Science Societies

Fostering innovation and global competitiveness in the 2023 farm bill

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To address the current and emerging challenges to build a resilient and equitable agricultural system for the future, we must not only maintain, but also grow, the investment in USDA-sponsored research. Photo by Jaclyn C Fiola.

With the 2018 farm bill set to expire next year, stakeholder groups, like ASA, CSSA, and SSSA, are working to develop their recommendations to put forward to Congress. During this time, it is critical that our Societies engage in the discussion and make sure that Congress is aware of the effects that farm bill programs have on the scientific community. To do this, a Farm Bill Task Force, made up of members from all three Societies, has been established to assist the Science Policy Office staff in developing our policy and research recommendations.

In June, the task force surveyed scientists and practicing professionals to get feedback on agricultural research, extension, and production. The following priorities were identified and will serve as the basis of our advocacy efforts over the next year.

1. Provide robust, consistent, and diverse support for **agricultural research**
2. Improve **climate coordination** to support translational research
3. Facilitate FAIR **data collection, sharing, and storage**
4. Support **equitable outcomes** in research, education, and production
5. Leverage networks of trusted, **on-farm advisers** to meet technical assistance needs

Provide Robust, Diverse Support for Agricultural Research

The productivity and economic prosperity of American agriculture seen today is built on decades of investments in agricultural research and innovation. To address the current and emerging challenges to build a resilient and equitable agricultural system for the future, we must not only maintain, but also grow, the investment in USDA-sponsored research. The limited number of total USDA research dollars is the top barrier for expanding agricultural research and innovation across the U.S.

Programmatic changes could allow the USDA to better support and sustain long-term agricultural research. Examples of such changes could be extending the lengths of grants to account for multi-year field studies and clarifying priority area definitions while still allowing for rapid research response to critical emerging issues. An across-the-board increase in federal investment in agricultural research programs remains critical.

Improve Climate Coordination to Support Translational Research

As climate change exacerbates the pressures on agricultural producers to do even more with less while requiring agile production decisions in the face of changing environments, the pace of information exchange needs to quicken. To move into the future, collaborations among existing groups should be strengthened, and new, interdisciplinary, and multilevel alliances must be formed. This will contribute to the free flow of information to and from the producers on the ground and encourage a more rapid dissemination of best practices.

Facilitate FAIR Data Collection, Sharing, and Storage

To achieve rapid and efficient gains in agricultural resilience, we will need to address the significant impediment posed by a lack of data infrastructure, long fostered by a research culture that has eschewed data sharing. The USDA should also put considerable thought into what data should be collected; data management; long-term sustainability, preservation, and curation practices; and importantly, data privacy, especially where working farms are concerned. New USDA programs that incentivize climate-smart agricultural practices should include a mandatory data collection component that feeds information into this data repository. Just as crucial as sustained funding for data collection is the development and sustained maintenance of an agricultural data repository and a national, coordinated system to funnel

observations into it. The repository should ascribe to FAIR (Findable, Accessible, Interoperable, and Reusable) principles. Funding designated to set up the repository must also include tools to train and incentivize researchers and students to contribute organized and annotated data as well as meta-specialists for data extraction and upload applications.

Support Equitable Outcomes in Research, Education, and Production

Our three Societies have made the commitment to enhancing the experiences, opportunities, and safety of all our members by creating a diverse, inclusive, and equitable environment in our scientific fields of study. The USDA can play an invaluable role in addressing the equity challenges facing minority and underrepresented groups within the agricultural research workforce. Robust federal funding for the broad suite of USDA research programs can advance a more representative and equitable agricultural research enterprise by bolstering the student pipeline, expanding educational programs and grants—especially for minority-serving institutions (MSIs)—expanding resources for early career researchers, and facilitating collaborations with diverse stakeholders to address existential threats, such as climate change. Further, we recognize that promoting equitable outcomes does not stop with the research workforce but extends to extension, outreach, and production.

Leverage Networks of Trusted, On-Farm Advisers to Meet Technical Assistance Needs

Agricultural extension and USDA-NRCS employees work along with certified professional advisers, such as Certified Crop Advisers (CCAs), to bring the latest techniques and technologies to producers. Extension and certified professionals are already trusted resources that producers turn to for advice and assistance, and USDA should leverage these relationships to deliver technical assistance. At the same time,

when technical assistance is in high demand, the cooperative extension system is plagued with run-down infrastructure, reduced budgets, and limited personnel. Further, certified professionals struggle to navigate the cumbersome and complex process to gain Technical Service Provider certification. To deliver adequate assistance to producers and help them navigate production challenges and conservation opportunities, USDA needs to support an all-hands-on-deck approach among on-farm advisers.

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