

Summary & Resources - Rains and Sun Hilltop Farm September 2023 OAK Farmer Field Day



CSA Production, Packing and Planning

“Growing food is the best way we know to affect health in our communities.” Anna Raines started her Farmer Field Day by sharing her family farm’s “Why?”. Trained as a scientist specializing in nutritional science, Anna explained her dedication to the work and her desire to be part of a local food system improving her community’s health through fresh, organic food. Community Supported Agriculture (CSA) and farmers’ markets allow Rains and Sun Hilltop Farm to provide customers with fresh produce and education about the nutritional benefits of “eating local.” Rains and Sun’s current CSA distributes 80 weekly vegetable shares to local families, and two weekly farmers’ markets allow them to serve even more of their community. Focusing on her production for the CSA, Anna walked the Field Day attendees through her two acres of diversified vegetables, multiple high tunnel and caterpillar tunnel crops, and a new packing shed designed for wash, pack, cold and dry storage, and loading efficiencies.

Over ten years, the Rains and Sun crew has grown their certified organic vegetable operation from 16 beds serving seven weekly CSA shares to 92 beds serving 80 weekly shares and two farmers’ markets. This growth has been steady and intentional as Anna acquired knowledge, tools, and infrastructure to scale up wisely. Reducing tillage of the soil as much as possible, Anna and her four-person (primarily part-time) crew use a broadfork and walk-behind tractor with a power harrow to manage their standardized 3’x100’ beds. After flail mowing an existing crop, they suppress further vegetative growth under a silage tarp for two to three weeks (longer in the springtime), remove the tarp and broadfork the bed, add amendments (as needed), and run the power harrow to prepare the seedbed for the next crop or cover crop.

Cover crops are integral to the planting rotations and soil fertility management at Rains and Sun. Anna uses a diversity of cover crops in every season of the year. Annually, she rotates two field blocks (one field block = four beds) out of cash crop production into cover crops to rest and restore the soil’s fertility. Learn more about Anna’s cover cropping practices in the [slides and videos from her 2021 virtual field day.](#))

Anna previously used manure as part of her fertility but was concerned about unintentionally introducing persistent herbicides or weed seeds onto her farm. Anna now relies on cover crops, along with an organic pelletized fertilizer (Re-Vita Pro), alfalfa meal (both macro and micronutrients), feather meal (slow-release N), and occasional amendments when annual soil tests indicate a specific need. Her soil tests are systematic: sampling field blocks based on their years in production, comparing change over time, and sampling tunnel soil separately to monitor potassium and phosphorus levels. (Potassium levels significantly affect the absorption and utilization of other nutrients, and phosphorus can build to unhealthy levels in beds that do not get rain.)

Crop rotations also contribute to healthy soil, and Rains and Sun's field block design prioritizes rotations: eight blocks cycle through different plant families within the production year. More than half of Anna's field blocks hold planned yet flexible short-term crops: lettuce, herbs, green onions, and root vegetables - all favored crops for CSA and farmers' market customers. Carrots and beets are especially popular early in the season; salad mix includes lettuces, mustard (spicy mix!), and baby kale; roots like turnips, radishes, and green onions are easy crops and increase product diversity. The remaining field blocks hold longer-term heavy feeders like cucurbits (like squash), brassicas (like broccoli, kale, and cabbage), and solanaceous crops (tomatoes, peppers). Rains and Sun grow most of their tomatoes and peppers under tunnels, where Anna uses white-on-black landscape fabric to reduce heat and suppress weeds. (TIP: white-on-black landscape fabric suppressed weeds much better than white-only fabric. They previously used white silage tarps for this purpose, but the fabric is more pleasant - not as slippery or stinky - for the crew.)

The field block organization and standardized bed sizes at Rains and Sun provide an efficiency that helps everyone on the crew, as does the planning that starts on Anna's computer in the early winter months. Anna's planning also holds enough flexibility to allow for weather, CSA share demands, crew support, and the realities of a dynamic farm. "We can't plan for every detail," Anna shared, "but we prioritize the planning and hope it translates to the field as much as possible." (Reference some of Anna's planning resources below.)

In shaping her CSA each year, Anna has adopted an online software for planning, organizing, and building her shares and customer communications. For four years she has used Farmigo, which has paid for itself via efficiencies and timesavers, including CSA customization, month-to-month access/pricing, label creation for share packing, and more. Over the years, Rains and Sun has offered set shares (defined by the farm) and customized shares (defined by the customer) and has found that offering a mix of both provides customer satisfaction and flexibility for the farm's crop planning (i.e., not having to have 80 quantities of every crop, every week).

Rains and Sun has also improved its packing and storage capabilities, primarily through a new and expanded packing shed. This building includes a three-basin stainless sink with sprayer, stainless steel tables for crop stacking and share packing, a tub for crop rinsing, a five-gallon salad spinner (which they have outgrown and will replace with a converted washing machine spinner), and an 8'x10' cold storage space adjacent to the garage door for direct loading into delivery vehicles. The efficiencies extend to the packing, storage, and CSA-share crates, color-coded by crop or delivery locations.

OAK is grateful to Anna Raines for sharing her CSA experience, farm infrastructure, and systems of efficiency with our community. We offer gratitude to the Kentucky Department of Agriculture

for sharing details of the Local Food Purchase Assistance program with our field day participants. OAK appreciates the support of the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service for this event.

Resource Links:

- **OAK resources:**
 - [Join OAK today!](#)
 - [Find-A-Farm Directory](#) - OAK Family Farm Members
 - [The asterisks below indicate OAK member discounts](#)
 - [OAK YouTube](#) farmer resources/conference and playlists of previous field days
 - [OAK Organic Transition Program](#) - for assistance with or info on certifying organic
 - [USDA's National Organic Program](#) and [OMRI-listed products](#) for compliance
 - [OAK Conference*](#) - **Save the Date: January 25-27, 2024**, at KSU Harold R. Benson Research and Demonstration Farm in Frankfort, KY
- Suppliers / Products
 - [Suppliers and Farm Resources](#) on OAK's Find-A-Farm Directory
 - Grow Appalachia [Growing Supplies](#)
 - [Earth Tools*](#)
 - [Dubois Agrinovation](#)
- Potential Funding 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](#) - [Angella Watson](#)
 - [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](#) - [Joe Ulrich](#)
 - [EQIP - High Tunnel Initiative](#)
 - [High Tunnel System - NRCS KY](#)
 - [Microirrigation - NRCS KY](#)
 - [Roof Runoff Structure - NRCS KY](#)
 - [Organic Management NRCS Conservation Practice Standard - Coming Soon; In Development](#)
 - [Conservation Plan Supporting Organic Transition](#)
 - USDA [Rural Development \(RD\)](#)
 - [Cooperative Services \(Starting Farmer/Ag Cooperatives\)](#)
 - [Programs and Services in Kentucky](#)
 - Kentucky Department of Agriculture (KDA)
 - [Organic Marketing Program](#) - [Abigale George](#)
 - [Local Food Purchase Assistance \(LFPA\)](#) - [Lynsey Crumbie](#)
 - [Glean Kentucky](#) - Combatting food waste and food insecurity

- Grants:
 - [SOAR loan](#) - southern and eastern KY
 - [KSU Small-Scale Farm Grant](#)
 - [County Ag Investment Program \(CAIP\)](#) grant: county-specific! Ask your County Cooperative Extension Agent
- Soil Health Resources:
 - Soul Fire Farm's [How Alive Is My Soil?](#)
 - [Cover Crops for Sustainable Crop Production](#) - Sustainable Agriculture Research and Education (SARE)
 - [Building Soils for Better Crops](#) - SARE
 - [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 virtual event recordings:
 - [Rains and Sun Hilltop Farm](#) includes:
 - Crop Planning for the Small to Medium CSA (#OAK2021 with Anna Raines)
 - Tools for Minimal-Till Market Farming and Diversified Vegetables (Virtual Field Day at Rains and Sun Hilltop Farm) - entire event + short features
 - [Paper Pot Transplanter at Salad Days Farm](#)
 - Rains and Sun's recordkeeping examples:
 - [Rains and Sun Distribution Log 091323.pdf](#)
 - [Rains and Sun Harvest Log 091323.pdf](#)
 - [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](#) of the Organic Farming Unit at the University of Kentucky
- Crop Planning Software:
 - [Tend - Organic Farm Management Software](#)
 - [COG Pro - Recordkeeping for Organic Certification](#)
- Online Sales Platforms and Software:
 - [Farmer Guide to Direct Sales Software Platforms](#) -National Young Farmers Coalition, 2020
 - [Farm-Specific eCommerce Platforms](#) - CSA Innovation Network, 2021
- Market-Specific Resources
 - KDA's [Kentucky Farmers' Market Manual and Resource Guide](#)
 - [MarketReady Producer Training Program](#) - wholesale and institutional market assistance
 - [CSA Innovation Network](#) - Community Supported Agriculture (CSA) resources and community