NATIONAL COALITION FOR FOOD AND AGRICULTURAL RESEARCH

December 6, 2011-by e-mail to bioeconomy@ostp.gov

RE: Comments to OSTP on National Bioeconomy Blueprint

To the Office of Science and Technology Policy (OSTP):

In response to your Request for Information (RFI), the National Coalition for Food and Agricultural Research (National C-FAR) urges you to place a high priority on federal funding for food and agricultural research and education as you carry out your important charge of developing a National Bioeconomy Blueprint.

A vibrant and viable food and agriculture sector is essential to any National Bioeconomy Blueprint. It is hard to conceive of any "bio" initiative that would not have food and agricultural sciences as one of its essential building blocks. This includes a strong commitment to federal funding for food and agricultural research and education. Unfortunately the federal government's track record over the past two decades has been the reverse—flat or declining funding for food and agricultural research and education. Indications are that the nation is not investing enough to develop the science needed translate into productivity increases to feed 9 billion people, let alone provide vital contributions to a bioeconomy.

National C-FAR believes **the nation has a serious deficit in federal funding for food and agricultural science**, just as the nation has a budget deficit. This food and agricultural science funding deficit is serious, long running and unsustainable. Failure to address this research deficit will have real negative consequences, not just to our food and agricultural system but to the entire U.S. economy, and certainly to the effectiveness of any future bioeconomy.

The National Bioeconomy Blueprint represents an exciting opportunity to reverse that harmful trend by embracing a commitment to the increased funds needed to revitalize food and agricultural science. National C-FAR urges OSTP to make this commitment a core principle of the National Bioeconomy Blueprint.

While agriculture is lised in several of the questions posed, it is indeed disappointing to find no mention of food and agricultural science—and no mention of involving the unmatched capabilities offered by the U.S. Department of Agriculture's (USDA) research mission (inter- and intra-mural) in the President's announcement about the series of federal government initiatives being launched as part of the implementation of the America Invents Act. National C-FAR would urge OSTP to remedy this oversight. Much of the focus of the America Invents Act is to streamline the nation's patents process as a way of speeding the translation of new scientific outcomes to the marketplace. However, an investment in food and agricultural science is necessary to create a flow of new scientific outcomes in the pipeline for this process to have the desired results.

National C-FAR would like to offer the following related responses to categories of questions raised in the RFI:

- *Grand Challenges*: Core food and agricultural challenges, such as—feeding 9 billion people, providing nutritious and safe food, achieving global food security, contributing to national energy security through bioenergy, and protecting the nation's natural resources and environment while doing so—should be prominently included among the grand challenges.
- *Research and Development*: Working to achieve these grand challenges will require an increased investment in food and agricultural research and development. Successes will ultimately translate into high quality jobs in rural America and across the nation.
- *Moving Life Sciences from Breakthroughs to Market*: Life sciences are deeply ingrained in food and agricultural science and its multi-faceted missions. But severely constrained, stagnant, constrained funding in food and agricultural life sciences—and necessarily interrelated sciences—severely constrains the pipeline of breakthroughs that present future market opportunities.
- *Workforce Development*: The nation's unmatched land grant system and related research and teaching institutions in food and agriculture are absolutely essential to producing an adequate supply of qualified scientists and technicians to work in agriculture, business and government—and to teach future researchers, and educators. Federal funding is absolutely essential for this system to be viable in the future.

Recent studies have concluded that funding for scientific research for food and agriculture needs to be increased steadily and significantly if future challenges are to be met. For example, in "*Public Agriculture Research Spending and Future U.S. Agricultural Productivity Growth: Scenarios for 2010-2050,*" a USDA Economic Research Service report (EB-17, July 2011) states:

- By 2050, global agricultural demand is projected to grow by 70-100 percent. Meeting this demand from existing agricultural resources will require raising global agricultural total factor productivity (TFP) by a similar level.
- If U.S. public agricultural R&D spending remains constant until 2050, the rate of agricultural TFP growth in the U.S. is projected to decline, with U.S. agricultural output increase by 40 percent by 2050.

Similar conclusions are expressed in "*Investing in a Better Future through Public Agricultural Research,*" (CAST Commentary QTA2011-1, March 14, 2011):

- Publicly funded food and ag research in the U.S. has been essentially flat over the past two decades.
- Public funding of agricultural research in the rest of the world has outpaced investment in the U.S.
- With agricultural research funding delays, productivity increases are expected to slow, and world food prices will rise more rapidly than otherwise projected during the next 40 years.
- Numerous studies find rates of return on public ag research investments of 20 to 80%. Huffman and Evenson (2006) estimate a marginal rate of return of approximately 50%.
- There is an important and necessary role for public research because the private sector faces weak incentives to undertake research in numerous areas of national interest.
- Agricultural research is a low-cost source of future productivity and output increases; but advances in the frontiers of science translate into long lags before benefits are realized, typically 15-20 years.

National C-FAR serves as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension and education. National C-FAR is a nonprofit, nonpartisan, consensus-based and *customer-led* coalition established in 2001 that brings food, agriculture, nutrition, conservation and natural resource organizations together with the food and agriculture research and extension community.

The success of the agriculture and food industry plays a significant role in the overall health and security of the U.S. economy and has been one of the few bright spots in recent years. In 2010, U.S. farms and ranches spent $288 billion to produce goods valued at $369 billion; the value of U.S. food and agriculture exports is expected to be more than $140 billion in 2011, creating a record trade surplus of $42.5 billion. Furthermore, the jobs of 21 million Americans depend on the vitality of the U.S. agriculture and food sector.

The bottom line is simple—commit to increased federal funding for food and agricultural science and education. The National Bioeconomy Blueprint must include as one of its core components a true commitment to significant increases in federal investments for food and agricultural research and education to have a realistic chance of being effective in achieving its goals.

National C-FAR appreciates the opportunity to share its views.

Respectfully Submitted,

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