

**Written Statement on FY 2021 Appropriations Requests
on behalf of the
Seeds and Breeds for the 21st Century Coalition
submitted to the
Subcommittee on Agriculture, Rural Development, FDA, & Related Agencies
Senate Committee on Appropriations
April 6, 2020**

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Thank you for the opportunity to present our FY 2021 funding requests. The Seeds and Breeds for the 21st Century Coalition is a national network of non-profit, public, and private researchers, advocacy organizations, agricultural businesses, seed companies and individual farmers. We advocate for policies and funding to support and advance classical public breeding research programs and germplasm infrastructure in order to protect agricultural genetic diversity and address long-term challenges to agriculture such as climate change and global food security. The following organizations wish to be associated with this testimony:

**American Malting Barley Association
Arkansas Rice Growers Association
California Certified Organic Farmers (CCOF)
Carolina Farm Stewardship Association
Center for Food Safety
Clif Bar & Company
Farm Aid
Fedco Seeds
Food & Water Watch
Freed Seed Federation
Friends of the Earth
Hudson Valley Seed Company
Maine Organic Farmers and Gardeners Association
Michael Fields Agricultural Institute
Michigan Organic Food and Farm Alliance
Montana Organic Association
National Barley Improvement Committee
National Farmers Union
National Onion Association
National Organic Coalition
National Sustainable Agriculture Coalition
Natural Resources Defense Council
New England Farmers Union
Northeast Organic Dairy Producers Alliance
Northeast Organic Farming Association- New York
Northeast Organic Farming Association- Interstate Council
Northeast Organic Farming Association- Vermont**

**Ohio Ecological Food and Farm Association
Organic Farmers Association
Organic Farming Research Foundation
Organic Seed Alliance
Organic Trade Association
Oregon Tilth
PCC Community Markets, Seattle
Rural Advancement Foundation International- USA
Strauss Family Creamery
Virginia Association of Biological Farming
Vitalis Organic Seeds**

Our USDA requests are as follows:

National Institute of Food and Agriculture (NIFA)

Agriculture and Food Research Initiative (AFRI)

Request: Report language on public cultivar development.

In recent decades, public resources for the development of improved plant varieties and cultivars have dwindled, while resources have shifted toward genomics and biotechnology, with a focus on a limited set of major crops¹.

Farmer access to regionally adapted seeds and breeds is paramount to fostering the competitiveness of agriculture in all regions of the U.S. As agricultural research has shifted toward an emphasis on lab-based and molecular breeding, seed choice has not kept up with demand, and the diversity of our plant genetic resources has narrowed. Farmers need access to seeds that are bred specifically for their regions and cropping systems. In particular, farmers lament limited cultivar options in major crops, especially publicly held seed varieties and plant cultivars released by land grant universities that are adapted to regional farming needs to satisfy the national market. By improving agricultural productivity and resilience, classical or field-based breeding also improves food security for our growing population.

In Section 7406 of the Food, Conservation, and Energy Act of 2008, the National Research Initiative was merged with the Initiative for Future Agriculture and Food Systems to become the Agriculture and Food Research Initiative (AFRI). Congress included language within AFRI to make “conventional” plant and animal breeding a priority for AFRI research grants, consistent with the concerns expressed by the Appropriations Committee in preceding appropriations cycles.

Classical or “conventional” plant and livestock breeding is a proven science and is highly cost-effective when compared with other breeding approaches. It is our most successful and benign approach to crop improvement, accounting for about half of our dramatic food and fiber crop yield increases throughout the 20th and early 21st centuries. Classical breeding, using field-

¹ Carter, T., W. Tracy, T. Sinclair, T. Isleib, and R. Joost. 2014. What is the State of Public Cultivar Development?. 2014 Seeds and Breeds for the 21st Century Summit. March 5-7, 2014. Washington, DC.

based selection, complements newer forms of breeding and fills important roles that lab-based approaches, such as genomics, are not well suited to. Lab-based breeding has value, and may become more important as these technologies improve, but cannot be relied upon currently or in the foreseeable future to fulfill many breeding needs.

In the last several years, USDA made regionally adapted cultivar development using conventional breeding techniques a higher priority within the overall plant breeding funding area. The most recent development is that a “cultivar development” priority area was created within AFRI, in response to direction from the Senate appropriations report language. While this development represents progress, the amount of funding overall remains extremely low relative to the need and the number of proposals submitted. In addition, the AFRI practice of awarding three-or-four-year grants conflicts with the longer-term breeding cycles typical for public cultivar development projects. We request report language to reiterate that funding for public cultivar development should be given greater priority within the AFRI process. In addition, we are requesting that report language also urge NIFA to award longer-term grants within the cultivar development priority area to be more consistent with the longer-term breeding cycles typical for these projects. Specifically, we urge inclusion of the following report language:

Section 7406 of the Food, Conservation, and Energy Act of 2008 specifies priority areas within the Agriculture and Food Research Initiative [AFRI], including an emphasis on conventional (classical) plant and animal breeding. The Committee strongly concurs with the intent of this section and appreciates the agency’s progress in creating a distinct Cultivar Development funding priority within the AFRI program for development of publicly available, regionally adapted cultivars, as the Committee previously directed. The Committee expects the agency to continue to increase funding for this AFRI priority area, and to increase the timeframe for grants made in this area to be more in keeping with classical plant breeding timeframes. In addition, the agency should take steps to improve its tracking of public cultivar projects within AFRI. The Committee further directs the agency to report its progress in meeting these requirements.

Agriculture Research Service (ARS)

ARS/National Plant Germplasm System

Request: Support a 10 percent increase in overall funding.

Funding for the U.S. National Plant Germplasm System (NPGS) collection has grown only slightly after years of stagnation, while the demand for seeds in the collection is expanding greatly. Due to lack of funding, many seeds in the collection have not been characterized to improve utilization or regenerated to ensure germination and long-term viability.

Plant breeding and associated scientific research is essential to meet the ongoing challenges of producing plants for food, fiber, animal feeds, industrial and medicinal purposes, and for landscape and ornamental uses. It is important to collect and conserve living plant material, both to help solve immediate agricultural production problems as well as safeguard

plant genetic diversity for future needs. This mission is more essential than ever because the loss of genetic diversity is accelerating with threats from many factors, including global urbanization, habitat changes associated with climate, and changes in land use related to population growth and economic development.

NPGS is a collaborative effort to safeguard the genetic diversity of agriculturally important plants. The NPGS is managed by the Agricultural Research Service (ARS). Many NPGS genebanks are located at state land-grant university sites, which contribute lab, office, greenhouse and field space for operations, as well as staff for technical and support services.

The mission of the NPGS is to support agricultural production by:

- acquiring crop germplasm
- conserving crop germplasm
- evaluating and characterizing crop germplasm
- documenting crop germplasm
- distributing crop germplasm

Unfortunately, in recent years the number of accessions (deposits) to the NPGS seed banks has grown significantly while funding for the system has grown only slightly after years of stagnation. Therefore, we are requesting a 10 percent increase in overall funding for the germplasm system to address these concerns, as well as the following report language:

The Committee provides a 10 percent increase in overall funding for the National Plant Germplasm System (NPGS) to address the backlog of accession regeneration and ensure that regeneration happens at recommended intervals going forward. Funding for the NPGS has grown slightly in recent years, after being stagnant for many years, putting the viability of seeds in the collection at great risk. The collection contains many valuable genetic resources that are critical to maintaining the resilience of our agricultural production and national food security. Yet, due to insufficient funding, many of these accessions have not been regenerated frequently enough and are at risk of dying in storage. It is an urgent need to ensure the viability of the seeds in this collection and to characterize traits of importance to national food security for use in breeding.

Thank you and we look forward to working with you to strengthen America's agricultural sector.