

A PROPOSAL TO
NORTH CAROLINA SMALL GRAIN GROWERS ASSOCIATION, INC.

FOR RESEARCH OR EDUCATION ENTITLED
Small Grains Extension and Outreach Program
COVERING THE PERIOD FROM **10/01/2023** TO **09/30/2024**

REQUESTING SUPPORT IN THE AMOUNT OF **\$33,000**

SUBMITTED BY:

| Project Leader | Departmental Affiliation |
|-----------------------|-------------------------------|
| Angela R. Post | Crop and Soil Sciences |
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NORTH CAROLINA STATE UNIVERSITY
RALEIGH, NORTH CAROLINA
IRS No. 56-6000-756
Second Congressional District

Contact Information:

North Carolina State University
Sponsored Programs Office
2701 Sullivan Drive; Suite 240
Raleigh, NC 27695-7514
Phone: (919) 515-2444
Facsimile: (919) 515-7721
Website: <http://www.ncsu.edu/sparcs/>
e-mail: sps@ncsu.edu

Note: This is a fundamental research or scholarly project and, as such, the University shall be free to publish or disseminate the results of this research or otherwise treat such results as in the public domain, and it will conduct the research in an open forum consistent with the University's mission of research, instruction and public service.

NCARS/NCCES Code: 24-02

OBJECTIVE(S):

1. Continuing education training for agents through Small Grains Short Course.
2. Incorporate complete datasets into consumable products for online and in-person dissemination.
3. Support virtual education efforts to supplement in-person training for farmers and agricultural agents.
4. Complete the planning stage for a 2025 international extension exchange with other top wheat producing countries: options include Australia, Canada, India, Pakistan, Germany or France among many others.

PROJECT DESCRIPTION AND RELEVANCE:**Continuing Education training for agents through Small Grains Short Course:**

To ensure we are cultivating the best possible resource in our ag agents, they are in need of comprehensive training in small grains production. Turnover in county agents has been high for many years and some counties even go without agents for extended periods of time when there is a vacancy. This is not a problem which can be effectively addressed by NCSGGA. But we can work to make sure the agents we have in place and those just coming on board are well-trained and prepared for what the season sends their way. In 2022-2023, we gained eight new field crops agents in North Carolina, all with limited experience in small grain. In addition, there are eight row crops positions currently open in the system.

One priority for this proposal is to continue offering a Small Grains Short Course each year. For funding year 2023-2024, we will again be offering both basic and advanced small grains training. The basic course will be offered in Raleigh, with demonstration plots on-farm in Johnston County and at the Clayton Research Station. By offering these trainings at a separate time from farmer training events, we are able to educate and answer agent questions out of the view of farmers. This allows them be more open and free to ask questions on the topics they need to learn more about. In-depth training at these events helps agents become a valid and reliable resource for growers.

Several specialists will be invited to provide their expertise in a lecture paired with hands-on training. A full training guide will be prepared for each participant as a take-home resource which they can add to over time. Once completed agents will receive a certificate of completion and be listed on the state Small Grains website as a resource for small grains in their county. Additional incentives may be offered to enhance participation for this new training. Since county travel budgets are minimal, travel and per diem will be offered for agents to participate in the short course. We will continue offering 25 slots and adjust depending on needs and interest.

There are still advanced training topics which we have not covered for agents in North Carolina. In 2024, we will offer advanced topics in the use of drone technology for data collection, scouting, and drone spray technologies. We will also offer grain grading training for agents to better understand the process growers go through to sell the crop.

In 2024, we will continue to offer a small resource library for attending agents to take back to their counties which will include the production guide, weed and disease identification guides and other relevant references for them to refer back to throughout the year. Many of these references have moved online and agents do not have them at their fingertips when out in the field. So we are providing some hard copy materials to keep in the truck for those areas where cell or Wi-Fi service is poor.

Variety Selection Tool:

We will continue to gather new data for the variety selection tool for wheat and keep it up to date so new variety recommendations are accurate and farm-specific. Additionally, in conjunction with the NC OVT we now offer yield data in a relative term as compared to two check varieties in the OVT tests. We will continue to offer trainings on the variety selection tool on an as-needed basis and will tie its use in with our variety training during the basic and advanced agent trainings.

New Consumables & Virtual Education Opportunities:

The newest version of the Small Grain Production Guide is available. Many of the chapters already have paired video content. Throughout 2023-24, we will continue to increase the level of video content for the production guide so that producers and agents can consume the information in written and visual formats. New videos will be released from the program on important topics as they arise during the season.

Site Visits:

Each year I make site visits to troubleshoot on-farm problems. Fuel costs and any overnight travel required to complete these site visits is covered under this proposal. I often make 30-40 farm visits each year under this proposed extension and outreach work.

Domestic & International Extension Exchange:

After 8 years at NC State, it is time to start building a more robust national and international component to the Small Grains Extension program. I would like for this part of the program to be an extension-based exchange between wheat producers in the US and other countries. Social media and cellular coverage has made the world small and producers have access to information and data in real time like never before. However, there is still no substitution for traveling to a new place to learn about the production practices and farm management decisions and challenges producers around the world are facing in wheat production. Moving forward I would like this part of the program to be two-fold: 1) To make a planning visit to a wheat producing country along with one representative board member to a major wheat producing region of the world with intention to revisit that place within 12 months with an extension group. The group may include agents, students, producers and industry representatives from North Carolina. 2) Make a domestic trip with a similar group to a wheat producing region of the United States (Pacific Northwest, Great Plains, Midwest, Ohio River Valley). I am hopeful that initial support from the NCSGGA will foster opportunities to request support for this programming through several other funding agencies.

Several countries are on the list as options for learning and growth in the United States: Canada, Mexico, Germany, France, Australia, Pakistan, China, India. There are certainly other countries with opportunity for learning and growth which are not currently suitable for US travelers at the moment. But they will be on the radar for the future as global relationships evolve. These include: Ukraine, Russia, Syria, Iran and Afghanistan.

I will work with the NCSU Office of Global Engagement to develop the international portion of this program so that it can be self-supporting over time and offer a credit hour for any graduate student in attendance.

To be clear, I am requesting support for two travelers for the initial international planning of this program, myself and one board member. I want the information exchange to be valuable to North Carolina producers so it is important to have a North Carolina farmer participate in the planning of the larger event. I have targets in mind, but will leave the first target destination open

to suggestion from the NCSGGA. We have lots to share and lots to learn no matter where we choose to take this new programming.

I am also requesting support for 12 travelers for the initial domestic portion of the program. We will either fly to our target destination and tour in vans in the area, or—if the location is close enough—we will drive the entire way. When booked far enough in advance, this travel is relatively cheap. The target location for 2023-24 is the Ohio River Valley which is a large soft wheat producing region of the United States. Likely for this year we will be driving.

IMPACTS:

This annual project will continue developing a knowledge-base for agents and growers that we can build upon from year to year. We started with short courses in 2017 and have offered the short course and other training opportunities each year for agents except during COVID. As we move forward each of the topics included in this proposal will be developed into expanded training courses to more fully prepare agents and growers to troubleshoot problems and make sound decisions on-farm. The Extension and Outreach proposal is now proposed for one year at a time so that we can evaluate programs and change directions quickly as new needs arise for the program.

The addition of a domestic and international extension exchange will strengthen our ability to pivot as the agricultural landscape changes quickly at the global scale. We can learn about international markets, production practices similar and different from our own and also how growers may be adjusting production due to major shifts in global weather patterns.

RELATIONSHIP TO SIMILAR PROJECTS, IN NC AND OTHER STATES:

Almost every other state with large acreages of small grains has comprehensive extension programming to offer to stakeholders in their state and greater region. We look to those successful programs to better our work here in NC and in the future we hope to inspire those successful programs to adopt some of our strategies as well. We have moved in a team direction here involving several specialists in our field days each year and inviting them to participate in our short course and Whistle Stop training events. We have successfully integrated with the NC OVT and are continuing to impress programs around the country to work towards a model of collaboration rather than isolation.

I am not aware of a project that brings together researchers, extension specialists, students, producers and agents for a joint learning venture either domestically or internationally. Most of these projects include a single audience. For example, the Nuffield scholars is for farmers, study abroad supports the education of students. There are limited or no programs for extension agents or specialists except individual travel experiences.

FUNDS REQUESTED:

2023-24 \$33,000