National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Board

HIGHLIGHTS OF THE SPRING 2014 MEETING

May 5-7, 2014
Ohio Agricultural Research and Development Center
1680 Madison Avenue, Wooster, OH

SUMMARY OF PRESENTATIONS

The National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Board (hereafter "the Board") met in public session on May 5-7, 2014 in Wooster, Ohio. The meeting welcomed new Board members and provided an orientation to new and returning members.

The USDA Office of Ethics and Office of General Counsel provided guidance to the Board regarding its role as a Federal Advisory Committee, and reminded the Board to err on the side of openness in terms of public access to meetings and ongoing work.

USDA Research, Education and Economics (REE) Agency administrators gave presentations to the Board regarding mission area priorities and activities. Generally, the agencies will see an increase in the 2014 budget compared to recent years, but will be cautious in using those funds for strategic investment priorities. Such priorities include implementing the open data policy and issuing calls for proposals as quickly as possible. The Board was also reminded of agency responsibilities mandated by the passing of the Farm Bill in February 2014, including the creation of Centers of Excellence in key research areas.

The Board heard a presentation from the National Agricultural Library on the Open Data Initiative, including an overview of the initiative and updates on progress since the last Board meeting in September 2013. The USDA and its REE agencies are mandated to provide public access to both scholarly publications and scientific data resulting from federally-funded research, and are working with other agencies and various stakeholders to develop an appropriate process for carrying out this mandate. The USDA is looking to other federal agencies with similar data sharing protocols for guidance, such as the National Library of Medicine maintained by the National Institutes of Health. A revised version of the USDA's proposed implementation plan will be submitted to OSTP by May 27, 2014, and will be made accessible to the Board when OSTP grants approval. It was noted that scholarly publications are likely to be more easily accessible through a centralized system because of their common formats, while access to scientific data is likely to be decentralized and more problematic because of their heterogeneous nature. The USDA plans to deploy the first phase of PubAg (the protocol for scholarly publications) by September 30 and to develop a prototype of Big Ag Data (the protocol for scientific data) by December 31, 2014.

The USDA Office of the Chief Scientist (OCS) provided an overview of its role in coordinating science and prioritizing research areas within the USDA. The OSC has been restructuring over the past 10 months and is aiming to further develop its portfolio of activities in the near future.

The Under Secretary for USDA REE / USDA Chief Scientist updated the Board on current and pending USDA business, including department budgets for 2014 and 2015. The budget requests include funding for three of the six innovation institutes recommended by the PCAST report. It is proposed that these institutes focus on the following high priority areas: pollinator health, antimicrobial (i.e. antibiotic) resistance, and establishment of a national network for bioproducts manufacturing innovation. The new Farm Bill has resulted in a number of new responsibilities for NIFA, of which the highest priorities are the mandatory grants programs. Another large piece of work mandated by the Farm Bill is establishment of a new foundation for food and agriculture research. The board of directors will be named and the foundation incorporated by this summer. It was noted that the USDA is implementing a policy to provide an official response to each report and set of recommendations provided by the Board. That response will accompany the Board's reports when submitted to the Secretary.

The Board returned to the issue of addressing the charge from the Under Secretary regarding the balance of crop research, as outlined in the President's Advisory Committee on Science and Technology (PCAST) report, which was discussed at the September 2013 Board meeting. The OCS described a proposed outline for the report required from the Board and a possible timeline for its delivery. The OCS also summarized the information received by the Board thus far. The Board also heard a presentation from the Economic Research Service (ERS) describing the PCAST recommendation in more detail as well as existing data on agricultural research investments that could be used in research area priority setting. It was noted that some important knowledge gaps exist. More information is required on research investments in both the public and private sectors and the extent to which such investments are complementary or competitive. The Board was asked to consider what further information, if any, it requires in order to complete the report. It was suggested that a workshop and/or listening session with key stakeholders may be helpful for this purpose.

This meeting included a disciplinary focus on the Agricultural Experiment Station System. Board members took part in tours of the J. M. Smucker Company and Cedar Lane Farms, as well as the Ohio Agricultural Research and Development Center (OARDC) and USDA Agricultural Research Service facilities located on and near The Ohio State University (OSU) campus in Wooster. The Board heard a presentation from the Experiment Station Committee on Organization and Policy (ESCOP) describing its activities and priorities. The Board also heard a presentation from NIFA and discussed the USDA's role in the Agricultural Experiment Stations.

The Board heard a presentation from OSU regarding its research into zoonotic disease and food borne pathogens. Board members were also provided an opportunity to talk informally with OARDC, OSU and ESCOP researchers about ongoing work.

KEY ISSUES AND DISCUSSIONS

The Board engaged in substantial discussions on issues related to the Open Data Initiative:

1) *Stakeholder involvement*. Concern was raised that some interested parties – e.g. ECOP, ESCOP, universities – have not been adequately involved in discussions thus far.
2) *Cost models*. It was noted that data repositories require financing. Concerns were raised that the proposed method for USDA data access has not sufficiently accounted for the extra cost

burden that existing repositories would acquire or for the trade-off that USDA budgets would face between funding new research and maintaining data repositories.

3) *Responsibility for compliance*. Questions were raised about whether an institution or an individual researcher (Principal Investigator, or PI) would ultimately be held accountable for ensuring public accessibility to publications and data.
4) *Data value*. It was noted that different fields produce very different types and volumes of data, and also that data can vary substantially between the raw collection stage and the published product. If the duration and location of data storage will be based on some perceived value of the data, concerns were raised about how such decisions will be made.
5) *Privacy*. Concerns were raised about how personal identifiable information embedded within datasets will be handled. It was noted that the USDA is seeking advice from the NIH on this issue, but does not anticipate having a policy in place before the end of this year.

The Board also engaged in an extensive discussion on the work required regarding the balance of crop research. Issues that will need to be resolved for the Board to carry out its charge include:

1) *Distinguishing 'public' from 'private' investment*. It was noted that in some cases plant breeders and/or growers may financially support research done by public sector programs, and that mandatory check off programs might be considered a public source of funding. These situations complicate the definition of public versus private sector investment.
2) *Differences in investment time horizons*. It was noted that public and private sector programs often have different research time horizons, even when working with the same crop. Public investment is more likely to be in fundamental basic research, where the intended time horizon is 10 years or more, while private investment is more likely to be in shorter-term applications with time horizons of less than 5 years. In such situations, the temporal relationship between public and private investment may be entirely complementary and necessary, but may appear duplicative if not investigated appropriately.
3) *Differences in investment between major and minor crops*. The nature of complex temporal relationships, as noted in point 2) above, may differ significantly between major and minor crops, such that sweeping statements about the need for rebalancing may be inappropriate.
4) *Evaluation metrics*. It was suggested that a set of metrics to evaluate the impact of research investments might be helpful. However, it was also noted that any suite of metrics would need to include all desirable outcomes of research investment including those that might be hard to quantify, such as training of the next generation of breeders.
5) *Maintaining national capacity*. It was noted that there are likely to be critical research areas that are in the nation's interest to maintain. In those cases, even if private sector investment is significant, some degree of consistent public investment might be warranted to ensure continued national capacity and minimize the risk of waning interest from the private sector.
6) *Commercial viability*. It was noted that the private sector is likely to be motivated to invest in research only when the commercial viability of that research is evident. Hence when a long-term goal is in the nation's interest but is not currently commercially viable, the public sector might need to invest in research first in order to stimulate private sector investment.
7) *Consideration of current versus future needs*. It was suggested that any discussion about research investment priorities should account for both existing and future needs, such as training and encouragement for new emerging farmers. Consideration of future needs would also allow for some degree of proactive research and preparedness for anticipated crises, though again the difference between public and private interests would need to be explored.

SUMMARY OF BOARD BUSINESS

The Board nominated and elected an Executive Committee, Chair and Vice Chair to the Board.

The Board heard updates from the Citrus Disease and Relevancy and Adequacy subcommittees, and discussed reports from the Specialty Crop Subcommittee and National Genetic Resources Advisory Council (NGRAC). It was noted that NGRAC met at the end of September just before the government hiatus, and that therefore some of the recommendations in its report regarding AC21 will need further development and clarification.

RESOLUTIONS AND RECOMMENDATIONS

- The Board decided to form a working group to discuss the aforementioned issues surrounding the Open Data Initiative and to develop recommendations for the USDA.
- The Board approved the Report of the Specialty Crops Subcommittee for forwarding to the Under Secretary, with a question attached regarding the breadth with which 'relevancy' is defined in the review process for research proposals.
- The Board accepted the Report of the National Genetic Resources Advisory Council.
- The Board decided to rejoin Relevancy and Adequacy as a single subcommittee.
- It was suggested that the fall Board meeting be scheduled close to the FDA meeting to be held on 18-19 November.
- To improve the orientation component of future meetings, the Board suggested providing more guidance to REE Administrators for their presentations, including asking key questions ahead of time, and providing read-ahead material for new Board members.
- It was suggested that voting for new Board positions be postponed from this coming fall until the following year, since terms for the newly-elected positions will be shorter than usual.
- The Board agreed to hold a telephone conference call quarterly, between the regular semi-annual meetings, to comment on the progress of working groups and subcommittees. The call will be recorded and made accessible to any Board members who cannot join in.

ACTION ITEMS

- The Board was asked to put together a working discussion document responding to the Under Secretary's charge regarding the PCAST report within 3 months. The Board appointed a Chair and added new members to the working group that will prepare this report.
- To inform the report on PCAST, the Board will hold a listening session to gather more information from a wide range of stakeholders in both the private and public sectors.
- The Board will provide a report to ESCOP, which may include recommendations, on the programs run by the Agricultural Experiment Station System. A small working group was formed for this purpose.
- Board members were asked to research the purview and work of each subcommittee that reports to the Board and identify which subcommittee(s) they might best serve on. A call for interest in serving on committees will be sent out to all absent Board members.
- Executive Director will hold a webinar training session on the use of the Sharepoint website.
- Executive Director will set up folders with working documents on Sharepoint for working groups to store reports that are in progress.