



Research and Extension¹

INTRODUCTION

This Backgrounder surveys the Research and Extension Title (Title VII) of the Agricultural Improvement Act of 2018—otherwise known as the 2018 Farm Bill. Title VII authorizes and funds programs within the Research, Education, and Economics (REE) mission area of the United States Department of Agriculture (USDA).² Under this title, the federal government seeks innovative solutions to complex agricultural issues, disseminates research results to farmers, and educates groups and individuals on topics involving agriculture.³ Many consider USDA’s Research and Extension programs vital to the operation and enhancement of the United States agricultural industry because farmers rely on the latest science, technology, and training.⁴

I. HISTORY

Agricultural research and extension⁵ traces its history to the Morrill Land Grant Act of 1862.⁶ This Act sold tracts of federal land to finance the establishment of new public colleges and universities for agricultural and technical education.⁷ The Hatch Act of 1887 then expanded on the Morrill Act, offering federal money for agricultural research at the land-grant institutions.⁸ The Second Morrill Act of 1890 extended grants to historically black colleges and universities, creating the 1890 Institutions.⁹ In 1914, the Smith-Lever Act provided funding for extension agents, who are people hired at land-grant schools to conduct and disseminate relevant agricultural research to farmers.¹⁰ The Smith-Lever Act also offered federal funding for research and extension activities at these institutions. These laws created the basis for the modern agricultural research and extension system.

¹ The following people contributed to this report: Haley Cobb (University of Alabama School of Law), Danielle Haley (Harvard Law School), Hammons Hepner (University of Oklahoma College of Law), Sarah Luther (University of Houston Law Center), Tiffany Oliver (Florida State University College of Law), Emma Scott (Harvard Law School Food Law and Policy Clinic), and Alexandra Smith (Summer Intern, Harvard Law School Food Law and Policy Clinic).

² *Research, Extension, and Related Matters*, U.S. DEP’T OF AGRIC., ECON. RESEARCH SERV., <https://www.ers.usda.gov/agriculture-improvement-act-of-2018-highlights-and-implications/research-extension-and-related-matters/> (last visited Jul. 16, 2020).

³ *Id.*

⁴ *See Our Work: Research, Extension and Education*, NAT’L SUSTAINABLE AGRIC. COAL., <http://sustainableagriculture.net/our-work/issues/research-extension-education> (last visited May 9, 2020).

⁵ “Extension provides non-formal education and learning activities to people throughout the country — to farmers and other residents of rural communities as well as to people living in urban areas. It emphasizes taking knowledge gained through research and education and bringing it directly to the people to create positive changes.” *Extension*, U.S. DEP’T OF AGRIC., <https://nifa.usda.gov/extension> (last visited May 9, 2020).

⁶ GENEVIEVE K. CROFT, CONG. RSCH. SERV., R45897, THE U.S. LAND-GRANT UNIVERSITY SYSTEM: AN OVERVIEW 1–2 (2019), <https://fas.org/sgp/crs/misc/R45897.pdf>.

⁷ *History of APLU*, ASS’N OF PUBLIC & LAND GRANT UNIV., <http://www.aplu.org/about-us/history-of-aplu/> (last visited Jul. 16, 2020); *Land-Grant University FAQ: What is a land-grant university?*, ASS’N OF PUBLIC & LAND GRANT UNIV., <http://www.aplu.org/about-us/history-of-aplu/what-is-a-land-grant-university/index.html> (last visited Jul. 16, 2020).

⁸ 7 U.S.C. § 301; CROFT, THE U.S. LAND-GRANT UNIVERSITY SYSTEM, *supra* note 6, at 6.

⁹ 7 U.S.C. § 322; CROFT, THE U.S. LAND-GRANT UNIVERSITY SYSTEM, *supra* note 6, at 2.

¹⁰ 7 U.S.C. § 341; CROFT, THE U.S. LAND-GRANT UNIVERSITY SYSTEM, *supra* note 6, at 7.



This modern system falls under the REE mission area, which supports the creation and dissemination of scientific knowledge around agriculture.¹¹ The mission area driven by four agencies that together carry out “biological, physical, and social sciences related broadly to agriculture, food, and natural resources, delivered through research, statistics, extension, and higher education.”¹² While the REE mission area has a total budget approaching \$1.9 billion in FY 2020,¹³ the vast majority of this funding is made through annual discretionary appropriations from Congress.¹⁴

Of the four agencies under REE, three are “intramural”¹⁵ and carry out research and statistics work directly. The **Agricultural Research Service (ARS)** was established in 1953 and is the primary agency tasked with agricultural research.¹⁶ Today, ARS employs over 2000 researchers at over 90 research stations, across the United States and abroad, who conduct and share research related to “efficient and sustainable food and fiber production, development of new products and uses for agricultural commodities, development of effective pest management controls, and support of USDA regulatory and technical assistance programs.”¹⁷

The **National Agricultural Statistics Service (NASS)** grew out of USDA’s early Division of Statistics and the creation of the Crop Reporting Board in 1905. Like the Economic Research Service, the modern-day NASS came out of a USDA administrative reorganization in 1961.¹⁸ NASS employs about 1,000 analysts in 45 states who collect and compile U.S. agricultural statistics including the decadal Census of Agriculture, and crop forecasts and price estimates.¹⁹

The **Economic Research Service (ERS)** was an administrative creation of the Secretary of Agriculture in 1961, though it was preceded by the creation of the Bureau of Agricultural Economics in 1922 and by the Division of Statistics one year after the USDA was created in 1862.²⁰ ERS typically employs about 330 researchers who conduct economic and policy analysis on all aspects of the agricultural sector.²¹ In June 2019, USDA announced the relocation of ERS and National Institute of Food and Agriculture to the Kansas City Region.²²

The fourth REE agency, the **National Institute of Food and Agriculture (NIFA)**, is a creation of the 2008 Farm Bill. NIFA is “extramural,” meaning that rather than conducting research in-house, the Institute “provides grants and partnerships with the land-grant university system and other organizations that work

¹¹ CONG. RSCH. SERV., R40819, AGRICULTURAL RESEARCH: BACKGROUND AND ISSUES 1 (2020), <https://fas.org/sgp/crs/misc/R40819.pdf>.

¹² *Id.*

¹³ U.S. DEP’T OF AGRIC., FY2020 BUDGET SUMMARY (2019), <https://www.usda.gov/sites/default/files/documents/fy2020-budget-summary.pdf>. This allocation rose to \$3.3 for the FY 2021 budget, but the COVID-19 pandemic may still impact these figures. See U.S. DEP’T OF AGRIC., FY2021 BUDGET SUMMARY (2020), <https://www.usda.gov/sites/default/files/documents/usda-fy2021-budget-summary.pdf>.

¹⁴ See JIM MONKE, CONG. RESEARCH SERV., R45425, BUDGET ISSUES THAT SHAPED THE 2018 FARM BILL (2019), <https://fas.org/sgp/crs/misc/R45425.pdf>.

¹⁵ AGRICULTURAL RESEARCH, *supra* note 11, at 1–2.

¹⁶ *Id.*; *About History*, U.S. DEP’T OF AGRIC. (Dec. 20, 2017), <https://www.ars.usda.gov/oc/timeline/about/>.

¹⁷ AGRICULTURAL RESEARCH, *supra* note 11, at 1; *About ARS*, U.S. DEP’T OF AGRIC., <https://www.ars.usda.gov/about-ars/> (last visited Mar. 19, 2021).

¹⁸ *About NASS: History of Agricultural Statistics*, U.S. DEP’T OF AGRIC., https://www.nass.usda.gov/About_NASS/History_of_Ag_Statistics/index.php (last visited May 9, 2020).

¹⁹ AGRICULTURAL RESEARCH, *supra* note 11, at 5.

²⁰ *ERS History*, U.S. DEP’T OF AGRIC., <https://www.ers.usda.gov/about-ers/ers-history/> (last visited May 9, 2020).

²¹ AGRICULTURAL RESEARCH, *supra* note 11, at 5.

²² *Secretary Perdue Announces Kansas City Region as Location for ERS and NIFA*, U.S. DEP’T OF AGRIC. (June 13, 2019), <https://www.usda.gov/media/press-releases/2019/06/13/secretary-perdue-announces-kansas-city-region-location-ers-and-nifa>.



at the state and local level.”²³ NIFA has discretionary budget authority totaling approximately \$1.5 billion annually.²⁴

II. THE 2018 FARM BILL

Title VII, the Research and Extension Title of the 2018 Farm Bill, funds specific programs, sets REE priorities, and sets requirements for competitive grant funds. The Title reauthorizes many existing programs and creates several new opportunities. Most of the reauthorizations extend funding an additional five years and expire at the end of fiscal year (FY) 2023.²⁵ Reauthorizations include the Agriculture and Food Research Initiative (AFRI);²⁶ the Organic Agriculture Research and Extension Initiative (OREI);²⁷ the Specialty Crop Research Initiative (SCRI);²⁸ the Sustainable Agriculture Research and Education Program (SARE);²⁹ and the Foundation for Food and Agriculture Research (FFAR).³⁰ OREI, in particular, will receive a significant increase in funds, with mandatory spending increasing gradually from \$20 million in FY2019 to \$50 million in 2023 and beyond.³¹

The 2018 Farm Bill also adds a number of new grant and research priorities that fall under NIFA’s purview. To the list of “high-priority research and extension areas,” Title VII adds macadamia tree health, national turfgrass research, fertilizer management, cattle fever ticks, laying hen and turkey research, chronic wasting disease, algae agriculture research, nutrient management, dryland farming agricultural systems, and hop plant health.³² The Title also adds new priorities to the funding list for AFRI, which is administered by NIFA, including soil health, tools that accelerate the use of automation or mechanization of labor-intensive crop-related tasks, and barriers and bridges to entry for different types of disadvantaged farmers.³³ Grants issued under AFRI are intended “to combat major agriculture-related societal challenges through research, education, and extension.”³⁴

Turning to new programs, the 2018 Farm Bill establishes two notable programs intended to foster innovation. First, the Agriculture Advanced Research and Development Authority (AGARDA) Pilot is designed to develop cutting-edge technology through innovative research that is focused on persistent, threatening problems in food and agriculture, including extreme weather.³⁵ AGARDA is modeled after forward-looking programs within other agencies, such as the Defense Advanced Research Projects Agency, with the hope of supporting research projects that private industry would not otherwise initiate.³⁶ Despite buzz around this pilot, the section had not been implemented—not even the completion of a

²³ AGRICULTURAL RESEARCH, *supra* note 11, at 1.

²⁴ U.S. DEP’T OF AGRIC., FY2020 BUDGET SUMMARY, *supra* note 13, at 71.

²⁵ RENÉE JOHNSON & JIM MONKE, CONG. RESEARCH SERV., RS22131, WHAT IS THE FARM BILL? (Sept. 26, 2019).

²⁶ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7504, 132 Stat. 4821.

²⁷ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7210, 132 Stat. 4811.

²⁸ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7305, 132 Stat. 4816.

²⁹ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, §§ 7201–7204, 132 Stat. 4803.

³⁰ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7603, 132 Stat. 4826; JOHNSON & MONKE, *supra* note 25.

³¹ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7210, 132 Stat. 4811.

³² Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7209, 132 Stat. 4806.

³³ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7504, 132 Stat. 4821.

³⁴ *AFRI Annual Review*, U.S. DEP’T OF AGRIC., NAT’L INST. OF FOOD AND AGRIC., <https://nifa.usda.gov/afri-annual-review> (last visited Jul. 16, 2020).

³⁵ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7132, 132 Stat. 4797.

³⁶ GENEVIEVE K. CROFT, CONG. RSCH. SERV., IF11319, 2018 FARM BILL PRIMER: AGRICULTURAL RESEARCH AND EXTENSION 3 (2019), <https://fas.org/sgp/crs/misc/IF11319.pdf>.



strategic plan—as of July 2020.³⁷ The second initiative authorizes USDA to make competitive grants to support research, education, and extension activities in the areas of urban and indoor agriculture, with mandatory funding for FY2019.³⁸ NIFA began moving forward on this initiative by soliciting stakeholder input in April 2020.³⁹

The 2018 Farm Bill also introduces new funding opportunities for educational institutions. Title VII directs USDA to recognize three new “Centers of Excellence” at 1890 Institutions that will each focus on one or more of the following areas: student success and workforce development; nutrition, health, wellness, and quality of life; farming systems, rural prosperity, and economic sustainability; global food security and defense; natural resources, energy, and environment; and/or emerging technologies.⁴⁰ The Title also establishes a scholarship grant program for students at 1890 Institutions pursuing a career in the food and agriculture sciences.⁴¹ Separately, the 2018 Farm Bill creates the New Beginning Initiative to provide grants to land-grant colleges and universities for support specifically targeted to Tribal students.⁴²

The most notable repeal impacting the Research and Extension Title is that of the matching requirement on all competitive grants, which the 2014 Farm Bill had implemented.⁴³ NIFA has since updated its guidance for competitive grant applications to reflect this removal, explaining that for programs established prior to 2014, the match requirement reverts to that included in the program’s authorizing legislation.⁴⁴

III. KEY ISSUES

A. *Public Funding in Agricultural Research and Development*

While the United States has historically led the world in agricultural research and development (R&D), private sector investment in these activities has comprised a greater proportion of R&D dollars spent in recent years.⁴⁵ It is important, however, that the United States continue investing in agricultural R&D rather than relying on the private sector to ensure that researchers continue to create and innovate in ways that will benefit society long-term and not just produce commercially advantageous products. The creation of AGARDA to help stimulate innovation to thwart threats to the food system, reauthorization of many research grant and funding opportunities, and repeal of certain matching requirements in the 2018 Farm Bill will support such essential agricultural advancements. However, USDA has not yet moved forward with implementing AGARDA and many programs only receive discretionary funding. Further, funding gaps remain in crucial areas. For instance, there is no direct funding for plant breeding research,

³⁷ See STAFF OF H. SUBCOMM. ON APPROPRIATIONS, 116TH CONGRESS, REP ON AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES APPROPRIATIONS BILL, 2021, <https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/Ag%20Report%20received%207-2-20.pdf>.

³⁸ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7212, 132 Stat. 4811.

³⁹ See Solicitation of Stakeholder Input for Urban, Indoor, and Other Emerging Agricultural Production Research, Education, and Extension Initiative, 85 Fed. Reg. 22124 (Apr. 21, 2020).

⁴⁰ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7213, 132 Stat. 4813.

⁴¹ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7117, 132 Stat. 4789.

⁴² Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7120, 132 Stat. 4791.

⁴³ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 7614, 132 Stat. 4833; see *2014 Farm Bill Drilldown: Sustainable and Organic Research*, NAT’L SUSTAINABLE AGRIC. COAL. (Feb. 12, 2014), <https://sustainableagriculture.net/blog/2014-farm-bill-drilldown-ree/>.

⁴⁴ *Matching Requirement*, U.S. DEP’T OF AGRIC., <https://nifa.usda.gov/matching-requirement> (last visited Jul. 16, 2020).

⁴⁵ MATTHEW CLANCY ET. AL., U.S. DEP’T OF AGRIC., U.S. AGRIC. R&D IN AN ERA OF FALLING PUBLIC FUNDING (Nov. 10, 2016), <https://www.ers.usda.gov/amber-waves/2016/november/us-agricultural-rd-in-an-era-of-falling-public-funding/>.



thus hindering development of “regionally adapted seeds” and other innovations that would help secure the long-term viability of U.S. agriculture.⁴⁶ Such gaps will likely fall subject to future farm bill debates.

B. Regional Extension Agents Role Assistance in Navigation of Rules/Regulations

The outlets for information regarding research and funding opportunities are extremely fragmented. There are over 50 programs and sub-programs through the Farm Bill alone available to producers and similar entities.⁴⁷ With 97% of farms being family owned and run, it is difficult to keep up with all the opportunities available to producers.⁴⁸ Theoretically, extension agents help farmers navigate these systems; however, these agents are already stretched thin⁴⁹ and experience high rates of burnout.⁵⁰ Further, despite the significant benefits extension has brought to farmers and the U.S. agricultural economy over the years, extension funding and the number of full time agents have both declined.⁵¹ As a result, many farmers and advocates would be happy to see more funding devoted to support cooperative extension, as well as new strategies for imparting information and deploying services.⁵²

C. New Farmers and Ranchers Associate Degree Program

The Research and Extension Title works to attract new farmers through the Beginning Farmers and Ranchers Development Program. The program has proliferated into a wide variety of projects. For instance, from 2009 to 2010, sixty-nine different projects trained, educated, and provided outreach assistance to beginning farmers in forty-five states.⁵³ These projects used several techniques, but some of the most successful included face-to-face classroom coursework or workshops, one-on-one mentoring, hands-on workshops, incubators, and full-time apprenticeships with seasoned farmers.⁵⁴ However, some have criticized the program for its inconsistency. The USDA’s own analysis pointed out that measuring outcomes proved challenging given the variety of offerings.⁵⁵ Thus, some have argued for standardization, possibly modeled on private industry associates degree offerings like the Ford ASSET Program, designed to set

⁴⁶ 2018 Farm Bill Drilldown: Research and Plant Breeding, NAT’L SUSTAINABLE AGRIC. COAL. (Dec. 14, 2018); *Path to the 2018 Farm Bill: Sustainable Agriculture Research*, NAT’L SUSTAINABLE AGRIC. COAL. (Nov. 29, 2017), <https://sustainableagriculture.net/blog/path-to-2018-farm-bill-research/>.

⁴⁷ *Farm Bill Programs & Grants – Overview*, NAT’L SUSTAINABLE AGRIC. COAL., <http://sustainableagriculture.net/publications/grassrootsguide/farm-bill-programs-and-grants> (last visited Jul. 16, 2020).

⁴⁸ NAT’L AGRIC. STAT. SERV., U.S. DEP’T OF AGRIC., 2012 CENSUS OF AGRIC. HIGHLIGHTS – FAMILY FARMS, (2015), https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/NASS%20Family%20Farmer/Family_Farms_Highlights.pdf.

⁴⁹ N.C. COOP. EXTENSION CMTY. LISTENING SESSION, CREATING OUR FUTURE, N.C. AGRIC. AND TECH. STATE UNIV. (2013) <https://www.ces.ncsu.edu/wp-content/uploads/2013/10/Moore-County-Listening-Session-Summary.pdf?fw=no>.

⁵⁰ Karen M. Enslie, *Burnout: How Does Extension Balance Job and Family?*, 43 JOURNAL OF EXTENSION (2005) <https://www.joe.org/joe/2005june/a5.php>.

⁵¹ Sun Ling Wang, *Cooperative Extension System: Trends and Economic Impacts on U.S. Agriculture*, 29(1) CHOICES 1 (2014), https://www.choicesmagazine.org/UserFiles/file/cmsarticle_355.pdf.

⁵² See NAT’L FARMERS UNION, POLICY OF THE NAT’L FARMERS UNION 168 (2016), <http://1yd7z7koz052nb8r33cfxyw5-wpengine.netdna-ssl.com/wp-content/uploads/2016/03/2016-Policy-Book-Final.pdf>; Sam Bloch, *Wisconsin’s agriculture agent shortage heralds the end of an era for rural America*, THE COUNTER (May 29, 2018), <https://thecounter.org/extension-agents-wisconsin-university-cuts/>; George W. Norton & Jeffrey Alwang, *Changes in Agricultural Extension and Implications for Farmer Adoption of New Practices*, 42 APPLIED ECON. PERSPECTIVES & POLICY 8 (2020), <https://onlinelibrary.wiley.com/doi/full/10.1002/aapp.13008>.

⁵³ NAT’L INST. OF FOOD & AGRIC., U.S. DEP’T OF AGRIC., FY2011 OUTCOMES REPORT: BEGINNING FARMER AND RANCHER DEVELOPMENT PROGRAM (2011), https://nifa.usda.gov/sites/default/files/resources/Beginning%20Farmer%202011%20Outcomes_0.pdf.

⁵⁴ *Id.*

⁵⁵ *Id.*



desired outcomes and procedures across states. The standardization may come up against opposition, however, due to its expense and the transfer of decision-making from the state to the federal level.

D. Farm-Level Data Collection

As precision agriculture becomes more widely used, questions of data privacy become more urgent. Farmers' equipment gathers a wealth of information about their local climate, fields, and crops.⁵⁶ That information could be very useful to researchers, but farmers could see their competitiveness suffer if data linked to their land became public in an identifiable way. In the 2018 Farm Bill, Congress signaled increased interest in this growing field by extolling the benefits of precision agriculture technologies and directing—under the Miscellaneous Title—the Federal Communications Commission to create a Task Force for Reviewing the Connectivity and Technology Needs of Precision Agriculture in the United States.⁵⁷ Thus, we are likely to continue seeing debates over privacy protections and research access in future farm bill discussions.⁵⁸

E. ERS & NIFA Relocation Out of Washington D.C.

In June 2019, USDA announced the relocation of ERS and NIFA to the Kansas City Region.⁵⁹ USDA cited cost savings—around \$20 million per year—and the Kansas City Region's status as a “hub for all things agriculture,” with a “significant presence of USDA and federal government employees in the region” and “multiple land-grant and research universities within driving distance,” as key reasons for the move.⁶⁰ Despite these justifications, many policymakers and advocates have questioned the wisdom and motives behind this decision. Some House Democrats have asked the Government Accountability Office to review the decision and supportive reasoning, which USDA had kept under wraps.⁶¹ Skeptics note the high rates of attrition and delays in important research and reporting owing to the move.⁶² These concerns appeared well-founded as of October 2020, when it was reported that the two agencies had lost about 75% of their staff, making grant administration and report completion nearly impossible.⁶³ The significant impacts of this change will continue to be an important subject in the lead up to the next farm bill.

CONCLUSION

The Research and Extension Title remains crucial for scientific progress, agricultural productivity, and farmer education. Although Congress passed a budget-neutral 2018 Farm Bill,⁶⁴ the Research and Extension Title received a positive cost impact score—indicating an overall increase in spending—from the Congressional Budget office for the outlays across both five-year (FY2019–FY2023) and 10-year (FY2019–2028) projections.⁶⁵ Overall, Title VII maintained or increased funding across important

⁵⁶ Sjaak Wolfert et al., *Big Data in Smart Farming – A review*, 153 *ELSVIER*, 69, (2017) <http://www.sciencedirect.com/science/article/pii/S0308521X16303754>.

⁵⁷ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, § 12511, 132 Stat. 4992.

⁵⁸ *Hearing: The Future of Farming: Technological Innovations, Opportunities, and Challenges for Producers*, U.S. H.R. COMM. REPOSITORY (Jul. 13, 2017), <http://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=106220>.

⁵⁹ *Secretary Perdue Announces Kansas City Region as Location for ERS and NIFA*, U.S. DEP'T OF AGRIC. (June 13, 2019), <https://www.usda.gov/media/press-releases/2019/06/13/secretary-perdue-announces-kansas-city-region-location-ers-and-nifa>.

⁶⁰ *Id.*

⁶¹ *Democrats request GAO review of ERS, NIFA relocation*, POLITICO (Dec. 12, 2019), <https://www.politico.com/news/2019/12/12/usda-relocation-083802>.

⁶² *Id.*; see also *Demolition by Relocation: ERS and NIFA Moving Day Looms Closer*, NAT'L SUSTAINABLE AGRIC. COAL. (Jul. 24, 2019), <https://sustainableagriculture.net/blog/not-relocation-but-demolition-ers-nifa/>.

⁶³ *USDA relocation has delayed key studies and millions in funding, employees say*, WASHINGTON POST (Oct. 2, 2019), <https://www.washingtonpost.com/science/2019/10/02/usda-relocation-has-delayed-key-studies-millions-funding-employees-say/>.

⁶⁴ MONKE, BUDGET ISSUES, *supra* note 14, at 2.

⁶⁵ *Id.* at 4.



initiatives and created new mechanisms to spur innovation in agricultural research and development, but left some important programs at the mercy of the appropriations process.