AGree Transforming Food & Ag Policy

ECONOMIC + ENVIRONMENTAL RISK COALITION

July 30, 2020

Deputy Secretary Stephen Censky
United States Department of Agriculture
Washington, D.C., 20510

Dear Deputy Secretary Censky,

On behalf of the AGree Economic and Environmental Risk Coalition (AGree Coalition), we thank you for the opportunity to provide suggestions for developing the strategy of USDA's Agricultural Innovation Agenda. We believe that one of the biggest opportunities to increase productivity and decrease the environmental footprint of U.S. agriculture in the next decade is increasing USDA's agricultural data integration and sharing it appropriately and safely through a data warehouse or data trust model.

As you know, USDA is home to a vast resource of agricultural data collected from producers by various agencies. Increased integration and analysis of this agricultural data is key to supporting innovative analyses by university researchers and delivering transformative innovation in the four focus areas identified in the 2019 National Academies report *Science Breakthroughs to Advance Food and Agricultural Research by 2030*. We know that this can be done in a way that prioritizes data security and protects producers' personally identifiable information.

Improved agricultural data integration and analysis is essential to addressing the most pressing questions facing the U.S. agricultural sector and American society at large. Questions that could be addressed by increased USDA data integration and analysis include:

- How can agricultural enterprises become more efficient, resilient, and sustainable?
- How are yield variability and risk affected by different soil types for major crops?
- How are yield variability and risk affected by soil health for major crops?
- What conservation practices, alone or in combination, work best, where?
- What conservation practices are most effective in reducing farm risk due to extreme weather events and climate variability?
- How can the food and agriculture sector develop and implement solutions to climate change? In doing so, how can we measure and verify those important contributions?
- What legislative and administrative policy changes are needed in order to make conservation practices, federal farm programs, and improved food security more cost-effective, efficient, and economically viable?

USDA data sets have the potential to answer these questions, but they must be integrated and securely shared to perform the needed analysis. By integrating relevant USDA data sets and creating a secure, multi-layer querying system, government and land grant university researchers will be able to simulate and evaluate real time crop growth, risk, financial market impact, water quality and quantity impacts,

and climate change mitigation and adaptation options. In order to fully leverage this integrated data system, USDA should implement a strategy where data collection experiments are designed to inform models which can then be used to scale results. Researchers will be able to combine the data sets provided by USDA with regional farm level data sets, remotely sensed data, weather data, futures market data, and other public and private data to perform vital analysis. This data integration, analyses, and results would benefit the entire agricultural supply chain as well as taxpayers and the environment.

This chain-reaction of benefits initiated by increased data sharing was demonstrated when the National Agricultural Statistics Service made the data collected by the Agricultural Resource Management Survey (ARMS) public. When this occurred, the number of peer reviewed articles published by agricultural researchers at universities skyrocketed. This small example of making one dataset securely and easily available to trusted researchers demonstrates that unlocking research and innovation in the agricultural sector can be as simple as establishing secure, easy to use pathways for data access.

Another successful example that demonstrates the impacts of improved data sharing and analysis is the system of internal data dashboards recently created for USDA Mission Areas. This shared, internal USDA platform integrates an analytics platform to make data available across office leadership and inform decision-making. This system has increased USDA's capacity to generate important insights, developed through analysis of robust data sets, across the agency. We encourage USDA to continue this excellent work and extend this innovation to developing secure, external data-sharing systems.

It is also important that USDA's efforts to build out a bold new agenda for innovation are grounded in practical realities of implementation, particularly given the challenges and disruptions presented by COVID-19. Ensuring the quality and interoperability of data inputs, measuring program outcomes, and building understanding about the impact of conservation practices is essential to accomplishing the agency's conservation and efficiency goals. Ensuring that innovation efforts are implemented across the agency and creating accountability for field offices and agents must be a priority to ensure these efforts benefit farmers, the environment, and the taxpayer.

The AGree Coalition looks forward to seeing dozens, if not hundreds, of university agricultural researchers and experts facilitate research and innovation in genome design, digital/automation, prescriptive intervention, and systems-based farm management in partnership with USDA through the use of an innovative, integrated data infrastructure. We strongly believe that increased agricultural data integration, sharing, and analysis are key to delivering innovation in the Agenda's identified focus areas and answering the pressing research questions outlined in these written comments.

We appreciate your leadership in launching and developing this Agricultural Innovation Agenda and look forward to reviewing the final strategy and lending support to USDA as an implementation partner.

Sincerely,

The AGree Economic and Environmental Risk Coalition