The Power of Agricultural Data

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Federal agricultural data collection and management in the United States is decentralized and fragmented, hampering the ability of policy-makers to empower growers and researchers in data analytics. A bill introduced by Senators John Thune (R–SD) and Amy Klobuchar (D–MN) and included in the Senate farm bill could help.

Bipartisan bill S. 2487, the Agriculture Data Act of 2018 (*1*), directs the U.S. Department of Agriculture (USDA) to establish a secure data warehouse and a protocol for confidential data sharing with university researchers to allow for better use of the USDA's vast data resources. This would unlock enormous opportunities for data-driven scientist discovery that will eventually lead to better conservation outcomes. Broadly linking historic microdata across the USDA will lead to research and tools that could better enable producers and policy-makers to identify and operationalize activities that improve water quality, risk management policies, nutrient effluence management, fertility and pesticide use, and in-field management (*2*–*6*). Pollution mitigation and economic growth are not mutually exclusive (*7*), but better data analytics and use of existing data are necessary to bridge the gap. Rapid advancements in georeferenced technologies and analytics offer an unprecedented opportunity to use these data to enable smarter production systems.

The Agriculture Data Act of 2018 would be an important first step to harness the power of USDA data, providing researchers the ability to conduct big-data–oriented research in agriculture, the environment, nutrition, and supply chains. Such research would enable the design of policies that inspire changes in agricultural practices, improve producer profitability, and lead to better environmental outcomes. Strongly held concerns about data privacy have inspired frequent conversations among producers, researchers, conservation groups, congressional leaders, and USDA legal counsel experts about best approaches to data integration. The proposed Agriculture Data Act of 2018 ensures the protection of private data while unleashing the power of data that are currently siloed by the federal government. We encourage its passage.

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Competing interests: J.D.W., J.M., N.G., B.S., C.M., K.W.D., R.B., F.Y., and D.A. are members of AGree's Conservation and Crop Insurance Taskforce. J.D.W. provided unpaid technical advice to U.S. Senate staff responsible for drafting the Agriculture Data Act of 2018 legislation, which was informed by AGree's Conservation and Crop Insurance Taskforce. J.D.W. operates Ag-Analytics.Org, a farm management and data platform, and is an Expert Reviewer for the Federal Crop Insurance Program as nominated by the Chief Economist of the USDA and authorized by the Federal Crop Insurance Corporation Board of Directors.