

**PROGRESS REPORT
TO
NORTH CAROLINA SMALL GRAIN GROWERS ASSOCIATION, INC.**

TITLE: NCSU Small Grains 2019-20 Extension Assistant, Harvest Support and Data Collection

LEADER(S): Angela R. Post

DEPARTMENT(S): Crop and Soil Sciences

REPORT

Two small grain field days were supported in 2020. Table 1 outlines dates, locations, and attendance at each field day. Overall, 1937 stakeholders were reached by the North Carolina Small Grain field days.

Table 1.

County	Date	Agents	Attendance
Gates County	February 19, 2020	Paul Smith; NE Ag EXPO Team	150
Rowan County	March 18, 2020	Brad Graham (NCDA)	1,787

This is the second year we have been down to two field days. We held the events early in the season so that growers would have time to implement management strategies prior to the grain-fill period. At field days that occur in late April and May we cannot effectively advise growers on management decisions because the timeline has already passed. Growers are always encouraged by the possibility of being able to go back to their farms after the field day and make sound decisions for their crop to get maximum potential. We have replaced these late season field days with the Small Grains Whistle Stop Tour, which is summarized in this report below.

In 2020, one of our field day events had to be conducted in a virtual format. We invited several specialists to be a part of the virtual event; however, participation was limited due to COVID-19. Between the two events we had participation from Mr. Ryan Heiniger, Dr. Angela Post, Dr. Christina Cowger, Dr. Wesley Everman, Dr. Paul Murphy, and Dr. Carl Crozier, who all presented relevant research from their programs. The Gates County field day also featured a small trade show with equipment on display and many vendors on hand to answer farmer questions. These activities and hands-on demos were well received by growers and other stakeholders.

Budgets for each location are presented below:

Table 2. Northeast Region Budget (\$3,000)

Description	Cost
Fuel (gas & diesel)	\$153.08
Field Supplies - samples	\$1,040.16
Misc. Supplies - Screen, Airgas, hand sanitizer	\$280.16
Insurance	\$44.70
Maintenance - tires	\$503.92
Printing Cost & Advertising	\$147.32
Shipping and Postage - stamps, paper & mailing samples	\$843.88
Tent Rental	—
Tables & Chairs	\$770.00
Porta-Potty Rental	\$266.34
Catering Services	\$2,144.39
Door Prizes & Plaque	\$131.97
Ice Cream, Water and Drinks	\$170.03
TOTAL EXPENDITURES:	\$6,495.95
Amount Deposited	\$3,000.00
Negative Balance	(\$3,495.95)

The negative balance this year was supported with county programming funds.

Central Piedmont Region Budget (\$ 4,600.00)

A check was not sent to the Piedmont Research Station this year. The Field day was originally scheduled for March 18, 2020. The in-person portion of the event was cancelled and we held the event virtually. We did reschedule the in-person portion for May 6, which also had to be canceled due to COVID-19. No expenditures were incurred for this field day. An in-person event is planned for 2020-21.

Table 3. Historical Comparison of Cost-per-Participant

Location	2017 (\$/participant)	2018 (\$/participant)	2019 (\$/participant)	2020 (\$/participant)
Eastern	151.24	No event	Whistle Stop	Whistle Stop
Northeast	64.59	44.83	57.76	43.31
Coastal Plain	91.94	No event	No event	No event
Central Piedmont	85.95	52.19	52.87	Virtual
Southern Piedmont	66.28	59.56	Whistle Stop	Whistle Stop
AVERAGE	92.00	52.19	55.31	43.31

In 2017, average cost per attendee based on numbers from registration sheets was \$92 and ranged from \$64.59 to \$151.24. In 2018, costs were more stable across locations averaging \$52.19 and ranging from \$44.83 to \$59.56. In 2019, cost remained stable across locations averaging \$55.31 per person and ranging from \$52.87 at Rowan County to \$57.76 at Chowan County. We will continue to do our best to execute these events for approximately \$50 per attendee where possible. While events were limited in 2020, we remained under our target cost per attendee at \$43.31.

Whistle Stop Tours:

In 2020, we had to move to a 100% Virtual format for the Whistle Stop tour due to COVID-19. We originally scheduled 10 county events and 2 Syngenta events. Both Syngenta events were cancelled, and one of our 10 county events was cancelled as well. The tour dates, topics and attendance are summarized in Table 4. The first small grains whistle stop tour was held in 2018 and was a great success with a total of 12 events and 230 participants. The 2019 tour continued this success with 12 events reaching 201 participants (Tables 5 and 6).

There is a slightly higher travel cost associated with the specialist traveling to so many events, but overall response has been positive. In the three years we have hosted the tour we have educated 1,686 producers and stakeholders in 24 NC counties and 2 states (NC and SC). In the future, I would love to expand this tour to make it a regional activity and include state specialists from South Carolina and Virginia.

Table 4. All Virtual Small Grains Whistle Stop Tour Summary 2020.

2020 Dates	County: Address	Host	Crop Focus Topic	Attendance
April 24	Surry	Tim Hambrick	Wheat topdressing Demo	153
April 28	Pender	Mark Seitz	Wheat with limited topdress	87
April 29	Orange	Mart Bumgarner	Wheat Yield Estimations	64
May 1	Henderson	Jeff Chandler	Malt Barley Variety	49
May 5	Duplin/Onslow	Melissa Huffman/Della King	Wheat for forage and PGR	70
May 6	Stanly	Dustin Adcock	Wheat for Cover Crop	686
May 8	Caldwell	Seth Nagy	Wheat Variety Comparison	64
May 12	Lenoir	Steve Killete	Wheat and Barley Variety	34
May 13	Union	Andrew Baucom	Wheat Variety and PGR	48
TOTAL ATTENDANCE				1,255

Table 5. Year 2 Small Grains Whistle Stop Tour Summary 2019.

2019 Dates	County	Host	Crop Focus Topic	Attendance
April 30	Johnston	Tim Britton	Wheat- Variety Test	6
May 1	Beaufort	Rod Gurganus	Wheat- Variety Test *Agent Training to follow	25
May 7	Syngenta Field Day	Phil Farmer	Wheat- Heading date & Official Variety Test	32
May 9	Syngenta Field Day	Phil Farmer	Wheat-Heading Date & Official Variety Test	41
May 10	Rowan	Morgan Watts	Small grain silage and forage *Agent training to follow	3
May 13	Union	Andrew Baucom	Wheat- Official Variety Test, N-rich strip & PGR	22
May 13	Haywood	Ethan Henderson	Small grain silage and forage	15
May 14	Onslow	Melissa Huffman	Wheat- Scouting Problems, Yield Estimations	8
May 28	Henderson	Jeff Chandler	Wheat-Maximizing Yield Barley-Malting Quality, Nitrogen Programs	10
May 30	Lenoir	Stephen Kilette	Wheat- Official Variety Test, Population x Nitrogen Barley-Nitrogen	11
May 30	Wayne	Daryl Anderson	Wheat- Scouting Problems, Yield Estimations	14
	Guilford	Anna-Beth Williams	Wheat Scouting, Yield Estimations, Grain Quality	14
Total Attendance				201

Table 6. Year 1 Small Grains Whistle Stop Tour Summary 2018.

2018 Dates	County: Address	Host	Crop Focus Topic	Attendance
April 1	Beaufort	Rod Gurganus	Wheat- OVT & N Rich	27
April 18	Sampson	Della King	Wheat-N Rich	8
April 20	Cumberland	Anthony Growe	Wheat- N Rich/ Weed Management/Fungicide	3
April 23	Granville	Gary Cross	Malt Barley- Various	18
April 25	Wake	Emily Mueller	Wheat- N Rich	16
April 25	Johnston	Tim Britton	Wheat N- Rich & variety	26
May 4	Haywood	Jeff Chandler	Malting Barley	35
May 4	Wilkes	John Cothren	Small Grain Silage	8
May 8	Franklin	Charles Mitchell	Malt Barley- Fungicide	18
May 9 th	Duplin	Blake Sandlin	Wheat- Fungicide	16
May 10 th	Robeson	Mac Malloy	Fungicide & Pop x N	27
May 30 th	Henderson	Kyle Miller	Small Grain Silage	28
TOTAL ATTENDANCE				230

Extension Assistant Update

Our Extension Assistant Position was filled for only a portion of the year with a dedicated team-member. Mr. Taylor Purucker filled the role from May 2019 to mid-August 2019 and Mrs. Kaitlyn Milstein filled the role from December 2019 to May 2020. Both these individuals have been a part of the small grains program in other capacities and have done an excellent job organizing the new Grain Quality Analysis lab, analyzing data and processing samples. The position is vacant and advertised. However, the hiring process has been halted due to COVID 19. All hires must now be justified and approved by the chancellor's office. Currently this position remains under the direction of the Small Grains Extension Specialist. We will likely move forward into 2020-21 with the team members we have currently.

In addition, several undergraduates have worked to prepare field day sites and whistle stop materials in the absence of a dedicated person including Ian Fleming, Jeremy Davis, Brant Black and Jacob Chanona. We employed a portion of the salary budget for this position to pay these individuals during times when their roles were clearly dedicated to executing Small Grains Extension materials.

Harvest Support Update:

We currently utilize two combines to execute Small Grains Harvest in North Carolina. Replicated agent tests were supported at several locations this season. Data for these are released back to the county agent for dissemination locally. Eight other researchers were supported through harvest support from the small grains program at nine locations. Official Variety Trials were harvested at all 6 locations in 2020 and 35 of 36 agronomic trials directly in the program were harvested. One was lost from a producer broadcasting their bulk wheat over the top of the test.

Combine repair and maintenance exceeded \$20,000 in the 2019-20 season and will continue to go up as the Delta Combine ages. In 2017, the OVT purchased a new combine to be shared

when needed for Small Grain Harvest. We have replaced many pieces of equipment through these joint programmatic efforts. In 2019-20, we did not make any major equipment purchases in order to pay down a significant portion of the new combine. We are looking toward replacement of the Small Grains Delta combine over the next three years. Through these efforts and by carefully maintaining equipment and culling out older pieces that cannot be effectively repaired we have saved approximately 25% of the cost of a new combine. We hope to be fiscally responsible enough over the next three years to add to that savings and be able to purchase a new machine for Small Grains. It is through your support of proper and necessary equipment maintenance that we are can continue to do our work.

Data Collection Update:

We continue to employ statistical consultant, Ms. Carol Kinder, who works full time in the Department of Applied Ecology. She dedicates 12 hours each month to analyzing Small Grains and Official Variety Testing data as needed. A portion of her salary is currently paid by the OVT program. The small grains program pays a small portion of her salary from this grant for the months of June, July and August for her work on small grains datasets.

Individual location data for the Small Grains official variety test sites were analyzed and submitted for review to sponsors on July 8. Data were released on schedule to the public via www.ncovt.com on July 13, 2020.

We executed 36 agronomic field trials at the state level. These are being processed through the Grain Quality lab now and will be included in fall data releases as well as incorporated into the Revised Small Grains Production Guide.

IMPACT STATEMENT:

In total the field days and whistle stop tour series reached 3,192 stakeholders in the 2020 season. While the Whistle Stop Tours were all virtual, we have received a lot of positive feedback on the series. Whistle stop tours are gaining popularity with agents and growers are more likely to ask questions of specialists at these smaller events.

All OVT locations and 35 agronomic tests were executed from start to finish. Eight additional researchers' trials were harvested through joint efforts by the Small Grains and OVT programs. This adds value to information small grain producers are receiving because we can get yield data on trials that might not have been harvested in the past.