

May 22, 2013

Dear Senator:

On behalf of more than 100 agricultural businesses, organizations, and scientists, we respectfully ask for your support of Senator Tester's amendment to the Senate Farm Bill. This amendment aims to enhance farmer access to improved crop cultivars and livestock breeds adapted to diverse and regional farming needs. Directing more public dollars toward classical breeding projects that result in finished seeds and breeds increases the competitiveness of agriculture across the U.S. Classical breeding projects also improve food security for our growing population.

### **Classical breeding is a proven approach to meeting our food and fiber needs**

Classical plant and livestock breeding is a proven science. 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 20<sup>th</sup> and early 21<sup>st</sup> centuries.

Classical breeding, using field-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. Classical breeding, in particular, is highly cost-effective.

### **Senator Tester's amendment reinforces and builds on a 2008 Farm Bill mandate**

The need to better support classical breeding becomes more pressing each year. The 2008 Farm Bill included a congressional mandate that classical plant breeding be a priority within the Agriculture and Food Research Initiative (AFRI). There have been other requests by congressional agriculture and appropriations committees for USDA to make classical plant and animal breeding a priority.

To date, USDA has not fulfilled the 2008 congressional mandate. USDA is aware of the problem, and Senator Tester's amendment would support the agency's efforts by clarifying the urgent need to prioritize classical breeding as an essential approach to improving traits of broad interest, and addressing the demand for new cultivars that meet the diverse needs of farmers, especially cultivars adapted to regional conditions – a critical requirement for developing highly productive crop cultivars and diverse cropping systems that are resilient.

### **U.S. farmers face diminished seed choices to meet specific farming needs**

Farmers constantly face changing insect, weed, and disease pressures that vary by region and that rapidly change. Crops must continuously be adapted to meet these changes. Similarly, climate, growing season length, soils, and water availability all greatly affect crop growth and vary across the U.S. The most productive approach is to have seeds that are adapted to the same environment as their intended use.

The large investments currently made in molecular breeding programs do not adequately support the development of complex traits necessary for adapting seed to regional needs. It is not cost-effective to use these approaches to develop crop cultivars or livestock breeds adapted to the diverse needs of farmers. The lack of seed options is especially apparent for farmers seeking a range of cultivars in major crops. Options are even less for farmers seeking cultivars that are held in the public domain.

## Meeting food security needs

Beyond farmer choice, the lack of seed availability and the narrowing of genetic resources are making our food system less secure. Classical breeding can provide the genetic tools farmers need to manage evolving pest, disease, and weather challenges, creating a source of seeds and breeds adapted to changing needs and opportunities. Of course, one of these needs includes feeding our growing population. The maintenance and improvement of genetic diversity through classical breeding is essential for the success of productive food systems and the greater global food supply, both now and into the future.

## Summary

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 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 breeding also improves food security for our growing population.

Senator Tester's amendment seeks to reinvigorate classical plant breeding in the public sector to better ensure farmers have the seeds and breeds they need to be successful.

Sincerely,

Arkansas Rice Growers Association (Arkansas)  
ARMPPA (Wisconsin)  
Ashtabula Geauga Lake Counties Farmers Union (Ohio)  
California Farmers Union (California)  
Carolina Farm Stewardship Association (North and South Carolina)  
Center for Rural Affairs (Nebraska)  
Clif Bar & Company  
Dakota Rural Action (South Dakota)  
Dakota Resource Council (North Dakota)  
Delta Land & Community (Arkansas)  
Ecological Farming Association (California)  
Family Farm Defenders (Wisconsin)  
Farm and Ranch Freedom Alliance (Texas)  
Fay-Penn Economic Development Council (Pennsylvania)  
Food For Maine's Future (Maine)  
Friends of Family Farmers (Oregon)  
Grain Millers, Inc. (Indiana, Iowa, Minnesota, Oregon)  
Hawai'i Public Seed Initiative (Hawaii)  
Kansas Rural Center (Kansas)  
Land Stewardship Project (Minnesota)  
Mississippi Association of Cooperatives (Mississippi)  
Missouri Farmers Union (Missouri)  
Missouri Rural Crisis Center (Missouri)

Montana Farmers Union (Montana)  
National Center for Appropriate Technology (National)  
National Cooperative Grocers Association (National)  
National Family Farm Coalition (National)  
National Farmers Union (National)  
National Hmong American Farmers (National)  
National Organic Coalition (National)  
National Sustainable Agriculture Coalition  
Northeast Sustainable Agriculture Working Group  
Northern Plains Resource Council (Montana)  
Northwest Farm Bill Action Group  
Northwest Atlantic Marine Alliance  
Ohio Ecological Food & Farm Association (Ohio)  
Oregon Rural Action  
Organic Farming Research Foundation (National)  
Organic Farmers' Agency for Relationship Marketing, Inc. (National)  
Organically Grown Company (Oregon)  
Organic Seed Growers and Trade Association (National)  
Organic Trade Association  
Organic Valley  
Organization for Competitive Markets (Nebraska)  
Pennsylvania Association for Sustainable Agriculture (Pennsylvania)  
Prairie Quest Farm (Iowa)  
R-CALF (National)  
Ranch Foods Direct (Colorado)  
Rural Advancement Foundation International – USA (National)  
Seed Matters (California)  
Steve's Seed Conditioning (Illinois)  
The Land Institute (Kansas)  
Tilth Producers of Washington (Washington)  
Union of Concerned Scientists (National)  
United Natural Foods, Inc. (National)  
Virginia Association for Biological Farming (Virginia)  
Western Organization of Resource Councils  
Women, Food and Agriculture Network (Iowa)

### **Agricultural Scientists & Professionals**

Charles Benbrook, Ph.D.  
Research Professor and Program Leader  
Center for Sustaining Agriculture and Natural Resources  
Washington State University

Brook Brouwer, Graduate Student  
Department of Crop Science  
Washington State University – Mount Vernon

E. Charles Brummer, Ph.D.  
Adjunct Professor  
Plant Breeding & Genomics

University of Georgia

Liz Carlisle, Ph.D. Candidate  
National Science Foundation Graduate Research Fellow  
Center for Diversified Farming Systems  
University of California – Berkeley

Noah S. Corp  
Professor, Agriculture/Farm Manager  
College of the Redwoods  
Eureka, California

Julie Dawson, Ph.D., Postdoctoral Research Associate  
Department of Plant Breeding and Genetics  
Cornell University, New York

Jane Dever, Ph.D.  
Associate Professor of Cotton Breeding  
Texas A&M AgriLife Research

J. Franklin Egan, Ph.D.  
Department of Crop and Soil Sciences  
Pennsylvania State University

David Ehrenfeld, M.D., Ph.D.  
Department of Ecology, Evolution and Natural Resources  
School of Environmental and Biological Sciences  
Rutgers, The State University of New Jersey

Les Everett, Ph.D.  
Agronomist Water Resources Center  
University of Minnesota

Paul Gepts, Ph.D.  
Professor, Department of Plant Sciences  
University of California – Davis

Deborah Giraud  
University of California Cooperative Extension Farm Advisor  
Eureka, California

Michael Glos  
Department of Plant Breeding and Genetics  
Cornell University

Irwin L. Goldman, Ph.D.  
Professor and Chair  
Department of Horticulture  
University of Wisconsin – Madison

Walter Goldstein, Ph.D.  
Executive Director  
Mandaamin Institute (Wisconsin)

Major Goodman, Ph.D.  
William Neal Reynolds Professor and Distinguished University Professor of Crop Science, Genetics,  
and Statistics  
Member of the National Academy of Sciences  
North Carolina State University

Alison Harmon, Ph.D., R.D., L.N.  
Associate Professor  
Food & Nutrition and Sustainable Food Systems  
Montana State University

John Patrick Hart, Ph.D. Candidate  
Department of Plant Breeding & Genetics (Vegetable Breeding)  
Cornell University (New York)

Lori Hoagland, Ph.D.  
Assistant Professor  
Specialty Crop Production Systems  
Purdue University (Indiana)

Philip H. Howard, Ph.D.  
Associate Professor  
Department of Community Sustainability  
Michigan State University

Casey Hoy  
Professor and Kellogg Endowed Chair in Agricultural Ecosystems Management  
The Ohio State University  
Ohio Agricultural Research and Development Center  
Ohio State University Extension

Krista Isaacs, Ph.D. Candidate in Agroecology  
Michigan State University

Allison L H Jack, Ph.D.  
Agroecology Faculty at Prescott College, Environmental Studies Program  
Director of Prescott College Jenner Farm  
Prescott College

Stephen S. Jones, Ph.D.  
Research and Extension Center at Mt. Vernon  
Professor/Scientist  
Washington State University

Jack Kloppenburg, Ph.D.  
Professor, Department of Community and Environmental Sociology  
Director, GreenHouse Residential Learning Community

Gaylord Nelson Institute for Environmental Studies  
University of Wisconsin

Sibella Kraus  
Sustainable Agriculture Education (SAGE)  
David Brower Center (California)

Claire Luby, Graduate Student  
Department of Horticulture  
University of Wisconsin – Madison

Alexandra Lyon, Graduate Student  
Nelson Institute for Environmental Studies  
University of Wisconsin – Madison

Jennifer MacAdam, Ph.D.  
Associate Professor  
Plant Physiology and Forage Production  
Department of Plants, Soils, and Climate  
Utah State University

Michael Mazourek, Ph.D.  
Assistant Professor  
Calvin Noyes Keeney Professor of Plant Breeding  
Department of Plant Breeding and Genetics  
Cornell University (New York)

Kevin Murphy, Ph.D.  
Assistant Research Professor/Clinical Assistant Professor  
Department of Crop and Soil Sciences  
Washington State University

James Myers, Ph.D.  
Professor of Vegetable Breeding and Genetics  
Oregon State University

John Navazio, Ph.D.  
Organic Seed Research & Extension Specialist  
Washington State University/Organic Seed Alliance

Doug O'Brien, Ph.D.  
Horticulture Department  
Cabrillo College (California)

Chris Picone, Ph.D.  
Department of Biology  
Fitchburg State University (Massachusetts)

Gerald Presley  
Research Assistant  
Department of Bioproducts and Biosystems Engineering

University of Minnesota

Adrienne Shelton, Graduate Student  
Department of Agronomy  
University of Wisconsin – Madison

Margaret E. Smith  
Professor, Department of Plant Breeding & Genetics  
Associate Director, Cornell University Agricultural Experiment Station  
Cornell University

Richard G. Smith, Ph.D.  
Assistant Professor of Agroecology  
Department of Natural Resources and the Environment  
University of New Hampshire

Sieg Snapp  
Professor, Soils and Cropping Systems Ecologist  
Kellogg Biological Station  
Department of Plant, Soil, and Microbial Sciences  
Michigan State University

Doreen Stabinsky, Ph.D.  
College of the Atlantic Bar Harbor (Maine)

Seth Swanson  
Montana State University Extension  
Missoula County Extension Horticulturist

C. Robert Taylor  
Professor of Agricultural Policy  
College of Agriculture  
Auburn University

William F. Tracy, Ph.D.  
Professor and Chair  
Friday Chair of Vegetable Research  
Department of Agronomy  
University of Wisconsin – Madison

Steve Zwinger  
Research Specialist/Agronomy  
North Dakota State University  
Carrington Research Extension Center

Questions can be directed to Kristina Hubbard at [kristina@seedalliance.org](mailto:kristina@seedalliance.org)