Paid Experiential Learning Programs in Supporting K-14 Educators and Administrators in NC

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Background

- Lack of curricula about innovation and entrepreneurship related to agriculture and food systems
- Lack of exciting contacts and approaches to support K-14 teachers and administrators across all disciplines, types of schools, and special needs education models
- Lack of hands-on, fun, and guided activities to engage and invigorate educators and administrators when learning about agriculture and food systems

Goals and Objectives

To increase the number of K-14 educational professionals trained in the agri-food system sciences via

(1) expert-guided interdisciplinary research to enhance faculty expertise and encourage widespread implementation of educational innovation at K-14 levels;

(2) immersive learning experiences (e.g., on-farm activities, experiential learning training, and field trips) and curriculum development and teaching training for K-14 education to improve student success outcomes

(3) continuous support, coaching, and mentorship for participants to integrate food and agricultural science concepts in their classes across disciplines to help students explore career opportunities in food and agriculture.

Location of the Program

https://cefs.ncsu.edu/field-research/small-farm-unit/

CEFS
CENTER for ENVIRONMENTAL FARMING SYSTEMS
NC State | NCA&T | NCDA&CS

The Center for Environmental Farming Systems is a partnership of North Carolina State University, North Carolina Agricultural and Technical State University, and the North Carolina Department of Agriculture and Consumer Services.

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Small Farm Unit Contacts

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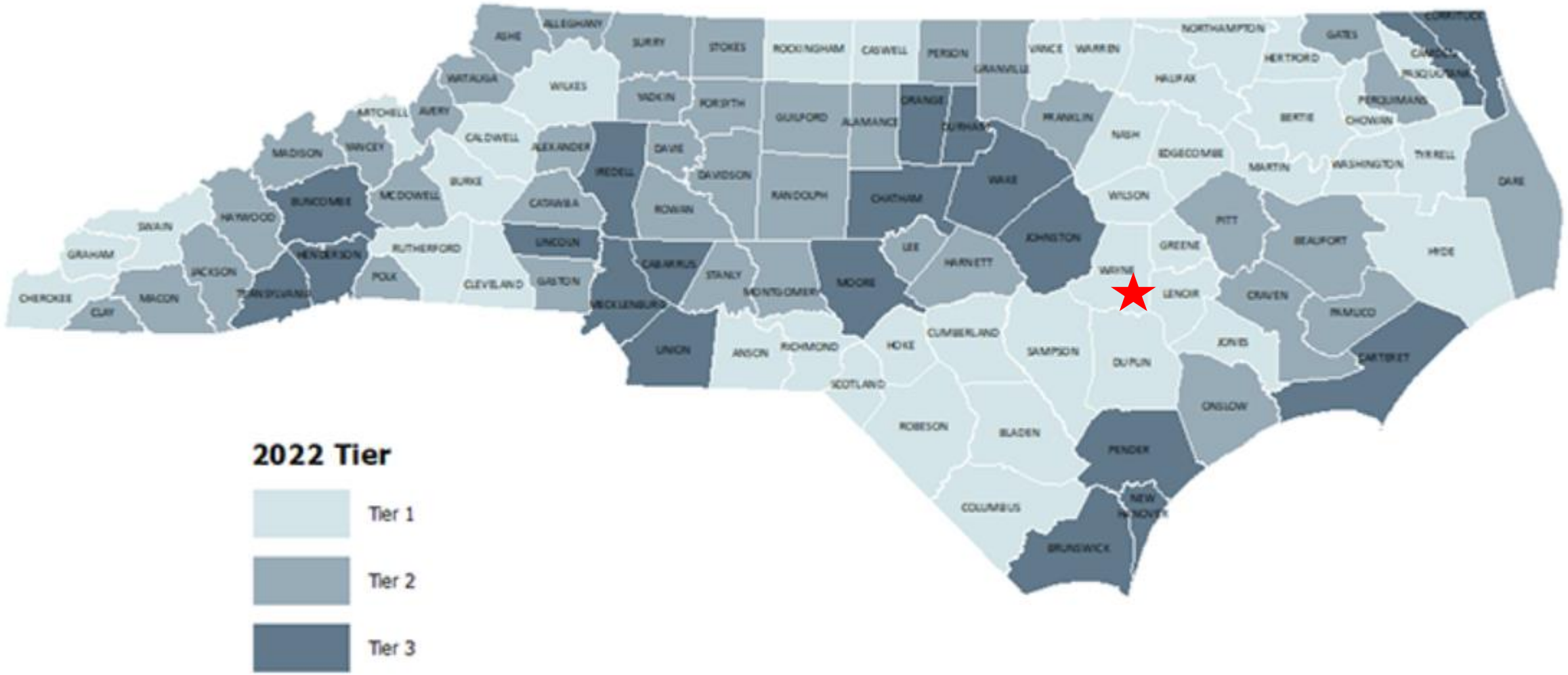
The research and experiential learning training site is located at the Cherry Research Farm (one of the 18 Research Stations managed by NCDA&CS) in Goldsboro, NC. This research farm has 2,250 acres of operating farmland covering multiple crop/animal production units to support long-term sustainable farming practices, training, research, and demonstration for agricultural producers. **Our primary on-farm training location for this project will be the Small Farm Unit at Cherry Research Farm**. It is a 30-acre organic operation (15 acres certified organic, 15 acres not certified organic but using organic practices) with multiple plots and various scales of fruit and vegetable production. There are 40+ beehives at the Small Farm Unit managed by the NC Beekeeper Association to offer a natural pollination habitat. Our farm has a long-term climate monitoring station, and it is located along the banks of the Neuse River and Little River, which provides an excellent opportunity to evaluate the impact of diverse cropping systems on climate change and water quality. ***Since 2016, we have grown 30-35 varieties of specialty crops and conducted over 60 workshops to show farmers niche markets to gain higher profits using many conservation practices (drip irrigation, plastic mulch, cover crops, barrier vegetables, solar fencing, etc.) We donate all harvested produce to the local charity to enhance community health.***

Priority

- Our priority is to serve the K-14 schools working with socially disadvantaged and underserved populations in North Carolina, including teachers who support students with special needs
- All disciplines are welcome
- Full-time employees in rural and urban areas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COLUMBUS
BRUNSWICK
NEW HANOVER

Logistic of the Program

- Time - June, July, and Maybe August
- The proposed training is 5-day immersive learning in Goldsboro, NC
- Each group will consist of 15 teachers
- Lodging, meals, materials and program travel are covered by grant
- Each participant will receive a certificate and $1500 payment if selected to participate, and must complete the full program
- Childcare, translation, and special accommodation can be arranged

Approaches

(1) Integrated research and hands-on activities to stimulate knowledge transfer and application – work at the farm

(2) Facilitated team works to follow the real-world work environment – shared values and responsibilities

(3) Peer-to-peer support to mirror networking in career development

(4) Monthly coaching and mentoring opportunities to support participants – will be scheduled in Zoom

Day 0: travel day for participants to arrive in Goldsboro, NC and check into the hotel.

6:00 pm to 7:30 pm welcome reception, networking activities, self-assessment

Day 1: 6:30 am to 7:00 am report to Small Farm Unit

7:00 am to 8:00 am tour Small Farm Unit, task assignment (Farm Manager)

8:00 am to 9:00 am training of tasks using different tools and equipment

9:00 am to 11:00 am team tasks and working hours (breaks in between)

11:00 am to 12:00 pm team reports, reflection, and Q&A at the farm

12:00 pm to 1:30 pm travel back to the hotel and work lunch

1:30 pm to 2:45 pm guided research on the trend of ag and food systems at the global, national, state, and local level (Dr. Liang)

2:45 pm to 3:00 pm break

3:00 pm to 5:00 pm guided curriculum design (by individual or team) evening activities and self study

Day 2 to Day 5:

6:30 am to 7:00 am report to Small Farm Unit (Farm Manager)

7:00 am to 9:00 am team tasks (breaks in between)

9:00 am to 11:00 am expert-led on-farm training sessions focusing on *conservation practices and regenerative systems* (organic vs. non-organic, seed and transplants, soil sampling, soil and water integration, cover crops, weed and pest control, various conservation practices, beekeeping, natural habitat management, crop and soil dynamics, and climate impacts)

11:00 am to 12:00 pm team reports, reflection, and Q&A at the farm

12:00 pm to 1:30 pm travel back to hotel or travel to field trip locations (lunch will be provided according to travel schedules)

1:30 pm to 2:45 pm guided research and extension activities (Dr. Liang and subject experts) focusing on *innovative food systems* including market, finance, farm labor, climate-smart strategies, and technology demonstration (e.g., sensors, robots, unmanned automatic vehicles, Geographic Information System and data visualization, etc.) Each day will cover a different topic to match research activities.

2:45 pm to 3:30 pm break or travel back to the hotel

3:30 pm to 5:30 pm guided curriculum design (by individual or team), peer-to-peer learning presentations, learning outcomes and reflections, and conclude the program on Day 5. Evening office hours will be available for participants to work with the trainers.

Criteria to select participants

(1) The school's need to promote and advance food and agricultural sciences

(2) Applicant’s personal and professional development goals in advancing food and agricultural sciences via different courses and settings

(3) Applicant’s willingness to commit time and effort to 5-day training in Goldsboro

(4) Teaching philosophy and experience

(5) Recommendations from supervisors, peers, and students

Our Team Management Principles

COORDINATE JOINT EFFORT AND RESPECT PARTICIPANTS AND SUBJECT-MATTER EXPERTS TO EXECUTE TASKS

INVITE AND GATHER INPUTS AND SUGGESTIONS TO FULFILL THE NEEDS OF DIVERSE STAKEHOLDERS

ACTIVELY RECRUIT AND ENCOURAGE PARTICIPATION FROM LIMITED-RESOURCE COMMUNITIES

RESPECT PRIVACY AND CONFIDENTIALITY

BUILD A TEAM AND EXPAND NETWORKS THROUGH MENTORSHIP AND COACHING

PROVIDE EFFICIENT AND EFFECTIVE SERVICES IN A TIMELY MANNER RESPONDING TO THE NEEDS