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Testimony of
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On
Fiscal Year 2020 Appropriations for the U.S. Department of Agriculture
Submitted to the
Appropriations Subcommittee on Agriculture, Rural Development,
Food and Drug Administration, and Related Agencies
United States House of Representatives

April 4, 2019

The Entomological Society of America (ESA) respectfully submits this statement for the official record in support of funding for agricultural research at the U.S. Department of Agriculture (USDA). **ESA requests discretionary appropriations of at least \$1.520 billion in fiscal year (FY) 2020 for USDA's National Institute of Food and Agriculture (NIFA), including at least \$500 million for the Agriculture and Food Research Initiative (AFRI). The Society also supports a topline funding level of at least \$1.821 billion for the Agricultural Research Service (ARS) including robust funding for the ARS Crop Protection budget as well as funding to preserve valuable pest management research and invasive species programs in FY 2020. ESA also supports at least \$1.1 billion for Animal and Plant Health Inspection Service (APHIS) to support their mission of safeguarding domestic soil from foreign and invasive threats.**

Advances in the agricultural sciences, including the field of entomology, help to address some of our most pressing societal needs related to food security and safety, as well as environmental and human health. Through improved understanding of insect pests and the development of biological approaches to pest management, entomology plays a critical role in the protection of crops from infestation and disease. In addition, entomology contributes to our knowledge of pollinator biology and the factors affecting pollinator health and populations, helping to ensure safe, reliable crop production that meets the needs of a growing world population.

As NIFA's premier competitive research program, AFRI funds a wide range of agricultural research, education, and extension projects at universities and research institutions nationwide. In addition, AFRI's Education and Literacy Initiative supports more than 2,000 trainees annually that will become the next generation workforce of agricultural and food scientists. **ESA appreciates the Subcommittee's efforts to increase the AFRI budget since the program's establishment, and ESA requests \$500 million for AFRI in FY 2020, which is consistent with the President's FY 2020 budget request.**

To maximize its limited resources, AFRI supports projects that address key societal challenges and build foundational knowledge in high-priority areas of the food and agricultural sciences, such as food safety and food security. For example, researchers funded by AFRI are currently

investigating whether certain viral pathogens are capable of manipulating honey bee behavior to increase disease transmission. Honey bees contribute \$16 billion per year to food production in the United States alone.¹ With many species of pollinators in rapid decline, research in this area is increasingly critical to maintain our agricultural economy.² In addition to AFRI, other NIFA grants support programs to study and implement evidence-based approaches to reduced-risk integrated pest management (IPM), which has implications for human health, the environment, and the economy. IPM uses science-based, environmentally conscious, comprehensive methods to take effective management action against pests, often resulting in lower costs and a more targeted use of pesticides.

ESA supports increased funding for research on pollinator populations. Insects that play a role in pollination play a vital role in our nation’s agriculture industry; honey bees alone pollinate more than 90 crops in the U.S. and are essential for the production of an estimated one-third of all the food we eat or export. To ensure a healthy bee population, more research is needed to examine the diverse factors that endanger bee health. ESA was encouraged to see the inclusion of the Pollinator Health Task Force and the establishment of the Honeybee and Pollinator Research Coordinator position in the 2018 Farm Bill. However, in addition to the funding increases requested within AFRI and ARS, **ESA supports USDA’s coordination of multi-agency activities through the Office of the Chief Scientist to further investigate pollinator health and develop implementation plans to prevent pollinator population decline.**

As USDA’s intramural research agency, ARS funds research with a direct impact on our nation’s agriculture enterprise, including in the areas of crop and livestock production and protection, human nutrition, food safety, and environmental stewardship. ARS also conducts research on ways to defend against invasive species, such as by conducting research to identify biocontrol agents which can be deployed to combat expanding populations of invasive pests like the Emerald Ash Borer (EAB), which is one of the most destructive and costliest invasive insects to ever spread across the U.S., responsible for an estimated costs in damage of \$12.7 billion so far. This past year, ARS and APHIS jointly found that wasps from the Russian Far East parasitize the eggs of EAB, thus killing the beetle, and this may lead to a new biocontrol to help deal with this terrible pest that is destroying Ash trees from the East Coast across the Midwest.³ However, the President’s FY 2020 budget request proposed significant reductions for ARS, including cuts in funding for the Crop Protection and Crop Production accounts as well as the elimination of multiple projects and program areas. The ARS Crop Protection research program builds knowledge and develops approaches that are made available to crop producers, enabling better control of pest and disease outbreaks as they occur. The ARS Crop Production research program develops and approves safe and effective strategies for reducing crop loss and providing a dependable food supply. **ESA supports at least \$1.821 billion for ARS and maintaining strong funding levels for the Crop Protection and Crop Production accounts.**

¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3358326/>

² AFRI Competitive Grant: “Inter-strain Variation and Evolution of Resistance to Phytochemicals in the Bumblebee Trypanosome Parasite, *Crithidia bombi*.”

³ <https://www.sciencedirect.com/science/article/pii/S1049964418304973>

USDA also plays a critical role in protecting domestic soils from foreign threats in the form of invasive species through APHIS. Invasive insect pests are some of the most costly and troublesome challenges faced by farmers, homeowners, and others, outcompeting native species, spreading disease, and transforming ecosystems. Increasing rates of trade, human movement, and climate change all put expanding pressure on the need for increased inspections and screening. Currently only a tiny fraction of cargo coming in through ports and planes are screened. While data-driven methods for prioritizing shipment inspections based on statistical risk are improving success rates, the international capacity and cooperation for pre-border, border, and post-border inspection and response must be expanded and improved. Furthermore, remote sensing is applied to a range of problems, but it is virtually absent in insect pest management. However, it could play a significant role in increasing early detection and rapid response (EDRR) to invasive pests. APHIS would greatly benefit from a program dedicated to EDRR for emerging threats. **ESA supports APHIS's mission of safeguarding the nation and requests that in addition to supporting APHIS at the level of \$1.1 billion. This would include an additional \$25 million on top of the \$75 million authorized in the 2018 Farm Bill for a program focused on responding to emerging invasive threats via EDRR at a high level, rather than a threat-specific line item, giving APHIS the flexibility and discretion to respond as new threats emerge.**

ESA, headquartered in Annapolis, Maryland, is the largest organization in the world serving the professional and scientific needs of entomologists and individuals in related disciplines. Founded in 1889, ESA is a non-partisan professional organization with over 7,000 members affiliated with educational institutions, health agencies, private industry, and government. Members are researchers, teachers, extension service personnel, administrators, marketing representatives, research technicians, consultants, students, pest management professionals, and hobbyists.

Thank you for the opportunity to offer the Entomological Society of America's support for USDA research programs. For more information about the Entomological Society of America, please see <http://www.entsoc.org/>