your county’s office in [West Kentucky](#) or [East Kentucky](#)
  - [USDA Natural Resources Conservation Service \(NRCS\)-Kentucky](#)
- Kentucky Department of Agriculture (KDA)
  - [Organic Marketing Program](#)
  - [Grants and Funding Opportunities](#)
- University of Kentucky:
  - [Extension Publications](#)
  - [Food Connection](#) - Value Chain Coordinators' [contact information](#)
  - [Center for Crop Diversification](#)
- Grants:
  - [SOAR loan](#) - southern and eastern KY
  - [KSU Small-Scale Farm Grant](#)
    - [Beginning Beekeeper grant](#)
  - [County Ag Investment Program \(CAIP\)](#) grant: county-specific! Ask your County Cooperative Extension Agent