



# National Organic Coalition

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AFRI  
Competitive Programs Unit  
Cooperative State Research, Education, and Extension Service  
U.S. Department of Agriculture  
Stop 2240  
1400 Independence Avenue, SW  
Washington D.C. 20510

Re: CSREES-2008-0002

As the Cooperative State Research, Education, and Extension Service (CSREES) prepares to implement the Agriculture and Food Research Initiative (AFRI), as authorized by Section 7406 of the Food, Conservation, and Energy Act of 2008, I welcome the opportunity to provide comments on behalf of National Organic Coalition.

These comments focus on the provisions of the Act which specify conventional plant and animal breeding as a priority area of research within the AFRI program.

In recent decades, the public resources for conventional/classical public plant and animal breeding activities have suffered as scarce federal resources have shifted toward higher-profile work in the area of genomics and molecular genetics. Because of the overlap in the ways in which conventional breeding activities and genomic activities are categorized within CSREES, it has been difficult to directly quantify the extent of this shift. However, the symptoms of this shift have been evident in the land grant universities and farm fields of our nation.

Across the nation, once-strong public plant and animal breeding programs at our land grant universities have atrophied. Routinely, as the conventional/classical breeders retire, their positions are not being refilled. New positions in the field are not being created. Graduate student interest is declining because of fewer faculty resources, and fewer research opportunities.

In contrast, publicly and privately funded new positions in the field of genomic or molecular

genetics are on the upswing, and graduate student interest is being redirected into these and related areas. These trends are taking place because of the accurate perception of a decline in resources for conventional/classical plant and animal breeding, and the false perception that plant and animal breeding is outmoded or even obsolete relative to its genomics cousin.

The real world implications of this shift can be felt most acutely in the farm fields of our nation. The problem is particularly acute for organic farmers and sustainable farmers whose cropping and livestock systems depend so heavily on local adaptation of plants and animals to unique soils and pest conditions and the changing climates of their areas. In addition, these farmers are either prohibited from using genetically modified germplasm (in the case of organic farmers), or choose not to do so because of conflicts with their cropping systems (in the case of many sustainable farmers). Yet with the development of fewer and fewer publicly available cultivars, these farmers are finding it increasingly hard to find the seeds and breeds that meet their needs.

The private sector has shown the willingness and ability to devote significant resources to the field of genomics and molecular genetics, with a focus on breeding for the development of identity-preserved germplasm for large-scale markets. In contrast, regional, site-specific, genetic diversity needs are not well met by the private sector, nor are changing consumer demands for products with certain taste and/or nutrition qualities. Without the public sector conventional breeding programs to do the on-going work to develop and release locally adapted seed varieties and breeds, these needs will continue to go unmet.

Yet concerns about the decline of our public breeding capacity go well beyond the needs of organic and sustainable farmers and consumers. If we continue to allow the consolidation of our germplasm resources into an ever-narrowing pool, we jeopardize our food security in the event of blight or pathogens. Diversity and adaptability of our seed and animal germplasm is the best precaution against such food security vulnerabilities.

The role of the AFRI program in reinvigorating the investment in private sector plant and animal breeding is critical. The Food, Conservation, and Energy Act of 2008 has demonstrated Congress' concerns in this regard as well, by listing "conventional" breeding within both the "Plant Health and Production and Plant Products" and the "Animal Health and Production and Animal Products" priority areas of AFRI. Congress further elaborated on its concern in this area through Statement of Managers language to accompany the Farm Bill:

*The Managers are aware of the importance of supporting public sector conventional plant and animal breeding, as evidenced by the specific mention of this priority under the "plant health and production and plant products" and "animal health and production and animal products" priorities in AFRI. The Managers intend that the term "conventional breeding," also known as "classical breeding," refer to breeding techniques which rely on creating an organism with desirable traits through controlled mating and selection. Because conventional breeding is critical to the development of seeds and breeds that are well adapted to local conditions and changing environmental constraints, these efforts are important to the food and*

*agriculture sector. The Managers are aware that participatory breeding programs, where producers are involved in the process of developing new plant varieties and animal breeds, yield varieties and breeds that are better adapted to local environments. The Managers encourage an emphasis on funding of conventional plant and animal breeding as part of the new AFRI.”*

Therefore, we offer the following recommendations with regard to the implementation of the AFRI program:

- 1) Two new program areas should be designated within the AFRI structure, one to address conventional plant breeding, and another to address conventional animal breeding, each with an allocation of \$10 million per year.
- 2) CSREES should recognize the unique, long-term nature of conventional/classical plant and animal breeding, and apply the 10-year term to grants made in this area.

In changing the statutory maximum grant term limit from 5 to 10 years for the AFRI program, Congress specifically noted that this longer-term grant timeframe should be used conservatively for those efforts that are long-term in nature. The Farm Bill Statement of Managers language states the following:

*The Managers intend that most program areas within AFRI would have grant terms of short duration. However, the Managers are aware that there are areas of research where longer-term grants are needed, such as conventional plant and animal breeding, environmental research, and nutrition research. The Managers expect the Secretary to use 10-year grant terms only when it is critical for long-term systems research.*

Conventional plant and animal breeding efforts are indeed long-term in nature, and did not fit well into the 5-year limitation of the National Research Initiative. We encourage CSREES to avail itself of the 10-year grant terms for conventional breeding projects, but to be sparing in its application of these longer-term grants elsewhere. As noted by the above Statement of Managers language, a limited list of other areas, such as environmental and nutrition research, are also appropriate for such longer-term grants.

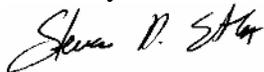
We are concerned about the accounting logistics of the 10-year grants, however. Given the current CSREES practice of setting aside all years of funding for a grant in the initial year of grant award, there is a concern that 10-year grants, if fully allocated in the initial year of the grant, could significantly curtail the overall pot of funds available in any given year. One possibility for addressing this problem would be to allocate the funds in two, 5-year segments, with a mid-term assessment of research or cultivar development progress. There would be a general assumption of continuation of funding for the second, 5-year period, barring any major inadequacy during the initial 5-year period. However, 10 years of funds would not have to be allocated in the first year of the grant.

3. When implementing the matching requirement provisions of the AFRI, we encourage CSREES to recognize that even though the cultivars developed may be commodity-specific and local/regional in nature, the development of public germplasm is a public good, serving larger societal goals of diversity and agricultural security. Where a clear public good can be demonstrated, the matching requirements should be waived or made more flexible.
4. As part of the Request for Application (RFA) process, we urge CSREES not to seek to address the conventional breeding priority area through commodity-specific RFAs. Instead, we urge the Agency to establish cross-cutting RFAs, which could be addressed through grant applications from a variety of different commodity-specific areas of conventional breeding.
5. As CSREES seeks to incorporate conventional breeding more fully into its competitive grant process, we urge the agency to track grants from conventional breeding activities separately from genomic or molecular genetics activities. In this way, the funding trends will be more easily monitored and analyzed. We realize that such an effort requires a clear definition of how conventional breeding differs from genomics. As stated in the AFRI authorizing language in the 2008 Farm Bill, we believe that conventional breeding includes “cultivar and breed development, selection theory, applied quantitative genetics, breeding for improved food quality, breeding improved local adaptation to biotic and abiotic stress, and participatory breeding.” And as further noted in the Farm Bill Statement of Managers, “...the term “conventional breeding,” also known as “classical breeding,” refer[s] to breeding techniques which rely on creating an organism with desirable traits through controlled mating and selection.”

In making decisions about allocating scarce federal dollars for high priority agricultural research, we encourage the Agency to consider both alternative sources of funding (e.g. private funding), as well as cost efficiencies of research activities. Unlike genomics and molecular biology, conventional breeding must rely heavily on public sources of funding, with few other sources of funding. In addition, the costs of conventional breeding techniques are significantly less, with much greater track record of cultivar release and public access to the research products.

Thank you for this opportunity to comment. We look forward to working with you further on this and future AFRI grant award processes.

Sincerely,



Steven Etka  
Legislative Coordinator