ESS PRIORITIES FOR FY 2012

ESCOP Budget and Legislative Committee

Are There Other Institutes/Divisions Desired for NIFA?

Current:

- Plant and Animal Productions Systems
- Human and Community Development
- Human Health and Nutrition
- Climate Change and Energy
    - While politically attractive at this time the above name is too narrow and fails to address growing concerns about natural resources including forests, land, water and environmental management. In addition, while related to climate change and potentially linked to mitigation, "energy" does not fit well within this general area.

Recommendations

- Suggest renaming Human Health and Nutrition **to**: Health And Human Nutrition
- Suggest renaming Climate Change and Energy to Natural Resources And Environment
- Create new institute for Bioenergy and Bioproducts
    - Energy is a big issue and will continue to be for the foreseeable future. As such this area is related to climate change and should play a role in mitigating changes. However; we suggest that the formation of a separate institute dealing with bioenergy and bioproducts

Programmatic Integration

The management structure and integration among the institutes are key factors in preventing silos. Will things fall through the cracks between Institutes? How will cross-institute interactions be promoted?

Are There Unidentified Research Priorities or Themes?

Survey Themes Provided:

- Bioenergy, Feedstocks and Conversion should also include logistics, bioproducts
- Biotechnology/nanotechnology (probably technology will be cross-cutting)
- Environmental stewardship, water quantity and quantity
- Value added products (food and non-food products)
- Health and Nutrition, Cultural Consumption Practices
- Food and Health
- Climate Change, Mitigation and Adaptation

- Food Safety
- Food Security and World Hunger

New ideas:

- Farm-scale energy technologies;
- Energy conservation efforts for "Agricultural and Community Systems";
- Keeping small scale farms economically viable, integrate into "Plant and Animal Production Systems";
- Food security in the US is a developing problem that few recognize
- Interstate water allocations;
- Making locally-produced food in individual states more profitable and sustainable;
- Sustainability of food, fuel and fiber;
- Need 'high risk' research funding targeted to provide opportunity for transformative change.

Comments:

Need human and infrastructural capacity across all themes, support network eroding to address theme capacity across system with budget constraints at all levels.

We should arrange these priorities under the institute themes ($200M programs) and modifiers added to bullets selected to show alignment

How Should Capacity Programs be Administered in NIFA?

These funds will continue to be distributed by formula into the future. There have been clear messages from OMB and Dr Shah that the Administration understand the importance of these funds and would not see to reduce them.

All comments indicated that participants do not want to see capacity programs diffused across the institutes. This could result in loss of the institutional memory and potentially have programs directed by the institutes rather than by the Experiment Station Directors. Directors must retain the ability to address individual state needs outside of overall national priorities. Directors will need to be aware of potential for the institutes and the POW process to become "directive" of state programs in the future.

NIFA Office for Capacity Programs

To protect capacity programs from either becoming too diffuse throughout NIFA and to protect them from being reduced in importance and forcibly aligned into program areas that fit under the national priorities only and thus ignore state or constituency needs or need for "novel" projects, place the capacity programs in a separate institute or under separate oversight of a highly placed

administrator. This administrator would champion the USDA-State-LGU partnership and have the responsibility of keeping capacity programs robust and fully funded.

NIFA has input into capacity funds through approval of the plan of work at our institutions. A plan of work review is scheduled for 2010; this process will include AES and CES Directors and their staff.

Other comments:

- There was also concern that creating another structure to manage capacity programs might add another bureaucracy with associated costs.

- 1890 programs have capacity programs that are in addition and somewhat different to the 1862 institutions.

- Also suggest that smaller research authorities be rolled into 'Hatch, McIntyre-Stennis, or Evan-Allen, e.g. 'animal health' which would require legislation.

How Should Multicultural Programs be Administered In NIFA?

Programs currently housed under CSREES/SERD must retain integrity and visibility. Included are authorized programs for the 1890s, 1994s, HSIs, Pacific Islanders, Native Alaskans and Territorial colleges

These programs should be place within the Institute for Human and Community Development or in a Multicultural Programs Office within the Director's Office

However, we are reminded, NIFA is modeling itself after the structure of NIH, which, like NSF has distinct divisions to serve MSIs. For example, NSF programs include multicultural programs in each of the divisions. Thus analogous structures within NSF and NIH might be appropriate NIFA.

What is The Desired Target Increase for Formula Programs in 5 Years?

There is general agreement with annual increases between 5 to 7% but as high as35%.

Comments:

"Keeping up with Inflation" is not convincing to anyone and we are already "behind" just asking for "inflation". We need to *double* capacity within the next 5 years but must have compelling arguments. To do so, we must package the request in terms of needs, priorities and outcomes to ensure that the capacity funds are recognized and increased.

- What good things the money is used for, e.g. new infrastructure to address the new priority areas in NIFA Institutes such as:

    - Energy Systems, Food Safety Detection, possibly a Continuing Services Contract for Infrastructure.
- What outcomes will be realized by our publics
- What good things would "go away" if lost or eroded

What Are The Next $200 Million Programs?

Need to increase appropriation under the current authorization; there is a $400+ million opportunity to increase AFRI appropriation under current authorization

Expand current/historical areas to energy – new area not under current appropriated areas of AFRI. This is new, need new capacity funds to invest in infrastructure to address this area. Any effort into energy production on available lands will impact "food security" in some way.

Bioenergy, Feedstocks Bioproducts, Conversion and Logistics

- Sustainable production/development of feedstocks including forests, animal waste, algal systems, and also municipal solid waste and other waste/nutrient streams
- Engineer plants to produce bioproducts and be productive under water limiting conditions and on marginal lands
- Develop 2nd and 3rd generation biofuels;
- Develop improved bioconversion processes
- Develop regional experimental biorefineries
- Logistics: harvesting, storage, processing, transportation

Health and Nutrition

- Fundamental and applied research that provides solutions to food-related health challenges (obesity, diabetes, heart disease, cancer, etc); Characterize and utilize ethnic foods in biomedical/preventative disease applications;
- Use classical breeding and biotechnology to develop functional foods, with improved nutritional and/or medicinal properties;
- Understand the "culture of consumption" and develop appropriate intervention strategies
- Characterize and utilize ethnic foods in biomedical/preventative disease applications;

Climate Change, Mitigation and Adaptation

(Rename: Natural Resources and The Environment)

- Carbon sequestration and life-cycle carbon balance;
- Mitigation and contribution so agriculture to climate change (this is similar to the title, thus the title should be here and rename the theme title as recommended previously)
- Mitigation and contributions of agriculture to climate change) i.e. the development of adaption science

- Competitively fund research and extension projects that focus on:
    - Life cycle analyses including Green Ag Industries
    - Sustainable food, fuel, and fiber systems;
    - Conversion of lands to forests and to other plants species
    - Developing plants adapted to new climate paradigms (economic models, microbial, land use thinking/change), household level inputs global perspective
    - Regionally adapted climate models
    - Water and climate change (affects on water quality, quantity, etc.)
    - Competitively fund research and extension projects that focus on:
    - *Microbial genomic ecology*
    - Sustainable food, fuel, and fiber systems, cross list with Plant and Animal Production;
    - Conversion of lands to forests and to other plants species, cross list with Plant and Animal Production;
    - Developing plants adapted to new climate paradigms, cross list with Plant and Animal Production ;
    - Regionally adapted climate models
    - Water and climate change (affects on water quality, quantity, etc.)

Food Safety

- Characterize and understand the ecology of pathogens from field to fork
- Develop and implement methods to rapidly detect, and prevent (respond to, and recover from) food borne illness, including trace-back and trace-forward labeling to identify contaminate food products;
- Develop pathogen controls based on the multiple hurdle concept, microbial physiology, and modes and mechanisms of action of hurdles;

Food Security and World Hunger

- Develop small scale culturally appropriate production systems; i.e. match production with local consumption;
- Establish collaborative programs between US land-grant institutions and partner institutions in foreign countries;
- Increase in scientific knowledge and training for international graduate students and professionals;
- Use biotechnology to enhance traits and production of local food crops;