

NIFA Animal Systems Portfolio Response to External Panel Recommendations

Overview

The Animal Systems Portfolio was reviewed and evaluated by an external panel of animal agriculture experts in November 2009. This review occurred during a time of considerable change at CSREES/NIFA. The original portfolio document on which the review was based was written during early and mid 2009 in reference to the previous five years of programmatic effort that occurred in the context of prior USDA and CSREES goals. The external panel considered the document during the same transition period in light of what they knew of CSREES and the general legislative outline of the new National Institute of Food and Agriculture (NIFA). The review was conducted one month after NIFA came into being and in the presence of a new, Presidentially-appointed Director, but before the new priority science areas were firmly established. Finally, we (the Animal Systems team) are responding after the priority science areas have been more thoroughly defined and following the announcement of novel Requests for Applications in our Competitive Programs area, but before the new administrative/organizational format of the agency has been implemented.

The external review included the programmatic outline of the portfolio, the financial and human resource inputs, and examples of the measureable outcomes and impacts for each of the program areas for the years 2005-2009. In addition, the expert panel considered written and verbal comments about future directions of the programs in this portfolio that came from the new NIFA Director, the Deputy Administrator for the Plant and Animal Systems unit, and various National Program Leaders in the Animal Systems team. The expert panel's report was received by the NIFA in December 2009 (http://www.nifa.usda.gov/about/pdfs/par_as.pdf).

The NIFA appreciates the substantial time commitment and thoughtful effort of the expert panel members, particularly in light of the major changes occurring in the agency even as the panel met. The members of the Animal Systems team have considered the evaluations and recommendations contained in the expert report, organized them into several broad categories (*i.e.*, planning and reporting, advocacy, and education) and sub-categories, and provided responses to some of the specific issues in each of these categories. It should be noted that our responses are not always detailed due to the continuing flux and development of the NIFA organization and program areas of emphasis.

Recommendations and Responses

1. A large number of the specific recommendations in the external panel report were focused on the areas of program planning and reporting. The panel recommended that *“more thought must be given to the programmatic structure within the Animal Systems area so that adequate planning and reporting can be accomplished.”* In the context of planning, the panel recommended 1) an increase in the awareness of program leaders, particularly outside their areas of specialty, 2) an effort to align the programmatic priorities and resources with the new agency structure, emerging issues in agriculture, and global agriculture issues, and 3) to

use external resources such as review panelists and stakeholders more effectively. Specifically, the panel recommended that:

- *National Program Leaders (NPLs) must stay current with the issues of animal agriculture*
- *Professional development for NPLs should include attending scientific meetings not normally attended by animal scientists. Expand the range of disciplinary meetings that NPL's attend to enhance their opportunities for appreciating the best discovery research, as well as developing opportunities for education, partnerships, and leveraging funding*
- *Participate in environmental scanning, trend analyses, scenario planning, and situation awareness opportunities and programs.*

We accept these recommendations in their entirety. While we are often more cognizant of important and emerging issues in our areas of expertise than many in the animal agriculture world there is an opportunity to augment this awareness by combining formal and frequent discussion of these issues within the team and through formal and informal contacts with other program areas that could provide a synergistic benefit, such as education and waste management.

The 2010 USDA Joint ARS-NIFA Animal Health Research Planning Stakeholder Workshop in March brought together over 150 animal agriculture leaders from industry and academia. They provided input to the prioritization of animal health issues and possible partnerships to provide solutions to these issues. Their feedback will be used by ARS (to develop its next 5 year research plan) and NIFA (to inform 2011 competitive priorities and beyond, and serve as an additional resource for the State Agricultural Experiment Station Directors). While the focus was on research needs, we encouraged and received input on education and extension needs as well. The equivalent workshop for ARS/NIFA Animal Production (including welfare) will be held in 2011.

While it is difficult for NPLs to cover their primary travel and meeting responsibilities due to funding restrictions, the suggestions that we attend meetings to expand our awareness and increase opportunities, and improve our planning abilities are important and will be implemented within the context of the provided resources.

2. The panel recommended that the Animal Systems team work to reprioritize program areas with an eye towards the new science priority areas of the agency. Specifically:
 - *Animal agriculture fits well within the pillars of the new NIFA emphasis areas of food security, bio-energy, food safety, climate change, and youth and community development. Tie the strategic plan of the Animal Systems Portfolio to the institutes being developed by NIFA*
 - *The NPLs must assume leadership roles and position the portfolio to be successful in the new institutional structure*
 - *Establish priorities to address major issues*
 - *Identify and prioritize emerging issues related to animal agriculture*
 - *Limit the portfolio to an established set of priorities that address the largest number of stakeholders possible. It is necessary to prioritize activities that address pressing issues of global animal agriculture e.g. the health and well-*

being of humans, animals and the environment. This includes the costs and benefits of producing animals and animal products based on these outcomes.

- *Define direct, measurable outcomes of interdisciplinary research and prioritize funding for projects that meet these outcomes*
- *Strategically direct resources toward priority areas*
 - *Direct discretionary funding to major issues of animal agriculture and emerging areas*
- *Integrated projects need increased funding over a longer duration to encourage quality outcomes*

We fully concur with these recommendations. The 2010 AFRI Request for Applications (RFA) mirrors the 5 new NIFA priorities with Challenge RFAs for: Global Food Security, Food Safety, Climate Change, Childhood Obesity, and Sustainable Energy. These are both national and global challenges facing animal agriculture. Competitive awards in these priority areas will be funded at substantially higher levels (\$500,000 - \$4,000,000 per year) and longer durations (up to 5 years) than in the past in order to generate more significant and sustainable impacts. A sixth area of Foundational Grants has been defined to enhance competitive funding opportunities of the traditional individual researcher, but with larger awards (\$500,000 minimum total). NIFA Animal Systems had at least one of its NPLs on each of the 2010 AFRI RFA writing teams, with some teams such as Global Food Security and Climate Change including at least 4 Animal Systems NPLs. This involvement has allowed us to help define the specific animal production, health, and welfare priorities that should be addressed, including global and emerging animal agriculture issues. Final decisions on RFA priorities, however, rest with the Director and his executive team. The NIFA administration has noted that our advocacy has positively influenced the allocation of program funds to the benefit of animal agriculture in 2010. Specifically, the Animal Systems team was able to successfully articulate the need to include animal priorities in 3 of the 5 Challenge RFAs (Global Food Security, Food Safety, Climate Change) and in several areas of the Foundational RFA. We now seek to expand that for 2011. All RFA's have been dramatically focused compared to previous years (http://www.nifa.usda.gov/funding/rfas/afri_rfa.html) with fewer numbers of animal priorities addressed.

Our current and future involvement in this process also will allow us to better coordinate the outcomes of the competitive process with institutional Plans of Work, capacity building proposals, and other areas of funding in order to ensure that priority science and critical emerging animal agriculture issues are appropriately identified and adequately supported. We intend to continue this advocacy, and to keep rolling records of the success and failure to achieve appropriate support for animal agriculture issues in the new agency environment. We will continue to develop mechanisms through which the support for animal production, health, and welfare issues can be reported to our stakeholders in a cohesive and understandable format.

One critical area of advocacy now is to help our stakeholders understand the new areas of opportunity that are available to them. Our plan is being executed now and includes communication as widely as possible to animal agriculture research, education, and extension groups through websites, personal contacts, public appearances, and publications so they understand that there are still funding opportunities for animal agriculture within AFRI. Also, we

intend to promote the concept of integrated efforts such that future proposals will have greater impact across our mission areas. Successful proposals will define in advance the specific measurable impacts that are intended in their research, education, and/or extension effort, and will be required to report those achievements in a manner so that we can use their information to advocate additional support for their efforts.

3. The panel also recommended that the Animal Systems team:
 - *Maintain an appropriate mix of formula and competitive funds for the Animal Systems Portfolio.*
 - *Expansion of resources should be in competitive funds needed for discovery research.*
 - *Recruit widely for the most highly qualified people from research, extension, and teaching from educational institutions and industry to serve on all review panels*
 - *Involve broader representation of stakeholders in listening sessions*
 - *Reprioritize stakeholder groups, seeking broad representation including human health scientists*

The team is committed to implementing the above areas. For example, the NIFA administration recently announced that new institutional Plans of Work and Annual Reports for formula funds will be formulated in conformance and with relevance to the five science priority areas beginning with FY2012. This will help align formula and competitive activities. Of course, formula funds are disbursed at the state level by the Agricultural Experiment Station Directors and the proportion they direct to animal priorities in their states is at their discretion. The President's 2011 Budget proposal to Congress requests a significant increase for the AFRI competitive program (from \$262 million to \$428 million). Competitive programs remains committed to peer panel diversity and will continue to publish those statistics each year in the respective annual reports published on the NIFA website. The NIFA Director expects that each of the new structural Institutes will not only include broader stakeholder representation in workshops, but also develop a systematic approach to gathering stakeholder input.

4. With respect to reporting, self-assessment, and communication of results, the panel recommended that the Animal Systems team develop their planning outlines with greater emphasis on measureable outcomes and impacts. Specifically:
 - *Implement a mechanism to measure and quantify impact in ways that resonate with the public in such a way as to create increased public support and funding. Additional stakeholder input will be needed to identify appropriate outputs.*
 - *Develop productivity tracking methodology*
 - *Allocate a portion of the funding toward evaluation and assessment*
 - *Assessments of impacts need to be addressed in a variety of equally important ways.*

Suggestions include:

 - *Publications, technical bulletins, science citation impacts, patents.*
 - *Document utilization by end user*
 - *Students trained/educated*
 - *Develop a strategy to transmit and translate animal agriculture science/information to the public and other governmental agencies*

- *Develop an agency-wide reporting process that is efficient and effective, that measures meaningful outputs, and that can be used to quantitatively determine impacts.*
- *Communicate Portfolio results in a fashion that the public recognizes as useful*

The team fully agrees with these suggestions. Several NIFA units, including ISTM and Planning and Accountability are working to address the outlined areas that cut-across the larger institute, while the Animal Systems team will develop a strategy to better communicate the animal portfolio accomplishments .

5. A final area of significant external panel recommendations focused on the degree of Animal Systems involvement in education programs that support animal agriculture. Specifically, NPLs need to be more involved and be more proactive in developing the animal scientists of tomorrow.
 - *Strategic plan needs to include specific recommendations to develop the next generation of scientists and practitioners*
 - *Seek ways to enhance the education/training of the next generation of scientists*
 - *Appropriate funds for quality research experiences for students*

At the time of the external review, we had not compiled statistics on the direct support provided through our programs to undergraduate, graduate, or post-doctoral education because this had never been a specific focal point of our portfolio. In addition, the tracking of capacity building (formula) funds that are managed by the Animal Systems team does not allow for direct recovery of this type of data. However, in response to the questions and concerns of the external panel members, we assembled data on the support to higher education that occurred through the competitive program area from 2005-2009. In brief, we supported 84 undergraduate students through 1329 months of education, 308 graduate students through 8095 months of education, and 218 postdoctoral students through 5171 months of education/research.

Subsequent to the review, the NIFA administration determined that educational support in all areas of agriculture needed increased attention. To this end, a separate Fellowships RFA in the AFRI competitive grants program will be launched in April 2010 for pre-doctoral and post-doctoral educational support. The Animal Systems NPLs helped shape this, as well as many of the other 2010 AFRI RFAs to insure that animal agriculture is appropriately represented. Furthermore, by promoting the issue of educational support to its own RFA, it will be possible for the agency to more easily track inputs and outcomes for all program areas.

In recognition of the importance of providing additional support to agricultural education, the Director of NIFA recently announced that, in his capacity as acting USDA Chief Scientist, he has commissioned his office to develop a new program document for the Research, Education, and Economics mission area that describes the goals and an integrated approach to the support of agricultural education. The Animal Systems team will work to ensure that animal science, veterinary science, and veterinary medicine are appropriately represented in this new effort.