A strong federal investment in agricultural research is vital to ensuring the success of U.S. farmers and a sustainable and secure global food production system, which starts with seed.

AGRICULTURAL RESEARCH SERVICE

The Agricultural Research Service (ARS) conducts research that requires a long-term investment leading to high-impact payoff. Management and utilization of vast collections of genetic resources are the type of research that can’t be done by an individual university or company.

ASTA is encouraged by Congress’s continued support for agricultural research funding. However, additional funding is necessary to address the broad range of long and short-term research needs of the entire agricultural sector.

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

The National Institute of Food and Agriculture (NIFA) leads and funds extramural research, education, and extension programs in partnership with leading scientists and researchers around the country. Under NIFA, its flagship competitive grants program, the Agriculture and Food Research Initiative (AFRI) funds research in a number of priority areas, including plant health and production and plant products. AFRI has received critical increases recent Congressional Appropriations cycles, receiving $435 million in the FY2021 Omnibus and COVID Relief and Response Act.

ASTA supports funding AFRI at its authorized Farm Bill amount of $700 million.

AFRI contributes to a more sustainable U.S. food and agriculture system by supporting key programs like Sustainable Agricultural Systems (SAS).

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GERmplasm Enhancement of Maize

The Germplasm Enhancement of Maize (GEM) project focuses on adapting exotic corn germplasm for use in the U.S. and identifying useful genetics in exotic landraces to develop new hybrids. These resources are then made available to breeders by request. To date, 346 lines have been released by GEM.

The continued success of American agriculture is intimately linked to corn production, with USDA estimating 14.2 billion bushels were harvested in 2020. However, U.S. corn production is based on predominantly two races of maize from more than 250 New World races. This limited genetic diversity renders the U.S. corn crop, and therefore, the global food supply, more vulnerable to attack by new diseases.

GEM is a unique public-private partnership between the federal government, universities and companies of all sizes. The current funding for GEM is approximately $2.56 million. Private industry provides over $625,000 of direct in-kind support annually, and industry germplasm contributions are currently valued at over $3 billion. However, demand for maize germplasm continues to increase and GEM has already distributed more than 25,000 seed samples. GEM also facilitates development of future researchers, training 21 Ph.D. and 15 M.S. students.

ASTA recommends an increase in GEM funding due both to increased research and operations costs, and the need to establish consistent winter nurseries for seed increases and regeneration.

NATIONAL PLANT GERMPLASM SYSTEM

The National Plant Germplasm System (NPGS) is a network of 20 labs that preserve the genetic diversity of crop plants. The NPGS collects unique plant germplasm from around the world and provides access for plant breeders in the U.S. and globally. Scientists must have access to these plant materials to help bring forth new varieties that can resist pests, diseases and environmental stresses.

Language in the 2018 Farm Bill mandated USDA to develop, publish, and implement a national strategic germplasm and cultivar collections assessment and utilization plan of the National Plant Germplasm System. This critical study will highlight the strengths and needs of the NPGS that can be bolstered through additional appropriations.

OTHER KEY RESEARCH AUTHORITIES

ASTA supports continued efforts to strengthen federal agricultural research at USDA.

- Land-Grant University Capacity Funding
- Foundation for Food and Agriculture Research (FFAR)
- Agriculture Advanced Research and Development Authority (AGARDA)
- Agricultural Genomes to Phenomes Initiative
- Specialty Crop Research Initiative

ASTA recommends an increase in GEM funding due both to increased research and operations costs, and the need to establish consistent winter nurseries for seed increases and regeneration.