

**2023 NCR-SARE Farmer Rancher Grant Projects Recommended for Funding**

Project #	Title	PI First Name	PI Last Name	Primary Grantee	Project State	\$\$ Amt	Cumulative	Practices	Commodities	Brief Description
FNC23-1359	Breeding a Cold-hardy, Non-astringent Hybrid Persimmon Cultivar	Weston	Adams	Weston Adams	MO	\$ 14,989	\$ 14,989	Crop Production	Fruits	Persimmons are rising in popularity as a naturally disease-resistant fruit for the NC-SARE region, but growers currently have access to very few non-astringent cultivars with sufficient cold hardiness. Using hybrid genetics, I wish to launch a private breeding project to address this problem.
FNC23-1361	Developing a Regional Spring Flowering Seed Mix to Support North Central Mason Bees	Justina	Block	Osmia Bee Company	OH	\$ 28,954	\$ 43,943	Crop Production	Animals	Develop and distribute a regional herbaceous seed mix for mason bees, and generate a public list of the floral resources that support mason bees so that North Central farmers, land managers, and home owners can make informed decisions on how to provide resources for springtime mason bees.
FNC23-1362	Pull-Type Hazelnut Combine Development	David	Bohnhoff	Happy Roots Farm	WI	\$ 30,000	\$ 73,943	Production Systems	Nuts	Development of a machine incorporating (1) a shaker for removing hazelnut clusters off plants, (2) a unique cluster collection platform and transport system, (3) a threshing unit for freeing nuts from their husks, and (4) rotary sieves and a winnowing system for separating nuts from other debris.
FNC23-1363	Hybrid Electric Tractor Energy - Saving Configuration Conversion	Robert	Braun	Pigeon River Farm	WI	\$ 14,957	\$ 88,900	Energy	Not commodity specific or doesn't apply	Converting farm utility tractor used for many tasks in the farm's daily operation to a hybrid configuration. The tractor will be modified with a modern high-powered electric motor and powered with onboard batteries. This configuration will mimic the example plug-in Toyota Pruis strategy.
FNC23-1364	Creating a Sustainable Honey Bee Depository from Urban to Rural Settings	Robert	Brooks	META	KS	\$ 12,860	\$ 101,760	Crop Production	Animals	It has been shown in the US and Europe that there are more honey bees and pollination (seed setting) in cities than rural areas. When bees swarm in the city they usually enter a house and are exterminated by the home owner. I propose to trap these bees relocating them to rural areas as pollinators.
FNC23-1365	How can Midwestern growers make the most of winter high tunnel real estate for winter salad mixes?	Michelle	Nowak	Franklinton Farms	OH	\$ 8,781	\$ 110,541	Crop Production	Vegetables	Unheated high tunnels make it possible to grow year-round in the Midwest, but careful crop selection is crucial for optimizing winter yields and profits. In our winter high tunnels, we will compare yields of 14 varieties of direct-seeded varieties of <u>babyleaf brassicas and lettuces</u> .
FNC23-1366	Integrating intensive mushroom and vegetable production with a closed-loop indoor growing system	Jacob	Chapman	Moose Paw Farm	KS	\$ 14,515	\$ 125,056	Production Systems	Other	Implementing systems in which a plant chamber will breathe for a mushroom fruiting chamber and vice versa. Greatly reduce energy input to both systems by nearly mitigating the need for reconditioning incoming air for temperature, humidity, and CO2/O2 concentrations in both systems.
FNC23-1367	Using No-Fence Technology to Integrate Livestock Into Vegetable Production	Arlo	Cristofaro-Hark	Cannon Valley Graziers, LLC	MN	\$ 29,875	\$ 154,931	Production Systems	Vegetables	With advancements in virtual fencing technology, there are many opportunities to maximize the benefits of integrating livestock into other agriculture enterprises. This project explores the efficacy of virtual fencing, and the impact of rotational and bale grazing on soil health and crop production.

FNC23-1368	Morel Mushroom Cultivation in an Urban Setting	Gladys	Davis	Cultivating Bliss Farm	MO	\$ 14,995	\$ 169,926	Sustainable Communities	Not commodity specific or doesn't apply	Comparing efficacy of substrates and production methods in developing morel mushroom fruiting bodies in elevated raceways. Project seeks to 1) assess cost to serve ratios, 2) reproducibility for commercial production; 3) affordably advance cultivation; 4) decrease pressure on wild mushroom stock.
FNC23-1369	Scaling Up Food-Grade Millet Production for Minnesota's East Africans	Naima	Dhore	none	MN	\$ 15,000	\$ 184,926	Crop Production	Other	East African refugees and immigrants are hungry for culturally relevant food. This project will demonstrate the feasibility of scaling up small-farm millet production in Minnesota, including weed, water and pest management, processing, marketing and profitability.
FNC23-1370	Optimizing No-Till Methods for a Direct-to-Market Organic Vegetable Farm	Sandra	Dietz	Whitewater Gardens Farm	MN	\$ 14,867	\$ 199,793	Production Systems	Vegetables	This project aims to build understanding for no-till farming methods for vegetable growers by piloting three recommended approaches, comparing results for soil and crop health and economic viability, and sharing results with other growers.
FNC23-1371	Investigating Viable Management Strategies of Marssonina Leaf Blotch in Organic Apple Production in Central Ohio	Zachary	Dobbelaer	Charlie's Apples	OH	\$ 8,280	\$ 208,073	Pest Management	Fruits	Charlie's Apple Orchard would like to conduct a controlled experiment to examine what mix of pest management strategies will eradicate or mitigate the impact of Marssonina Leaf Blotch on apple production within an organic orchard system.
FNC23-1372	Advancing black walnut syrup production through research and report on optimal tapping practices and promotion of findings at a field day.	Jonathan	Elrod	Blue Temoest Holdings, LLC, d/b/a Rusted Flatbed Farm	IN	\$ 14,808	\$ 222,881	Crop Production	Other	Black walnut trees are an underutilized natural and sustainable source of syrup as a sweetener similar to maple syrup but with a unique nuttier taste. This project will conduct research on optimal tapping practices and promote findings at a field day.
FNC23-1373	Demonstrating the Feasibility of Producing Culturally Preferred Vegetable Crops in Underrepresented Urban Areas	Aaron	French	City Sprouts	NE	\$ 14,690	\$ 237,571	Crop Production	Vegetables	City Sprouts will demonstrate the feasibility of producing culturally preferred vegetable crops for refugee and immigrant populations in order to provide greater access to these foods for those experiencing food insecurity while providing learning and economic opportunities for urban farmers.
FNC23-1374	Utilizing Microscopic Testing Protocols to analyze our soil and compost to make the correct actions to improve our soil quality.	Glenda	George	Baby Greens Family Farm	IN	\$ 30,000	\$ 267,571	Sustainable Communities	Vegetables	Our goal is to help primarily socially underrepresented growers/farmers in Northwest Indiana develop soil and compost that is self-sustaining. It will help us use less amendments over time and grow nutrient dense organic foods. We also hope to encourage more food growth in urban spaces.
FNC23-1375	Interseeding cover crops and grazing cattle to improve soil health, water infiltration, and profitability within an Organic transition.	Andrew	Getting	Getting Farms LTD	IA	\$ 29,968	\$ 297,539	Production Systems	Agronomic	Interseed cover crop mix within oats on 113 acres. After oat harvest, rotationally graze cattle on 56.5 acres while haying the remaining acres. We will measure the affects on soil heath with a Haney, PLFA, and a NRCS water infiltration test. We will also measure weight gain on the feeder cattle.
FNC23-1376	Grazing Planted Prairie in WI: Pollinator and Pasture Value	Ryan	Heinen	Gwynn Hill Farm	WI	\$ 8,730	\$ 306,269	Animal Production	Animals	This project explores the efficacy of using planted prairie as both a pasture resource for rotationally grazed cows and as forb-rich habitat for pollinators. Pasture and pollinator value will be evaluated using forage quality analyses and by surveys of pollinator presence and forb abundance.
FNC23-1377	Farming for Community Apprenticeship and Urban Growers Education and Training Program	Katie	Houck	Urban Harvest STL	MO	\$ 15,000	\$ 321,269	Education & Training	Vegetables	Our program engages primarily low-income, low-access urban growers in an 8-week hands-on gardening education program. The Apprenticeship and Urban Gardening Education series aim to increase urban food sovereignty and the growth of an urban farming community of practice.

FNC23-1378	Predictive yields for small-scale staple crop production in North Central States using common homestead equipment and minimal inputs.	Eleanor	Hucker	Great Lakes Staple Seeds	MI	\$ 14,852	\$ 336,121	Production Systems	Agronomic	Small-scale (>12 acres) production of staple crops using manual labor and common equipment: amaranth, barley, beans, buckwheat, maize, millet, milo, oats, potatoes, rye, sunflower, triticale, wheat. Agronomic analysis includes: yield per sq ft; energy inputs (calorie, diesel); growing degree days
FNC23-1379	Getting Big Milk Out of Small Dairy: A Milking Parlor Construction Guide For Herdshares, Creameries and Those Bootstrapping on Rented Land	Travis	Hurt	North Sky Farm	IL	\$ 15,000	\$ 351,121	Production Systems	Animals	A do-it-yourself guide to building an economical, efficient, and safe milking parlor. Detailed pictures, diagrams, and part lists will have even the most novice builder able to construct a parlor for the milking of cattle. Tenant farmer friendly design allows for complete disassembly and portability
FNC23-1380	Evaluating a single-pass alfalfa-corn silage intercrop to enhance forage production, profitability, and soil and water health	Adam	Hurtgen	Hurtgenlea Ltd.	WI	\$ 14,355	\$ 365,476	Crop Production	Agronomic	Our project will evaluate a single pass alfalfa-corn silage intercropping system for ruminant forage to increase land use efficiency, improve nutrient management, and enhance soil and water conservation in the upper Midwest. Alfalfa will be managed in 30" and 60" corn interrow spacing with controls.
FNC23-1381	Sustainable Biofungicide for Organic Farms	CHRIS	KEARNS	Cannivera	WI	\$ 14,956	\$ 380,432	Production Systems	Vegetables	In 2020 we lost a crop to leaf septoria and in 2021 we developed a scalable herbal solution that prevented leaf septoria and gave us our best crop to date. We want to test our product measuring plant and soil health to see if this can be used by other farmers to replace chemical applications.
FNC23-1382	Water Consortium: Researching and Edifying Water Catchment/Conservation Best Practices for Urban Farmers in Detroit	jøn	kent	Sanctuary Farms	MI	\$ 28,870	\$ 409,302	Education & Training	Not commodity specific or doesn't apply	This project is research and education based. We endeavor to edify, document and subsidize aspiring farmers' seeking varying water catchment systems and conservation practices. Opening a channel within the local municipality for a more easeful working relationship with current and future farmers.
FNC23-1383	Mooningwanekaaning Food Sovereignty and Traditional Agriculture Grant	Winona	LaDuke	Winonas Hemp	WI	\$ 30,000	\$ 439,302	Sustainable Communities	Animals	We will restore traditional varieties of corn, beans, squash, potatoes, Jerusalem artichokes and heritage turkeys and document traditional fish emulsion and other fertilizers, as well as horse drawn agriculture providing educational opportunities for tribal communities and the public.
FNC23-1384	Investigating best practices for efficient minimal heating of high tunnels with modular heaters and row covers.	James	Millsap	Millsap Farms LLC	MO	\$ 29,784	\$ 469,086	Energy	Vegetables	Two established farms compare the efficiency and effectiveness of using portable, high efficiency propane heaters, coupled with poly ductwork, to maintain minimum temperature in season extension tunnels. Experimenters will compare fuel consumption and labor savings with and without row covers.
FNC23-1385	Economically Viable Method of Raising Surplus Saanen Dairy Goat Billies as Meat Goats by Using Them as Brush Goats	Chad	Montgomery	Cedar Meadow Farms, LLC	MO	\$ 9,979	\$ 479,065	Animal Production	Animals	Dairy goat billies are goat dairy byproducts. Meat production from surplus dairy billies could be considerable. Goats eat a variety of forage, which is excellent for environmentally sound brush control. We examine the economic viability of raising dairy billies for meat through brush control.
FNC23-1386	Regenerate a Fifth Generation Farm for Sustainability and Profitability While Revitalizing an Aging Farming Community	Trisha	Nieder	Nieder Farms	MO	\$ 14,874	\$ 493,939	Sustainable Communities	Animals	A community once known for its vibrant farming is aging, with farmland being sold to make room for developments. A young family has returned to their fifth generation farm to invest in sustainable practices and inspire and teach the local community - with a focus on young farmers - to do the same.

FNC23-1387	Growing a profitable urban farming cooperative in a low-income neighborhood	Matthew	Norris	OTIS Fresh Farm	IL	\$ 7,522	\$ 501,461	Sustainable Communities	Vegetables	We aim to implement a drip system to increase efficiency, plant bioswales and covercrops, and cultivate a food forest to transform a vacant lot into a reliable source of weekly food for neighbors while documenting the entire process as part of a <a href="#">guide for beginning urban farmers</a>
FNC23-1388	Increasing Capacity for Latino Farmers' Seed and Food Production with Culturally Important Crops	Zachary	Paige	North Circle Seeds	MN	\$ 29,920	\$ 531,381	Crop Production	Vegetables	Three farmers, Rodrigo Cala of Cala Farm LLC, Javier Garcia of Auga Gorda Cooperative and Zachary Paige of North Circle Seeds are collaborating to collectively grow, market and save seeds from culturally important crops; jalapeños and ghost peppers, white corn for elote and tortillas, and garlic.
FNC23-1389	Brix Levels For Grasshopper Control	Glendon	Philbrick	Hiddendale Farm	ND	\$ 6,968	\$ 538,349	Pest Management	Vegetables	The Brix Levels for Grasshopper Control proposal will study how to increase levels of brix in several vegetables, flowers, oats, alfalfa, and soybeans to over 12% as a method to prevent grasshoppers from eating the plant while improving taste, while achieving optimal soil health.
FNC23-1390	Pilot Testing of Raw Elderberry Vinegar Production Feasibility for Small Farms	Thomas	Ruggieri	Fair Share Farm LLC	MO	\$ 14,965	\$ 553,314	Farm Business Management	Additional Plants	The production of raw elderberry vinegar is a potential value-added product for elderberry fruit. The project will pilot different wine to vinegar production processes to determine the feasibility, economic potential, and product attributes (health and culinary) of production on a small-farm scale.
FNC23-1391	Feeding Kernza® screenings to broiler chickens	Malaina	Schlautman	Malaina Schlautman	NE	\$ 7,655	\$ 560,969	Production Systems	Animals	Our projects tests the potential for screenings of a new high protein perennial grain, Kernza®, to serve as a sustainably sourced component of broiler diets.
FNC23-1392	Incorporating mushroom production into an urban, outdoor, No-till, Organic farm on existing productive space.	Tristen	Schultz	McLaughlin Grows Urban Farm	MI	\$ 3,878	\$ 564,847	Production Systems	Other	Taking beds and space inside a no-till market garden that is already productive and adding mushroom production in the same space. How will this affect the soil health and how much can we increase production and diversity without adding any new land.
FNC23-1393	Comparing strategies and evaluating the economics of alternative, non-conventional approaches to small scale pumpkin growing in the Midwest.	Riley	Sowle	Oconto Riviera	WI	\$ 14,999	\$ 579,846	Crop Production	Fruits	Bringing idle farmland back into production - measuring the effectiveness and economic viability of alternative pumpkin crop management systems to determine whether high cost, science-based fertilization spray programs are worth the investment compared to sustainable farm-based compost systems.
FNC23-1394	George Washington Carver Farms will transform former vacant lots into a beautiful green landscape that creates space for agriculture and education.	Nick	Speed	Ujima	MO	\$ 15,000	\$ 594,846	Education & Training	Vegetables	Ujima purchased a house and 5 lots in 2021 to launch George Washington Carver Farms. We are building a community hub in honor of the Missouri legend. It will include an outdoor classroom, demonstration garden, native garden, event space, and Victory & Peace Park (a meditation/grief garden).
FNC23-1395	Using Sainfoin and Silflower to Improve Beehive Health and Productivity in Kansas	Allen	Stovall	AJ Honey Farms LLC	KS	\$ 14,152	\$ 608,998	Crop Production	Additional Plants	We want to determine the honey potential of 2 perennial crops, sainfoin and silflower, in a 4-site field experiment. We also want to educate others on how to keep bees profitably using <a href="#">perennial plantings</a> .
FNC23-1396	Fashioning Amendments and Seeding Techniques to Rebuild Essential Genera of Endophytes and other soil Nutrient mobilizers (FAST REGEN)	Walton	Sumner	Sumner's Farm, LLC	MO	\$ 28,813	\$ 637,811	Production Systems	Agronomic	We will cultivate herbicide metabolizing microbes and symbiotes for 3 cover crops (CC), harvest CC seeds, and make microbe enriched CC seed balls. We then try to restore soil health and suppress weeds using only the seed balls, and finally grow field corn without synthetic fertilizer or herbicides.

FNC23-1397	Developing a Cover Cropping and No-Till Planting System for Small Scale Vegetable Farms Using the Two-Wheeled BCS Tractor	Phillip	Swartz	beyondsustainable.farm	MI	\$ 17,965	\$ 655,776	Production Systems	Vegetables	Designing, fabricating, testing, and improving implements for the BCS two-wheeled tractor to be used to further develop and improve a cover cropping and no-till planting system for growing tomatoes, winter squash, and other crops on small scale vegetable farms.
FNC23-1398	Developing a Farm Apprenticeship in Northeast Minnesota	Sarah	Mayer	Wolf Ridge ELC	MN	\$ 29,905	\$ 685,681	Education & Training	Vegetables	Vegetable production mentorship will prepare and sustain emerging farmers for careers in farm management and operation.
FNC23-1399	Queen Production Viability to generate Honeybee nucleus colonies for overwintering success in the Midwest	Mitchel	Wayne	Wayne Honey Farm	WI	\$ 15,000	\$ 700,681	Animal Production	Animals	To generate a plan and data on the use of Varroa Sensitive Hygiene queen cells and virgins to have local queens in the north and winter them in nucs. With our short season this plan optimizes the productivity and minimizes the resources required while maximizing viable colony increase.
FNC23-1400	Native Floral and Culinary Perennials : A Guide for Specialty Crop Production, Agroforestry Systems, and Diverse Landscapes	Emily	Wright	Three Creeks Farm + Forest	MO	\$ 20,840	\$ 721,521	Production Systems	Additional Plants	Our project aims to assess the role perennial plantings can play in specialty food and floral crop production and agroforestry systems. It includes trials for 50+ native perennial species, workshops for farmers and floral designers, and an online guide for floral and culinary plants.