NC STATE UNIVERSITY

College of Agriculture and Life Sciences
North Carolina Agricultural Research Service
Office of the Director
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April 25, 2022

The Honorable David Rouzer
United States House of Representatives
2333 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Rouzer,

North Carolina State University and the College of Agriculture and Life Sciences strongly support this FY 2023 request for USDA funds to improve facilities used by the USDA ARS crop breeding program at the Central Crops Research station in Clayton, North Carolina, which resides in the 7th Congressional District. As detailed below, this investment will have a direct positive impact on the work of ARS and a direct impact on the farming constituents throughout the 7th District. In addition, it will serve as a foundation for other important crop improvement programs throughout the state. The proposal is designed to improve the productivity of the USDA-ARS crop breeding programs and complimentary work of scientists at NC State University.

Corn and soybean are both important farm commodities in North Carolina and the 7th Congressional District. In 2019 corn was planted on almost one million acres in NC with a farm sales value of approximately $450 million and soybean was planted on just over 1.5 million acres in North Carolina with a farm sales value of approximately $500 million. In the 7th congressional district, corn and soybean are grown on approximately 140,000 and 190,000 acres, respectively. Additionally, corn and soybean are primary feed ingredients for the $6.6 billion (farm sales) animal production industry in North Carolina. Specifically, North Carolina produces $1.9 billion and $2.7 billion in farm sales value of hogs and poultry, respectively. In 2020 in the 7th Congressional District, there were 3.4 million hogs, 9.4 million turkeys, and 84 million broilers.

Significant gains have been made in corn and soybean average yields over time. Five-year average corn yield in North Carolina (1997-2001) was 96 bu/ac and increased to an average of 122 bu/ac during the most recent 5-year period (2017-2021). During the same time period, average soybean yield increased from 29 bu/ac to 38 bu/ac. While historical yield gains may be attributed to many improvements in a wide range of production practices, most of the modern-day improvements in corn and soybean yield are directly attributable to improved genetics. Continued genetic improvement of plant varieties is essential to the long term sustainability of crop production in North Carolina. Improvements to irrigation and infrastructure at the Central Crops Research Station in Clayton, will improve efficiency, data collection and precision of research, and data quality, all of which accelerate evaluation and release of new genetic materials.

The USDA-ARS corn researchers located in Raleigh, North Carolina, focus on using the wide genetic diversity present in corn to further our understanding of resistance to plant pathogens and to develop and release germplasm with improved tolerance to abiotic and biotic stresses. These releases, particularly through the Germplasm Enhancement of Maize (GEM) project, are then made available to all corn breeding programs in the United States. The GEM project has a network of collaborators that includes all of the major entities involved in the production of new corn germplasm in the U.S. This network facilitates the flow of new germplasm from our research plots in North Carolina into new commercial corn hybrids which can then be grown by farmers in North Carolina. By developing corn germplasm in North Carolina we expect that the products will be better adapted to some of the unique challenges that the North Carolina growing environment can present, including heat stress, drought stress and seed pathogens. Improving the resilience of the corn crop in North Carolina and across the U.S. should help ensure a stable pipeline for raw ingredients that are used to develop feed for important livestock commodities in North Carolina.

The USDA-ARS Soybean and Nitrogen Fixation Research Unit in Raleigh conducts research to improve seed yield, seed quality, and drought and flood tolerance for increasing the productivity and value of the crop in NC and is the only public breeding program in North Carolina. This group regularly uses 25-30 acres of field space in the Central Crops Research Station (CCRS) annually for summer soybean crossing, advancing early generations of soybeans and for regular yield testing.

The USDA researchers rely on the Central Crops Research Station for field studies due to its proximity to the duty station of USDA-ARS employees in Raleigh. Plant breeding requires daily field activities, and the next closest research station with adequate resources to conduct this type of work (Cunningham Research Station) is located about 1.5 hours from Raleigh. The infrastructure ARS uses at Central Crops needs upgrades, especially to the irrigation system. Water availability during the peak growing season (May-August) has been unreliable and irrigation is crucial to the collection of accurate data and preservation of valuable and sometimes irreplaceable germplasm. The system in use is more than 50 years old and has outlived its useful life. The hydrants and the underground piping have degraded. Replacement of the underground pipe with new pipe of increased diameter will improve both reliability and efficiency, the latter by cutting down the time necessary to irrigate a field. The facilities at Central Crops are also in need of upgrades, including: 1) increased and improved space for drying, shelling, packaging and long-term cold storage of research-derived corn and soybean seed. The current facilities are inadequate and antiquated, particularly the dryers and cold storage. 2) Increased storage capacity under a covered structure for valuable research and farm equipment. The USDA has invested hundreds of thousands of dollars into new research equipment that will need to be stored under shelter to prolong the usability of the equipment. 3) Improved facilities for storing and handling pesticides and fertilizer, which will allow researchers to gain access to fields earlier in the growing season and improve the ability of the farm workers to both safely handle pesticides and fertilizers and to use a broader range of chemicals for both research purposes and pest control, and 4) Creation of grain storage and drying capacity, which is currently unavailable at the farm but which would allow researchers more flexibility for harvesting research plots in a timely manner.

Please feel free to contact me if you have questions or desire additional information.

Thank you for your strong and enduring support for USDA-ARS, NC State University, and the Agricultural Producers.

Sincerely,

Steven A. Lommel
William Neal Reynolds Distinguished Professor
Associate Dean for Research, CALS
Director of NC Agricultural Research Service

NC SOYBEAN PRODUCERS ASSOCIATION

April 25, 2022

The North Carolina Soybean Producers Association (NCSPA) is pleased to support the request for the financial investment to renovate and improve facilities, equipment, and irrigation systems that are critical to the USDA ARS crop improvement mission at the Central Crops Research Station (CCRS) in Clayton, NC

The mission of the NCSPA is to maximize the profitability of North Carolina's soybean farmers in an economically and environmentally sound manner. Soybean is the largest acreage crop produced in NC with around 1.5 million acres grown annually and with an annual revenue of almost $500 million at the farm gate. Additionally, soybeans produced in NC are a primary feed ingredient for the animal industry in NC. Both soybean production and animal agriculture are of particular importance to the 7th Congressional District. One of the primary goals of the NCSPA is to support research and demonstration to improve soybean varieties and farm production practices. Research conducted by USDA-ARS at CCRS is vital to improving yield, profitability, and sustainability of soybean production in NC.

Scientists from the USDA-ARS Soybean and Nitrogen Fixation Research Unit in Raleigh conduct research to improve seed yield, seed quality, drought and flood tolerance for increasing the productivity and value of the crop in NC and are the only public soybean breeding program in the state. CCRS is a primary site for USDA-ARS soybean field research and is critical for their program and for the research to support soybean growers in NC. Most of the infrastructure and farm equipment at CCRS are old and outdated. New investments to modernize CCRS infrastructure and irrigation will improve efficiency, quality of data, and ability to evaluate and develop soybean germplasm specific to NC growing regions.

The North Carolina Soybean Producers Association wholeheartedly supports funding of these improvements and believe they will have a direct impact on soybean growers through development of new and improved drought and flood tolerant, pest resistant, high quality soybean varieties.

Sincerely,

Katherine Drake Stowe, PhD
Research Coordinator
North Carolina Soybean Producers Association

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North Carolina Pork Council

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April 26, 2022

The Honorable David Rouzer
2333 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Rouzer,

The North Carolina Pork Council (NCPC) is pleased to support the request for the financial investment to renovate and improve facilities, equipment, and irrigation systems for ARS related research being conducted at the Central Crops Research Station (CCRS) in Clayton, NC.

The mission of the NCPC is to promote and educate to ensure a socially responsible and profitable North Carolina pork industry. Swine production has a farm gate value of approximately $2 billion of the over $6.6 billion value of the North Carolina animal commodities (livestock and poultry). The pork industry also provides employment for more than 44,000 North Carolina citizens. One of the primary goals of the NCPC is to support research to improve swine production practices including feed crop production. Research conducted by USDA ARS at CCRS is vital to improving yield, profitability, and sustainability of soybean and corn production in North Carolina is important to the swine industry as both crops are used as feed for swine. This is especially true in the 7th Congressional District where corn, soybean, and animal production are prevalent.

Scientists from the USDA-ARS scientists located at North Carolina State University, Raleigh conduct research for increasing the productivity and value of both soybean and corn in North Carolina. CCRS is the primary site for these USDA-ARS soybean and corn field research scientists and is critical for their program and for the research to support growers in NC. Most of the infrastructure and farm equipment at CCRS are old and outdated. New investments to modernize CCRS infrastructure and irrigation will improve research precision, efficiency, data quality, and ability to evaluate and develop germplasm specific to North Carolina.

The North Carolina Pork Council wholeheartedly supports funding for these improvements, and we believe that these improvements will have a direct impact on swine producers through enhancement of corn and soybean production for animal feed.

Respectfully,

Roy Lee Lindsey, Jr.
CEO, NC Pork Council

The Corn Growers Association of North Carolina is pleased to support the request for the financial investment to renovate and improve critical facilities, equipment, and irrigation systems used to advance critical USDA Agricultural Research Service corn and soybeans research at the Central Crops Research Station (CCRS) in Clayton, NC

The Corn Growers Association of North Carolina is a member of the National Corn Growers Association and the U.S. Grains Council working across the nation and around the world to improve corn and to promote the use of corn. Also, we provide funding for research and education projects to improve corn management, promote the development of corn genotypes, and to improve corn products. Corn is grown on approximately one million acres annually in NC with an annual revenue of almost $450 million at the farm gate. Corn is also important to the animal agriculture economy in NC as a feed source for hogs and poultry. Both corn production and animal agriculture are a significant part of farm production in the 7th Congressional District. Improving yield, profitability, and sustainability of corn production in NC is a key focus of our organization and research conducted by USDA-ARS at CCRS is critical to fulfilling that mission.

The USDA-ARS corn researchers located in Raleigh, NC focus on using the wide genetic diversity present in corn to further our understanding of resistance to plant pathogens and to develop and release germplasm with improved tolerance to abiotic and biotic stresses. These releases, particularly through the Germplasm Enhancement of Maize (GEM) project, are then made available to all corn breeding programs in the US. New germplasm from our research plots in North Carolina flows into new commercial corn hybrids which can then be grown by farmers in North Carolina. By developing corn germplasm in North Carolina, new varieties will be better adapted to some of the unique environmental challenges in NC, including heat stress, drought stress and seed pathogens. Improving the resilience of the corn crop in North Carolina ensures sustainability of NC corn production and a stable pipeline for raw ingredients that are used to develop feed for important livestock commodities.

The Corn Growers Association of North Carolina fully supports funding of these improvements and believes they will have a direct impact on corn growers through development of newly adapted corn varieties with improved yield and pest tolerance.

Best,
Rhonda Garrison
Rhonda Garrison
Executive Director
Corn Growers Association of North Carolina