

The Honorable Mike Flood, representing Nebraska First Congressional District
House Appropriations Committee – Subcommittee on Agriculture, Rural Development,
Food, and Drug Administration, and Related Agencies

Member Day Testimony – March 23, 2023

Thank you, Chairman Harris, Ranking Member Bishop, and all the members of the Subcommittee. I am grateful for this opportunity to highlight an important project to promote cutting-edge agriculture research in the United States, the Midwest, and my home state of Nebraska.

Specifically, I would like to call to your attention the **United States Department of Agriculture (USDA) Agricultural Research Service (ARS) National Center for Resilient and Regenerative Precision Agriculture**. I am requesting \$25 million in programmatic funding with accompanying report language under the Agricultural Research Service (Buildings and Facilities) account, as well as \$25 million in community project funding to demonstrate my passionate support for this facility and innovative agriculture research.

Our nation is at a critical juncture in advancing precision agriculture technology and related artificial intelligence. In the next two decades, experts predict that U.S. agriculture will transition from mechanized agriculture using large, diesel-powered tractors and implements to digital agriculture using highly networked, small, lightweight autonomous robotic implements, drones, and sensors utilizing high input data and artificial intelligence. On-farm decision-making will be guided by these digital tools for targeted, precision, enterprise-level management. Similar changes are expected in the livestock industry for animal health, herd management, and workforce solutions.

These technological changes coupled with a rapidly growing world population demanding increased food production means that our producers must adopt climate-smart and regenerative management practices that promote resilience of our soil, water, and natural resources. **As the nation's agricultural systems move from mechanized to digital agriculture in this challenging environment, the federal government must invest in precision agricultural research to guide and drive this change.**

The National Center for Resilient and Regenerative Precision Agriculture is a planned \$110 million co-located United States Department of Agriculture (USDA) Agricultural Research Service (ARS) lab facility of 120,000 square feet with a 15,000 square foot greenhouse adjacent to a \$50 million state and philanthropically funded University of Nebraska ag-tech accelerator building in Lincoln, Nebraska. This facility will be the **first of its kind to utilize a "hub and spokes" model** focused on regenerative and precision agriculture which will bring together scientists from highly productive and nationally renowned land-grant universities and USDA ARS scientists across the nation to ensure the United States remains the leader in feeding and fueling a growing world sustainably.

The existing ARS Grain, Forage, and Bioenergy Research Unit and the Agroecosystems Management Research Unit in Lincoln will join two new research units: the Water, Climate, and Resilience Research Unit and the Precision Production Research Unit in this new facility, housing over 150 people when completed. Congress has already appropriated planning and design funds and funds for the greenhouse construction with groundbreaking expected in 2024. The full USDA

ARS Lab building will be constructed when Congress has appropriated the total funds for the project.

Agriculture plays a tremendous role in the Midwest Region of the United States, particularly in the seven states of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The seven-state region accounted for more than 30 percent of the nation's \$487 billion in agricultural production output in 2021 and is home to 411,000 farms and ranches. Although the Midwest Region accounts for just 14 percent of the nation's landmass, 80 percent of the land in these states is in agricultural production. In total, the Region accounts for more than 40 percent of U.S. cropland, nearly 20 percent of U.S. pastureland, and nearly 30 percent of total U.S. ag sector production. This region hosts existing complimentary federal agricultural facilities: the USDA National Bio and Agro-Defense Facility in Manhattan, Kansas; ARS National Laboratory for Agriculture and the Environment in Ames, Iowa; ARS Meat and Animal Research Center in Clay Center, Nebraska; and the National Institute for Food and Agriculture in Kansas City, Missouri. A co-located ARS facility for resilient and regenerative precision agriculture is highly needed.

Constructing this facility in close proximity to existing ARS facilities and strong land-grant universities will amplify capabilities and collaborations to benefit the entire nation.

The Cooperative Extension arm of land-grant universities and colleges offers an unparalleled connection to producers, processors and tribal communities and others eager to test, evaluate and adopt emerging ag technologies and regenerative management practices. Conveniently, the Midwest Region is home to 18 public research universities, eight of which are land-grant institutions and drivers of game-changing research in precision agriculture, plant and animal

genetics, livestock health, remote sensing, on-farm application of technologies and drones, natural resources management, biosecurity, and one health initiatives in human, veterinary, and environmental health.

This project has seen continued **support from the Administration and USDA** officials. It is specifically included in the USDA's budget book for FY24. Dr. Chavonda Jacobs-Young, Undersecretary for Research, Education, and Economics and Chief Scientist at the Department of Agriculture, has repeatedly expressed USDA's support for this facility. Most recently in response to a letter from the Nebraska delegation, she stated "I will continue to promote and advance for the cost-effective and timely development of this new facility to ensure that it will be open for business as soon as possible. As you noted, the National Center for Resilient and Regenerative Precision Agriculture will provide key collaboration opportunities with other universities and research organizations...**this work is essential for supporting the national economy and U. S. farmers, ranchers, stakeholders, and consumers.**"

This project has also garnered **support from state leaders** in Nebraska. In 2022, the State Legislature passed, and the Governor signed into law, \$25,000,000 to be matched by private philanthropic funding of \$25 million to construct the University of Nebraska - Lincoln companion facility adjacent (east side of expected ARS Lab building) to make the National Center for Resilient and Regenerative Precision Agriculture.

Most notably, this project has **strong community support**. Several commodity stakeholder groups in Nebraska have sent a letter in support of the National Center and demonstrated their support

through continued advocacy. In the letter, these stakeholders write, “Our ability to thrive depends on developing and adopting climate-smart, data-driven, resilient, and regenerative precision agriculture practices...[the] National Center also provides a unique opportunity for land-grant institutions and federal agencies to partner with established ag industries, as well as to attract startups and entrepreneurs to commercialize promising technologies.” In addition, the Lincoln Chamber of Commerce and the Nebraska Chamber of Commerce emphasize in a joint letter that “...The transition to digital agriculture will require a skilled ag- and food-tech workforce. **One in four jobs are tied to farming and ranching in Nebraska.** Biotechnology, value-added agriculture – including renewable fuels, automation, ecommoditization and international trade **present the greatest opportunities for economic growth both regionally and nationally.**” All in all, the National Center boasts diverse and robust support from those across the nation, the Midwest region, the state of Nebraska, and the local community.

In conclusion, I hope that my testimony here today highlights the important role this facility would play in advancing modern, resilient, and cutting-edge agricultural research. I am proud to have requested \$25 million dollars in programmatic funding to build upon the funds previously appropriated for this facility. I have simultaneously made a \$25 million community project funding request to support this important project.

Thank you for your time and consideration of this important project. I look forward to working with you to support cutting-edge research, agriculture resilience, rural prosperity, and the people of Nebraska’s First Congressional District.