

NATIONAL AGRICULTURAL RESEARCH, EXTENSION,
EDUCATION, AND ECONOMICS ADVISORY BOARD

MINUTES OF BOARD MEETING AND FOCUS SESSIONS

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WEDNESDAY, OCTOBER 27

ADVISORY BOARD GENERAL SESSION

Welcome, Remarks and Introductions

Dr. Martin Massengale called the meeting to order at 1:15. He informed participants that the Board had held a three-hour orientation session for new members that morning, at which they received briefings on the missions, research portfolios and outreach activities of the REE mission agencies. He gave a brief overview of the history, responsibilities and procedures of the Board, emphasizing the fact that it works by consensus and reports to both the Congress and the Department of Agriculture. As outgoing chairman of the Board, Massengale close by observing that, in his opinion and experience, USDA is woefully underfunded for agricultural research and development, and that it has done an inadequate public relations job in educating the public to the benefits of agricultural research.

Working Relationship between the Board and USDA

Dr. Catherine Woteki (Undersecretary for REE, USDA) thanked Massengale and Dr. Walter Armbruster for their years of service and leadership as chairman and vice chair of the Board. She noted that this was a critical and exciting time in the agriculture and food sector, which faces major challenges and opportunities in five priority areas: climate change, food security, bioenergy, food safety, and nutrition/obesity. There is an immediate for complete work on the *Roadmap for USDA Science*, a strategic plan with specific goals for agricultural research in the near to middle term. And USDA also faces a communication challenge: it needs to find new and compelling stories to tell about the benefits of science and research, particularly when the payoffs are 10 years or more in the future. To help her do this, she gave the Board two central “assignments”:

1. Tell her what’s missing from the current draft of the *Roadmap*, with particular emphasis on the REE mission agencies; and
2. Suggest specific projects, programs and goals for the Action Plan that she is currently preparing for delivery by Christmas.

Woteki added the Board’s work has always made a valuable contribution by bringing forward new ideas and adding new items to REE’s agenda. In response to questions, she said that the emphasis on metrics – part of a government-wide “science of science policy” movement – will be the key to a successful Action Plan, and that one key emphasis will be on consumer behavior, the financial and other factors that influence food choices.

Board Business

By unanimous voice votes, the Board accepted the agenda for the present meeting and the minutes of the March 2010 meeting, which were included in the briefing book. Members asked

that briefing books be sent to them in advance of future meetings, to allow them to prepare more fully before arriving at the meeting. The Board also heard reports from its standing committees:

- *Renewable Energy.* – Carol Keiser reported that this standing committee, created by the 2008 Farm Bill to review REE programs and initiatives in this area, submitted its initial report in July 2010. That report contains specific recommendations in the areas of cellulosic feedstocks, education and outreach, bioproducts utilization, biomass-derived biopower, and support for the World Bank’s *Global Strategy to Improve Agricultural and Rural Statistics*. The committee continues to hold meetings to assess the sustainability and environmental impacts of bioenergy. In response to questions, Keiser said that communications and consumer education will be vital in reaching the wide range of audiences.
- *Specialty Crops.* – Dr. Walter Armbruster reported that the draft of this committee’s second report was completed and released the previous day. In it the committee summarized the results of two regional listening sessions and provided information on the administration of the Special Crop Initiative. He believes that further consolidation of the research needs from these many small sectors will be an important input to the next Farm Bill. In response to questions, he said that the committee had not yet addressed the issue of “locally grown” food, although he is aware that it has growing significance for many consumers.
- *Relevance and Adequacy of USDA Research.* – This committee is working on its report, which is due in the first quarter of 2011.
- *Sustainability in Support of Food Security.* – Dr. Martin Massengale said that this working group had completed its report, based on the March 2010 meeting, and sent it to the Secretary and Congressional committees.
- *Competitive Grants.* – This is a new working group that may develop an agenda for the spring 2011 Board meeting.

J. Robert Burk (Executive Director, NAREEE Board Office) reported that the statement of the Board’s General Operating Procedures is under revision, and he directed members’ attention to the section on their rights and responsibilities as members of a Federal Advisory Committee Act (FADCA) board. In response to questions, he repeated that the Board generally operates by consensus, but that – while it is in the best interest of an advisory body to have a united voice – it is always possible to have a minority (dissenting) opinion or report at the request of one or more members.

FOCUS SESSION – AGRICULTURAL PRODUCTIVITY AND RETURN ON INVESTMENT IN AGRICULTURAL RESEARCH

Dr. Walter Armbruster noted that any discussion of the return on investment in research will be troubled by uncertain metrics and by the lag time between those investments and the full benefits to society. The planning committee that organized this focus session will develop more a complete report and recommendations in coming weeks

Opening Comments

Dr. Kitty Smith (Administrator, Economic Research Service, USDA) reported that, over the past 100 years, domestic and international food prices have declined in real dollars because of the rising productivity of agriculture. However, productivity is a relative measure that includes all inputs and outputs across the entire sector, including not just more land and water and labor, but also non-market factors such as price supports, export policies and exchange rates, and new technologies. Furthermore, the benefits of new technology may not be felt as increased yields for as much as 20 years after the research is funded. As a result, it is a detailed and complex undertaking to determine just what return we are getting for the dollars we invest in agricultural research. We know that consumers are getting more for their money, and at a lower in terms of resources consumed, but how should we best measure agricultural productivity and the return on investment in agricultural research?

Analysis and Implications

Dr. Keith Fuglie (ERS) presented an analysis at the global and national level based on a more sophisticated measure called *total factor productivity* (TFP) – the amount of output per unit of all of the inputs used in production. In essence, TFP measures the effect of increasing the quality those inputs and the efficiency with which they are allocated. These are precisely the contributions made by research, extension, rural education, and agricultural infrastructure – in other words, “agricultural R&D.” Using this more detailed analysis, economists have determined that the rate of global agricultural productivity growth has actually declined since 1961, but that an increasing proportion of that growth is coming from growth in TFP. These gains aren’t evenly distributed, however: some countries (e.g., Malaysia, China, Brazil, Chile) enjoy TFP growth over 2.3 percent per year, while others (the former Soviet Union, sub-Saharan Africa) have rates under 0.6 %/yr. The United States, at 1.6 %/yr, is in the middle rank of TFP growth.

Further analysis shows that countries with greater research, extension and education capacity have achieved both (a) more rapid TFP growth and (b) a higher rate of social return on their investment in agricultural research. In the United States, agriculture research spending (of which only 40 percent comes from USDA) represents less than 2 percent of gross domestic product (GDP), yet it has been responsible for more than 12 percent of TFP growth in the entire U.S. economy. These benefits are widely dispersed in society, mostly in the form of lower prices, but the total social return on investment in agricultural research stood at 47 %/yr in 2000. Fuglie concluded by observing that, in economic terms, this continued and oversized contribution to the growth of the U.S. economy suggests that the United States has been underinvesting in agricultural research, extension and education.

Land Grant University Perspective

Dr. Wallace Huffman (Iowa State University) presented a state-level analysis based on measurements of *public agricultural research capital*, which includes both federal and state

government spending that focuses on agricultural productivity (about 70 percent of total), and the workforce, facilities and expertise that it creates, averaged over 35 years (1970-2004), plus “spillover effects” from relevant expenditures in other states. Analysis shows that public research capital has grown steadily in some states, while in others it plateaued in the 1980s, and in a few it has declined since that time. Not surprisingly, states with flat or declining investment in public research capital have experienced slower TFP growth over time and reduced competitiveness, losses that are hard to make up in later years. Huffman added that his model, including spillovers and private investments, suggests that the real rate of return on agricultural research is between 55 and 60 percent per year.

Industry Involvement

William Leshner described industry involvement in the Global Harvest Initiative (GHI), a public-private partnership to increase agricultural productivity. Corporate interest was spurred by the sudden spike in food prices in 2008 and the recognition that to feed the world’s anticipated population of 9 billion in 2050, we must double food production over 40 years, with no new land and growing competition for clean water. This in turn will require us to increase global TFP growth from the current 1.4 %/yr to the needed 1.75 %/yr. Global Harvest plans to release white papers this year with findings and recommendations in five areas – research, trade, new technologies, economic development, and greater private sector involvement – and will publish an annual GAP Report describing progress on global agricultural productivity. Leshner indicated that the white paper on research will conclude, among other things, that agricultural research at USDA is woefully underfunded, especially in comparison with NSF and NIH, and will therefore recommend a significant increase in that funding.

In response to questions, Leshner added that the four corporate members – Archer Daniels Midland, DuPont, John Deere, and Monsanto – represent the decision-making core of GHI. They have no veto over the group’s recommendations, but it remains to be seen what they will ultimately sign off on. Additional members include the Congressional Hunger Center, Conservation International, International Conservation Caucus Foundation, Nature Conservancy, TransFarm Africa Corridors Network, and World Wildlife Fund. GHI is trying to increase its membership, both corporate and nonprofit.

Board Discussion

The Board’s initial discussion of these presentations focused on factors underlying the trends described and the recommendations of other groups addressing the issue. For example, the slow rate of diffusion of new agricultural technology might be responsible; the Consultative Group on International Agricultural Research (CGIAR) is working on the issue, but it isn’t known what their recommendations will be. Clearly it’s necessary to increase TFP in low-performing areas, but there’s a lot to be accomplished just by eliminating postharvest waste – pre-retail in developing countries, post-retail in developed economies.

Similar issues arise in rain-fed vs. irrigation agriculture. At present we irrigate 18 percent of U.S. farmland, but it produces 40 percent of total harvest. Climate change will affect the availability of surface water, so we need to use it more efficiently in the future. Genetically modified (GMO) crops are already increasing that efficiency domestically, but GMO crops are problematic overseas, where improved drought tolerance might be more appropriate. In fact, appropriate technologies for developing regions are likely to be different and simpler than those for U.S. farmers – such as limestone and low phosphate fertilizers for previously marginal lands, as has been done successfully in Brazil. Incentives are needed for innovations that might not have a high return on investment in the usual sense, perhaps something like the “orphan drug act” that encourages the development of pharmaceuticals that have a limited profit potential.

Advocating for such investments will require a broader coalition of domestic and international, producer and consumer, researcher and end-user groups. NSF and NIH were able to double their research budgets because they were able to mobilize their various constituencies to lobby in favor of the increases. In agriculture, however, the track record in this area is not good – commodity groups in particular have been reluctant to lobby for large increases in agricultural research. Other, less traditional constituencies must also be mobilized, including minority farmers, small farmers, and underserved communities both urban and rural. The success of the specialty crops sector in getting its message heard may provide a model; another is the growing lobby for organic and locally grown food; a third is the 2007 alliance of conservation and production groups to promote changes in forestry research.

There being no public comment, the meeting recessed at 5:00 p.m.

THURSDAY, OCTOBER 28

ADVISORY BOARD GENERAL SESSION

Board Business

Martin Massengale called the meeting to order at 8:30 a.m. and once again asked participants to introduce themselves.

By acclamation, the Board elected Jean-Marie Peltier as Chairman and Dr. Mary Wagner as Vice Chairman of the Board, respectively, for FY2011.

Board member Dr. Ira Levine asked to group’s indulgence to describe the activities of Professors Without Borders, an international academic collaboration that supports teaching exchanges and small-scale development projects in less-developed nations. Levine has participated in several projects centering on water resources, including one in the Galapagos Islands that gave birth to a comprehensive training and economic development plan sponsored by the Ecuadoran park service. Further information is available at *www.professorswithoutborders.net*.

Jean-Mari Peltier reminded members that USDA is now in the year leading up to a new Farm Bill, and asked them to be mindful in their deliberations of specific research needs in agriculture in general and in their own specific area or areas of interest. One member responded that they also need to think about where the Board itself is going – in general, they have spent too much time thinking and talking about the past, and not enough thinking and talking about the future.

USDA REE Communications Strategies

Rick Borchelt (REE Office of Communications, USDA) described the results of an REE public affairs review and plans for a new and more aggressive communications strategy. The review found both strengths and weaknesses. Weaknesses included the lack of a flagship science communications program, a lack of coordination with USDA’s Office of Communications and Office of Congressional Relations; a continuing focus on print releases in an era of multimedia communications; and an emphasis on individual, agency-specific research findings as local or regional stories, rather than stories of national scope about the aggregated impact of USDA science on the American economy and people. Strengths include a gold mine of “success stories” that need to be told, a pre-existing network of land-grant universities, professional organizations and advocacy groups whose own communications efforts USDA can leverage, and the growing demand for science stories in both print and broadcast media. The initiatives that are emerging to exploit these opportunities include:

- A web-based research magazine supported by podcasts, tweets and blog postings;
- Strategic incorporation of science messaging in overall USDA communications, with greater emphasis on the USDA brand rather than specific agencies;
- Greater emphasis on “success stories” featuring past investments that deliver on the promise of scientific research;
- Closer coordination between science communications and congressional relations;
- Better media training for USDA managers and more rigorous evaluation of USDA communications products, including annual communications reviews.

In response to questions, Borchelt cited ERS and NASS as models of how to integrate research results with agency communications and praised the ability of Extension agents as science educators. He urged other agencies not to wait for peer-reviewed publication but rather to push science stories into the press. Print publications are laying off their own science writers, and cable news is always hungry for content. The current USDA brand – “Every day in every way” – may need some work to bring science to the fore, as a tool for addressing major issues, rather than leaving it as an adjunct to other stories. He added that USDA has encountered some pushback on the quality of U.S. food abroad, this is not a core issue for REE. Board members noted that many U.S. food companies are international in their presence and could be useful partners in spreading the good word about American agriculture and USDA agricultural research.

Congressional Representatives' View of the Board's Role

Anne Simmons (Senior Professional Staff, House Committee on Agriculture) reported that Congress has started work early on the next Farm Bill, but that the context for this work is concern over deficits and a growing mood of reform. Between 70 and 80 percent of the USDA budget is taken up by feeding programs, which leaves very little cushion for increased spending on anything else. Conservation spending now equals or exceeds spending for commodity programs. And to complicate matters, many research programs (e.g., organics, specialty crops, farmers' markets) don't have a mandatory minimum going into the negotiations.

Dr. John Goldberg (Senior Policy Advisory to the Chair, House Agriculture Committee) agreed – negotiations over the Farm Bill will be difficult, regardless of the outcome of the November elections. Few present or prospective Members of Congress are from rural districts, and they find it difficult to understand why feeding and not production is the dominant issue. This will require a great deal of education and guidance for Members and staff alike, and the committee hopes that the Board will continue its traditional and valued role of helping Congress see the big picture in agricultural research.

In response to questions, Simmons and Goldberg added that deficit reduction will require a complex and painful audit of USDA programs. Research remains discretionary, and any increase in research spending will have to come from mandatory programs, at a time when even mandatory programs may be facing cuts. Even creating a mandatory minimum is difficult, and moving whole programs from discretionary to mandatory is almost impossible. Cuts to mandatory programs would require a waiver of House rules, and the leadership wants more oversight of discretionary programs to look for waste, duplication and mismanagement. Committee staff and Members alike need a simple message that will explain the value of agricultural research to their constituencies. The research community needs advocates who will advise Congress that, if it must cut research, it should do so wisely; and it should deliver that message sooner, rather than later. The best way to deliver that message is in person, regularly and frequently, by having the NAREEE Chair, Vice Chair and Executive Committee deliver its reports to committee members on behalf of a diverse and expert board.

Mission Agencies: Vision for the Future and Analysis of Funding Needs

Dr. Cynthia Clark (Administrator, National Agricultural Statistical Service [NASS], USDA) reported on efforts to expand NASS activities and expertise to include more of USDA's functions, including new statistical series on overseas markets, irrigation, organic prices, on-farm energy production, ethanol products, and biomass. Wherever possible this will follow the principles and practices of the Committee on National Statistics. Where the agency's expertise is lacking, they normally build it through hiring, but with the prospect of budget cuts, they have no choice to become more efficient. She asked for the Board's advice on other areas in which better statistics could improve USDA's performance; members suggested reinstating the annual catfish

and trout surveys, increasing geographical resolution where possible, and striving for the interoperability of socioeconomic and other databases (notably climate change)

Dr. Kitty Smith (Administrator, Economic Research Service [ERS], USDA) reported that the budget constraints on ERS might be slightly less severe than for other REE agencies, but with 80 percent of the budget going to salaries and benefits, any cut in the agency's budget would necessarily mean cuts in staff. ERS has hired a contractor who will help the agency with a strategic planning process, working with clients and shareholders to identify future issues and needs. She anticipates ERS becoming a center of excellence in behavioral economics, with special applications in nutrition, conservation, environmental services, and markets. Among the most important emerging issues are markets for environmental services, adaptation to climate change, global interdependence, and improved delivery of food assistance.

In response to questions, Smith added that statistics on feeding programs are kept by the various states using different measures and systems; there is a pilot program underway in data sharing. Among the most important global data will be commodity markets, food industry, and patterns of trade; the environmental impacts of food production tend to be the same across nations. NASS collects data on the horse industry, but most horses are not on farms. ERS strives to create a structured data management environment that will allow for interoperability and data mining, but they sometimes envy the NSF regulation that sets aside part of every grant for data management.

Dr. Edward Knipling (Administrator, Agricultural Research Service [ARS], USDA) reported that flat or declining budgets will bring a decline in the ARS workforce as retirees are not replaced. However, the agency routinely reallocates resources to new and emerging priorities, and – while it has no specific budget line for emergencies – it can quickly reprogram money and resources to deal with new issues and problems. A recent example is the brown marmorated stinkbug: ARS was able to anticipate this new pest before it emerged and worked with its four overseas laboratories to identify natural controls. While the Animal and Plant Health and Inspection Service (APHIS) has a robust infrastructure of inspection and quarantine, however, ARS and other agencies could use better labs and scientists to keep up with emerging threats and evolving regulatory regimes, which vary widely from country to country. It might be useful to create a setaside fund that would be available to coordinate the efforts of APHIS, ARC, the Centers for Disease Control and Prevention, and the Department of Homeland Security to deal with food and agriculture related emerging threats.

In response to questions, Knipling added that ARS have relatively few earmarks in its budget, perhaps \$41 million out of \$2.1 billion. USDA removes all such earmarks from the ARS budget in each new submission, but Congress reinstates about half of them and adds new ones. The current attrition rate at ARS is between 5 and 7 percent per year. It would be helpful to have a line item to address emerging threats. For example, Cuba will represent a large and diverse threat, if and when the embargo is lifted and trade resumes.

Dr. Roger Beachey (Director, National Institute of Food and Agriculture [NIFA], and Chief Scientist, USDA) described plans to integrate NIFA's three missions – research, education and extension – in five priority areas:

1. *Global food security and hunger.* – New science to boost production and innovation to feed vulnerable populations;
2. *Climate change.* – Knowledge to maintain productivity and develop mitigation technologies.
3. *Sustainable energy.* – Energy independence through biofuels, forestry and crops for bioenergy, and value-added bioproducts.
4. *Nutrition and childhood obesity.* – Nutritious, affordable foods and science-based information to support diet decisions.
5. *Food safety.* – New food processing technologies and education programs to reduce the incidence of food-borne illness.

NIFA has asked for a no-growth budget of \$1.5 billion in FY2011, with a 63-percent increase in funding for competitive grants under the Agriculture and Food Research Initiative (AFRI) to be paid for with offsetting cuts in other discretionary spending, including section 406 and other special research programs. Beachey suggested that Congress doesn't understand the special nature of agricultural research, and that REE's funding may be harmed by its location in USDA rather than an independent agency such as NSF. Workforce issues are becoming particularly severe at a time when USDA needs more brains, not fewer, at work for the nation's benefit. Accordingly, NIFA has established a Fellowship Grant Program to bring non-agriculture scientists into agricultural research and other initiatives to convince senior scientists to stay at work beyond the normal retirement age. Colleen Hefferan, who is well known to the Board, will lead an intensive review of this and other workforce and training programs in REE. NIFA is also looking for additional opportunities to collaborate with other REE agencies, other federal departments, and with NSF and NIH.

In the discussion that followed, Board members noted that all four REE agencies seem to be reading from the same roadmap, but they still lack a clearly articulated energy or agriculture policy. There is a need for greater long-term planning to deal with climate change and with the competitive challenges of China, Brazil, Chile, etc. Given the need to sharply increase agricultural production by 2050, productivity should be a major strategic goal, and USDA needs a better system for choosing among competing investments. If most of the pertinent research will be coming out of AFRI, then are those RFAs being written broadly enough? If the research agendas at ARS and NSF are givens, then how can NIFA best invest on the margins – for example, if ARS is funding production, should NIFA be funding nutrition? ERS might well increase its efforts in the area of predicting the future outcomes of current policies worldwide.

Other members noted that the Board, like USDA, continues to struggle with the question of competitive vs. formula (or “capacity”) funding mechanisms. Perhaps it is time for the National Academy of Sciences, which last looked at this question in *Publicly Funded Agricultural Research and the Changing Structure of U. S. Agriculture* (2002) to have another look. But the

larger and more important question is why overall funding for REE and agricultural research hasn't grown.

Status and Vision for the Future of the National Agricultural Library

Dr. Simon Liu (Director, National Agricultural Library [NAL], USDA) reported that the greatest threat to NAL is the continuation of flat budgets. NAL has a strong core collection, particularly in special collections, but it has already seen a decline in new collections; it has a small user base and no premiere product. Significantly, NAL lacks a reliable information technology (IT) infrastructure, including the high-capacity "10K" connection that would allow it to provide fast and reliable service to 10,000 clients at the same time. NAL does have plans to launch its new VIVO discovery tool in March 2011, and Liu anticipates that lifecycle analysis (LCA) might become NAL's premiere product. LCA is a systems engineering methodology that identifies the inputs, outputs and ecological impacts associated with a material, product or service through its entire life cycle – production, usage and disposal – thus identifying opportunities for improving environmental performance. LCA was pioneered by CocaCola but has reached its highest usage in Europe; this might be an opportunity to reclaim U.S. leadership in the field.

In response to questions, Liu added that NAL is not currently connected to the data networks at NSF. The National Library of Medicine already has large databases of genomic information; instead of reinventing the wheel, NAL would be wiser to leverage that investment through improved linkages. Liu does not foresee NAL doing LCA as a fee-for-service product, but it might charge users to post unique information that can't be found elsewhere. Board members suggested several other government data groups that might be able to help NAL with supplemental funding, including DOE and GSA.

Board Business

The Board elected the following members to serve on the Executive Committee for FY2011:

- Dr. Carrie Castille;
- Dr. Nancy Childs;
- Dr. Nancy Cox;
- Dr. Steven Daley-Laursen;
- Dr. Dennis Heldman;
- Leo Holt; and
- Terry Wolf.

Board Discussion

Board members noted that REE managers were talking about what they *had* to do, because of budget woes, and not about what they *want* to do, in response to the challenge of feeding 9 billion people in 2050. There is a clear need for strategies to accelerate the diffusion of new technology, and to raise TFP growth in low-performing states and nations, and to include

underserved communities and subpopulations in this effort. But if the challenge is to double agricultural productivity, then the more immediate question is why Congress had failed in recent budgets to maintain adequate funding for agricultural research. Historically, it has been difficult to get commodity producers to support increases in research funding; Congress doesn't like it when there are competing proposals (e.g., Create21 and NIFA), and the research title may suffer from being the last thing the committees write. Whatever the reasons, however, Congress has underfunded agricultural research in recent years, and the prospect is for actual cuts in the future.

In response to this prospect, the Board resolved to “double down” – to challenge the Secretary to ask for, and the Congress to approve, a doubling of the budget for agricultural research, just as they have done in recent years for NIH and NSF. To launch and catalyze this effort, the Board will compose and publish a concise, well-reasoned statement that positions agriculture as the solution to a series of real and compelling problems – not just world hunger, nutrition and food safety, but also job creation, exports, economic competitiveness, national security, sustainability, even renewable energy and climate change. To move this concept forward, the Board formed a subcommittee to begin drafting the statement and to work with the REE Office of Communications on testing its wording and message.

There being no comment from the public, the meeting recessed for the evening at 6:00 p.m.

FRIDAY, OCTOBER 29

ADVISORY BOARD GENERAL SESSION

Continued Discussion

Peltier called the meeting to order at 9:00 a.m. The Board continued its discussion of the “double down” challenge, which one member renamed “the Big Ask.” In a rapid-fire and far-reaching discussion, members noted that this initiative should be succinct, closely reasoned, and position agricultural research as a stakeholder, as well as a possible solution, to all of the major issues that were raised – climate change, sustainability, conservation, nutrition and health, standard of living, employment, energy, competitiveness. Productivity underlies all of these issues, but we are no longer seeing the productivity gains we will need. In this context, doubling the budget for agricultural research isn't an expense – it's an investment that the United States can't afford not to make. Important audiences will eventually include more than USDA and Congress; appropriate messaging will be vital. The Executive Committee will hold a teleconference within two weeks to continue this discussion.

Board Business

The Board confirmed the membership of ongoing and newly formed committees and working groups:

- *Renewable Energy* – Keiser-Long (chair), Bloom, Castille, Hamburg, Horan, Levine, Paige, Starkey, Vogel, and Wolf. Committee will meet with BRDI TAC in December, no report in the works.
- *Specialty Crops* – Armbruster (chair), Botts, Boyer, Green, Holt, Ishii, Lugg, McInerney, Taylor, and Wagner. Draft report is online; it will hold a listening session in Michigan in February or March 2011.
- *October meeting report* (productivity and ROI) – Perrings (chair), Armbruster, Hamburg, and Heldman. Will try to complete report by end of November.
- *Relevance and Adequacy* – Heldman (chair), Boyer, Castille, Daley-Laursen, Henton, Holt, Runge, Smith-Edge, Waukechon. Report due in spring but will have more impact if done sooner, preferably by end of March.
- *Competitive Grants* – Henton (chair), Cox, Douthitt, Green, Hamburg, Heldman, Levine, Taylor, and Waukechon. Possible topic for spring meeting; should include NSF and NIH as well as ARS and NIFA. Should address constitution of AFRI panels, industry input, transparency, minority participation.

The Board decided to hold its next meeting in March 2011; staff will canvass the members to determine precise dates.

Public Comment



November 11, 2010

Mr. J. Robert Burk
 Executive Director
 National Agricultural Research, Extension,
 Education, and Economics Advisory Board Office
 Room 3901 South Building
 U.S. Department of Agriculture
 STOP 0321
 1400 Independence Avenue, SW
 Washington, DC 20250-0321

Dear Mr. Burk:

The American Horse Council (AHC) appreciates the opportunity to submit these comments to the National Agricultural Research, Extension, Education, and Economics Advisory Board (Board). The mission of the Board is to provide advice to the Secretary of Agriculture and land-grant colleges and universities on top priorities and policies for food and agricultural research, education, extension and economics. The AHC asks that the Board ensure that research into equine health and diseases, education, extension and economics are included in the priorities and policies provided to the Secretary. Continued research is needed to protect the health of U.S. horses, the economic viability of the international horse industry and the many other benefits horses offer to Americans.

The American Horse Council

The AHC represents over 150 equine organizations in Washington before Congress and the federal regulatory agencies. AHC member organizations include breed registries, national and state equine associations, state horse councils, recreational associations, and organizations representing race tracks, horsemen, horse shows, veterinarians, farriers, rodeos, and other equine related stakeholders. The AHC also includes individual horse owners and breeders, veterinarians, farriers, trainers, professional, amateur, and recreational riders, and commercial suppliers. Individually and through our organizational members the AHC represents several hundred thousand individuals involved in all sectors of the horse industry.

The Horse Industry

According to the 2005 *Economic Impact of the Horse Industry in the United States*, a study done for the American Horse Council Foundation by Deloitte Consulting, LLC, the horse industry involves 9.2 million horses. 4.6 million Americans are directly involved in the industry, including nearly 2 million horse owners, 70% of whom live in rural communities of 50,000 or less. The horse industry has a \$102 billion impact on the U.S. economy and supports 1.4 million jobs. Forty-five states have horse populations of at least 20,000 horses; thirty-five states have populations of more than 100,000. The industry is built on the agro-business of breeding, raising, training, and using horses. The role of working horses in agriculture continues to be important. Obviously, the health, safety and welfare of these horses are critical.

The U.S. horse industry provides economic and other benefits that are discussed hereafter, which go far beyond the direct and indirect implications of many other livestock industries. It is the very nature of these complexities in the horse industry which allow these benefits to permeate through countless sectors of our society and, at the same time, require a more involved analysis in order to document their tangible economic and social benefits.

Deloitte's 2005 economic study is still referenced as the most accurate and complete representation of the economic impact and overall size of the U.S. horse industry. However, like all industries and commodities these numbers do not remain static, and it is critical to continue to invest in

documenting, recording, and analyzing the horse industry's economic and other benefits to better equip agencies and policy makers with current and accurate data needed to make informed policy decisions regarding research priorities, education and economics. We ask that the Board keep this need in mind as it makes recommendations to the Secretary.

Movement of Horses

The horse industry relies on the ability to move horses for sale, breeding, and competition interstate and internationally. In addition to the economic effects of the horse industry domestically, international trade in American horses and semen is substantial and must be protected. The effects of diseases on the international movement and sale of horses in the last several years and the requirements imposed by the federal government, states and foreign countries on moving horses – non-tariff trade barriers – has been substantial. More research into these infectious diseases is needed to avoid restrictions, both interstate and internationally, to equine commerce.

Equine diseases are significant hindrances to sustainable animal production, as well as animal well-being. In addition to contributing to animal suffering, equine diseases result in substantial economic losses in the U.S. annually and around the world. New and improved disease prevention, control, and mitigation strategies are needed to address current losses and prepare for future threats. Current knowledge gaps in these areas, however, seriously impede a major reduction in equine diseases that are already present in the U.S. Information gaps also threaten the future viability of the equine industry by increasing our domestic herd's vulnerability to pathogens which may establish new niches or undergo genetic mutations to result in new and re-emerging diseases. Research is continually needed to develop effective methods to detect and control the potential spread of foreign diseases that are accidentally or even intentionally introduced.

Research Priorities

At the invitation of the U.S. Department of Agriculture (USDA), various equine industry representatives participated in the National Program 103, Animal Health, Stakeholders Workshop in Baltimore, Maryland on March 23 and 24, 2010. The purpose of this meeting was to allow the National Institute of Food and Agriculture and the USDA Agricultural Research Service (ARS) to gather input from stakeholders into research plans for the next five-year program cycle.

At that meeting equine industry representatives laid out six research priorities for the horse industry. It is important for the Board to consider them. They follow with the rationale for each:

- Emerging and Re-emerging Diseases
 - Threaten biological and commercial health of U.S. horse industry, including international and interstate movement
- Non-infectious Diseases of Economic Importance
 - Equine health, safety, welfare and utility. Economically critical for industry and the public

- Reproductive and Developmental Health
 - Improved production efficiency, welfare, utility
- Equine Genomics
 - Population sustainability and improvement of equine health
- Foreign Diseases and Zoonoses
 - Protect domestic population; prevent disastrous economic impacts from foreign diseases; minimize/avoid trade barriers
- Nutrition and Metabolic Disorders
 - Enhancing health and utility, such as reducing equine obesity and associated disease, colic, parasitism, and laminitis

This list requires serious consideration as part of the Board’s recommendations to the Secretary for research funding.

The AHC is concerned that diminishing equine priorities in the competitive grant program will slow progress on investigating diseases affecting horse use and commerce and the economy of the U.S. equine industry.

Eligibility of Horses for Research Dollars

Horses are an agriculturally important part of the livestock sector and play a crucial role in the success and growth of the Nation’s economy.

The AHC points out that horses are still used in the U.S. to produce food and fiber on farms, ranches, feedlots, and rangelands. They are used even more in the rest of the world for such purposes. Equine diseases, such as laminitis, contribute to animal suffering and economic losses. Diseases that prevent any animal from “doing its job,” including horses, result in economic losses. Research is needed in all these areas.

Over the last few years, Congress has re-affirmed that horses are livestock and are to be treated just like other livestock by USDA. The AHC points this out in case there is still some misunderstanding about this or the importance of equine to the nation’s agricultural sector. USDA has put in a great deal of funds, staff, and time into controlling equine diseases for many years.

Nonetheless, to the extent that the Board is not up-to-date on recent Congressional actions we would like to point out that language in the outdated Agricultural Act of 1949 limiting federal funds to horses “used for food or fiber or the production of food or fiber” was repealed by Congress in 2005. Whatever limitations or perceptions stemmed from that 1949 statute can no longer be given any weight with respect to horses.

At the same time, in the last Farm Bill Congress specifically made horse breeders eligible for emergency federal USDA loans following a disaster. This change included “equine farmers and ranchers” within the group of producers specifically eligible for these federal emergency loans. That

bill also included a new permanent Agricultural Disaster Relief Trust Fund that provides relief funds to farmers and ranchers who suffer losses in areas that are declared disaster areas by USDA. Horses are specifically included within the definition of livestock eligible for that program.

The AHC points out these Congressional actions to re-emphasize that the equine industry is an important part of agriculture and horse diseases are eligible for federal research dollars and research at land-grant colleges and universities.

Other Benefits of Healthy Horses and a Healthy Equine Industry

While the economic value of the U.S. equine industry to the American agriculture sector has been documented, it provides other health and conservation benefits that are difficult to measure.

Health and Obesity. The health of all Americans, and particularly children, is now a national concern. Riding is a great physical activity for all Americans. Riders must develop muscular strength, endurance, flexibility, coordination, balance, and motor skills. Riding improves posture and cardiovascular health. Though there is often the perception that the horse is doing all the work, riding requires strength and activity from the rider that develops muscle and burns calories. Dr. Robert Leavitt, who has a PhD in sports medicine, has confirmed that horse related activities can burn as many calories as many other physical activities. For example, riding a horse at various gaits can burn as many calories as walking, riding a bicycle, or playing a game of basketball. Additionally, the daily care of a horse such as mucking out stalls, stacking hay, grooming, etc. promotes physical fitness also. According to Dr. Leavitt, grooming a horse can be equivalent to playing doubles tennis in the number of calories burned.

Therapeutic riding programs have had a tremendous impact on the lives of tens of thousands of children and adults, including returning wounded veterans, with physical, mental and emotional challenges. For many Americans with physical impairments the only opportunity they have to see many parts of our nation's outdoors and backcountry is on horseback. Indeed, more and more such individuals with these debilitating conditions are using horses as a means of access to our national parks and forest.

Equine disease is not just a threat to the horse and horse industry; it is a threat to all these activities that are important to millions of Americans.

Conservation and Protection of Farmland and Open Space. America's horses are bred, boarded, and trained on private horse farms all over the country. Every horse relies on grain and hay produced on America's farmland. Recreational riders need access to public lands and well maintained trails, trail heads for horses, and facilities to make use of our nation's public lands.

Horse farms and facilities and riders make a significant contribution to preserving open green space, stream buffers, wild life habitat, forests, and pasture. The conservation, management and use of both America's public and private lands are extremely important to the equestrian community.

The relationship between the equestrian community and the perseveration of America's working lands is a direct one. According to the Equine Land Conservation Resource "a minimum of 36 million acres (4 acres per horse, conservatively) is needed to support the 9 million horses in the US." This figure is the farmland required just to feed our horses, it does not include the pasture and open space needed to raise, breed, and board horses. America's farmlands are under threat from continuing urban development throughout the country.

Steps must be taken to protect this land. Research into the health of horses and the diseases that affect them, updating current economic information, and additional educational efforts are additional ways to ensure the conservation and protection of farmland and open space.

Conclusion

As the Board begins structuring its recommendations to the Secretary, the \$102 billion horse industry asks that these recommendations include research into equine health and diseases, education, extension and economics. This is particularly important in light of the infectious diseases, such as Contagious Equine Metritis and Equine Piroplasmosis, that the horse industry, USDA, and the state authorities have dealt with in the last few years. Keeping America's horses healthy and its industry commercially viable are good for American agriculture, the nation's economy, the health of Americans, the conservation of lands and our rural communities.

Thank you for the opportunity to submit these comments. If you have any questions or need additional information, please contact us.

Sincerely,

A handwritten signature in cursive script that reads "James J. Hickey, Jr." The signature is written in black ink and is centered on the page.

James J. Hickey, Jr.
President

There being no comment from the public, the meeting adjourned at 11:00 a.m.

ACTION ITEMS

- * Board staff will post all of the PowerPoint presentations from this meeting to the Board's website, including the presentation from the REE Office of Communications.
- * USDA Office of Congressional Relations will provide members with an analysis of election impacts and relevant committee members in the new Congress.
- * Board will provide REE Undersecretary with comments on the draft Roadmap and Action Plan.
- * Board staff will try to send briefing books to members in advance of meetings, so they can prepare before the meeting starts.
- * REE will provide members with an analysis of who owns U.S. debt.
- * REE staff will provide members with a summary of committee and working group assignments and report deadlines.
- * The Executive Committee will hold its first teleconference within two weeks to discuss its response to the Undersecretary and the "double down" campaign.