

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

**GENERAL MEETING AND FOCUS SESSIONS:
*Organic Agriculture and Rural Economic Development***

October 29-31, 2007

Double Tree Hotel, 1515 Rhode Island Ave., N.W., Washington, DC

MINUTES

GENERAL SESSION

- Welcome and Introductory Remarks1
- General Advisory Board Business1
- REE Responses to Previous Board Recommendations1
- Subcommittee Reports2
- Remarks by the Acting Secretary2
- Topics for Next Meeting3

FOCUS SESSION 1: ORGANIC AGRICULTURE

- Food Safety in Conventional and Organic Produce.....4

GENERAL SESSION

- Remarks from the Under Secretary.....6

FOCUS SESSION 1 (continued)

- REE Activities in Organic Agriculture7
- Input from External Stakeholder.....9

FOCUS SESSION 2: RURAL ECONOMIC & COMMUNITY DEVELOPMENT

- REE Activities in Rural Economic and Community Development.....10
- USDA Rural Development12
- Priority-Setting Process for Rural Economic and Community Development12
- Input from External Stakeholders13

GENERAL SESSION.....11

FOCUS SESSION 2 (continued)

- Rural Entrepreneurship and the Regional Rural Development Centers12

GENERAL SESSION

- Strategic Planning Session.....16
- National Agricultural Library17

ACTION ITEMS18

MONDAY, OCTOBER 29, 2007

GENERAL SESSION

Welcome and Introductory Remarks

Martin Massengale, Acting Chairman and presiding officer, NAREEE Advisory Board, called the meeting to order at 12:00 noon. He noted that new members of the Board had attended an orientation meeting that morning, during which they heard presentations on the role of the Board and their duties and responsibilities as members, as well as the missions and activities of the REE agencies.

General Board Business

The Board approved the minutes of its previous meeting by voice vote, with the proviso that members may submit specific corrections at a later time. The Board also approved the agenda for the present meeting. Finally, the Board unanimously elected Martin Massengale to continue as Chairman, and by a majority voice vote elected Walt Armbruster to serve as Vice Chairman.

REE Responses to Board Recommendations

Merle Pierson, Deputy Under Secretary for REE, USDA, reminded the Board that it has presented the Secretary with seven reports in the past six months. Under Secretary Buchanan has asked the mission agencies to prepare a consolidated response, and a Board Response Action Team has been formed to compile that report. The individual responses were included in the briefing book for this meeting, but clearly the Board has had no time to review them. Perhaps the Board will want to address these responses at its next meeting, or form working groups to do so.

In the past, the Board has asked whether its recommendations have had an impact on agency priorities or changes their priorities. Pierson reported that, in general, agency administrators say that – while they have heard some of these ideas before – the Board often provides a useful synthesis of other inputs. The most helpful recommendations from the Board are those that raise new ideas, ask complex questions, or suggest innovative approaches; the least useful are those that summarize staff presentations or affirm the status quo. Specific questions from the Board that have stimulated new thinking in REE include the following:

- Priorities in genetics (mining the plant germplasm repositories, pursuing the bovine and chicken genomes);
- Relationships between water quality, availability and climate change;
- Sustainability and environmental impacts of bioenergy options;
- Safety, consumer concerns and market impacts of nanotechnology;
- Cooperation and collaboration among REE agencies, and with other federal agencies, on ideas of common concern and action.

In the discussion that followed, Board members expressed satisfaction that REE finds value in its recommendations and urged administrators to come to the Board sooner with issues or options they are considering, in order to get the Board's feedback and guidance. The Board might find it useful to hold a strategic planning session to consider how it can be more effective in future; an example might be advice on budget matters, especially how to do more with fewer resources (a topic best addressed in conjunction with the Adequacy and Relevance activity in March). The Board's reports also go to Capitol Hill, and in fact several of them were congressionally mandated. The relevant committees and subcommittees seem to appreciate the Board's input, although they do not provide a written response. Members suggested that they should also circulate their reports among their broader constituencies, in order to focus their efforts in support of the Board and USDA.

Subcommittee Reports

Walt Armbruster, Chairman, NAREEE Specialty Crops Committee, reported that the April 2007 workshop on mechanization in specialty crops found that USDA was implementing a number of the subcommittee's recommendations and increasing funding for specialty crops. Mary Wagner added that this was a productive listening session, identifying issues such as sustainability and water usage that cut across crops and industry sectors. Jim Lugg agreed that the meeting was well received, and that growers think that the Board is doing good work on their behalf. Lugg identified the most prominent issues as sustainability food safety, especially pathogens from the environment. Armbruster said that he believes the California system to be a model that can be transferred to many other locations. This year's report of the Specialty Crops Subcommittee will be more specific; he will circulate a draft for comment in early 2008.

Marianne Smith Edge reported on the June 29 meeting of the NAREEE Ad Hoc Task Force on the National Agricultural Library (NAL). Chairman Tom Fretz reported by videotape that the task force was making the following recommendations:

- NAL must be independent of ARS if it is to have a place at the table; once it has visibility, fundability will follow.
- NAL should be both a repository and a *clearinghouse* for information.
- NAL should reshape itself as a national *digital* library of agriculture, with full online access and seamless linkages to other resources and partners.
- Every program and initiative of REE should have a public information component, and (by extension) every Advisory Board recommendation should also have a public information component.

In the discussion that followed, Board members pointed out that this was the third time that the Board has agreed to these recommendations and wondered why they weren't in the Farm Bill. This is a long-standing crisis that has now reached a tipping point, and Congress clearly isn't getting the message. Individual members are less constrained than the Board, collectively, and should do what they can to mobilize support among their constituencies. Allowing Elsevier to collect, aggregate and control scientific information isn't an alternative; already some USDA-funded researchers can't get free access to data they themselves generated. Other members

pointed out that the concerned stakeholders are research professionals, mostly at universities, who can't afford access to the information they want. Commodity groups and other stakeholders, for their part, have no knowledge of NAL or see no direct benefit from it. Perhaps the proper role for the Advisory Board, therefore, would be to encourage NAL to explain to these groups why they do, in fact, need this resource.

Remarks from the Acting Secretary

Charles "Chuck" Conner, Acting Secretary, USDA, told the Board that there are few problems in U.S. agriculture that we can't research or educate our way out of, and the Board's advice and expertise are vital in maintaining USDA's focus on scientific research. We are in a unique and favorable era for agriculture, with record prices for both crops and livestock. The question is, how do we avoid the historically inevitable bust that always follows a boom? To preserve our current success and enjoy it in the future, the 2007 Farm Bill has to do more than put money in the producers' pockets; it remains to be seen what will come out of conference committee. A common sentiment on the Hill seems to be that, "If it isn't worth mandatory funding, it isn't *really* important." Energy is an obvious example: energy prices are driving both feed and food prices upward at unprecedented rates, but only 20 percent of the food dollar goes to the farmer or rancher. Conner believes that research – properly funded and properly focused – will eventually solve this problem; advances in plant breeding for energy production and cellulosic ethanol will make the conflict between food and energy disappear, and we will return to historical food pricing patterns.

In response to questions from the Board, Conner added that USDA will have a major role in addressing climate change and water quality/availability, as well as food and fuel. Agriculture as a whole is carbon-negative, and the forest sector in particular should benefit from carbon trading schemes as they emerge. But funding for agricultural research remains inadequate, and the Initiative for Future Agricultural and Food Systems (IFAFS) is mandatory only in the House version of the Farm Bill, not in the Senate version. As a result, USDA remains committed to partnerships to address the current and future problems of food, energy and quality of life.

Topics for the Next Board Meeting

Board members identified a wide range of possible topics for focus sessions during their next meeting:

- Twenty-first century agriculture will be "knowledge farming," using information technology and data-mining to exploit the results of research in many disciplines in order to meet the nation's and the world's demand for food, fiber, medicines, materials, and energy.
- Topics of special interest and/or direct benefit to farmers and ranchers, such as international partnerships and applied research. The goal, in part, is to find messages that will encourage producers to support agricultural research.
- Water – quality, quantity, availability, conservation, reuse, trading/markets, and sustainability.

- Global climate change, including not only the threats and opportunities for U.S. producers but also the emerging market for “ecosystem services” such as carbon sequestration. The latter should be addressed from the perspective of the farmer and forester, not that of the trader.
- Animal welfare as it influences consumer preferences, and whether industry is making changes without a science base.
- Air quality as it affects agriculture, such as plowing, livestock processing and exhaust from irrigation pumps.
- Sustainability in all aspects of agriculture (air, water, manure, chemicals, etc.), with an equal emphasis on short- and long-term results.
- Veterinary medicine, especially veterinary workforce enhancement, including special training in emerging issues such as animal welfare and the need for farm vets, as well as pet vets.

In addition, agency personnel suggested several topics that would be of interest to REE:

- Long-term competitiveness of U.S. agriculture, not just in terms of bioenergy but in terms of the future role and shape of agriculture.
- Water and drought issues, including climate change.
- Nutraceuticals and “medical food.”
- Topics to include in the next five-year plan.

Walt Massengale added that the NAREEE budget, currently at \$350,000 per year, has been increased in the House version of the Farm Bill; the Senate is silent on this topic. Massengale believes that the increased budget is appropriate in view of the Board’s new responsibilities for specialty crops and the proposed National Institute of Food and Agriculture (NIFA).

There being no public comment, the Board recessed at 5:45 pending the evening’s reception and presentation.

FOCUS SESSION 1: ORGANIC AGRICULTURE

Food Safety in Conventional and Organic Produce

Robert Brackett, Director, Center for Food Safety & Applied Nutrition, U.S. Food & Drug Administration (FDA), reported that FDA has the same regulations for both conventional and organic produce, namely Good Agricultural Practices (GAP) and Good Manufacturing Practices (GMP). The theory behind this regulatory system is that, while it may be impossible to eliminate risk completely, it is possible to manage it, and the key to doing so is prevention and accountability at every step of the process.

Nevertheless, the incidence of foodborne disease is on the rise due to rising consumption of fresh produce, broader sourcing of fresh produce, and better detection of both food contamination and disease outbreaks. In addition, more people are at risk, including those over 45, pregnant

women, children, and people on certain medications. Lettuce and tomatoes are the most common carrier; recent examples include *E. coli* on greens from California and *Salmonella* on tomatoes from the East Coast. Eggs cause fewer outbreaks but more serious diseases.

Few studies have been done on the differences between conventional and organic research, but the available data suggest that the risks are much the same for chemical residues, if not infectious organisms. Process studies indicate that the most important risk factors are:

- Animal management, including wildlife as well as domestic animals;
- Packing and processing, especially the cleaning of equipment;
- Worker health and hygiene, notably handwashing; and
- Equipment, such as storage tanks, ice and chlorinators.

Recent studies of the *E. coli* 0157:H7 outbreaks in July and August 2007 revealed that this organism is endemic in the region, found in river water as well as cattle and feral pig feces. Problems thus arise when ready-to-eat produce is grown in proximity to livestock or wildlife, when irrigation wells become contaminated. A study in the Salinas Valley found that *E. coli* levels are highest after a heavy rainfall and at sites in or near grazing land.

Solutions to this problem must be based on close study of the actual practices of growers, harvesters and processors, looking for gaps and stumbling blocks that allow reservoirs of *E. coli* and contamination of produce. FDA believes that the GAP/GMP regime would be effective if it were consistently implemented, but it isn't. However, the agency also recognizes that one size doesn't fit all, or everywhere, that regulators need to provide size- and region-specific guidance. This requires a base of scientific data on which to base regulations, as well as flexibility in enforcing them. FDA continuously requests comment and feedback from producers and processors to improve its regulations and guidance.

In response to questions, Brackett added that while chemical contamination has remained constant in recent years, microbial contamination has increased. He recognized that there might be some advantages to having a single food agency responsible for both production and safety, as is the case in other countries, but that this would cause a massive merger shock in the United States. The best course for dealing with the safety of food imports is to ensure that foreign producers are using GAP, perhaps through the efforts of a third party. Research is ongoing on the use of gamma radiation, which is effective in killing microbes but has impacts on the quality of the produce; consumer preferences may be a bigger hurdle than technology. Manure management can be a risk factor, especially raw manure, but there is no difference in risk between surface and well water. Industry concentration can be both a problem and a solution, since centralized processing allows both problems and solutions to spread more rapidly. Using food safety as a marketing feature is probably a bad idea, since it may lead consumers to distrust the entire industry.

TUESDAY, OCTOBER 30

GENERAL SESSION

The meeting was called to order at 7:30 a.m.

Remarks from the Under Secretary

Gayle Buchanan, Under Secretary for REE, USDA, welcomed participants, especially new Board members, and called the Board an important and valued component in USDA's research enterprise. Abraham Lincoln called USDA the "people's department" when it was created in 1862, and today USDA remains dedicated to the generation and dissemination of agricultural knowledge, information and technology. Agriculture is also an important exporter, with every billion dollars in food exports creating \$2.6 billion in domestic economic activity and 26,000 jobs. Who benefits from agricultural research? Not just the farmers, ranchers and other producers, but also – perhaps more so – the consumers who have more food choices, at lower costs, with better nutrition and health. The environment also benefits through conservation and sustainability, as do other industries whose feedstocks include grain, fiber, wood in products and even sectors that didn't exist a generation ago.

The challenges facing agricultural research are many:

- How can we grow plants that will harvest the sun for uses other than food?
- How do we understand and plan for global climate change?
- How do we ensure adequate supplies of clean water?
- How do we improve nutrition and health in a growing, aging population?
- And how do we do all these things with no increase in funding?

The first step in answering these challenges is to bring USDA more recognition for its past accomplishments and present efforts, and for this reason he welcomes the Board's emphasis on public information and education about the value of agricultural research. In response to questions, however, he admitted that there is no flexibility in the budget for dealing with the problems of the National Agricultural Library – it is a critical priority, but in the current fiscal climate the REE budget is a "zero sum game."

FOCUS SESSION 1 (continued): ORGANIC AGRICULTURE

Mary Wagner introduced the focus session by reminding the Board of the four areas of research that were identified as priorities in the 2007 National Organic Research Agenda:

1. Soil management;
2. Pest and disease management;
3. Livestock and poultry management; and
4. Breeding and genetics.

She invited the Board to pay close attention to what the REE agencies are already doing in these areas, to look for gaps and overlaps, and to keep in mind that the whole topic of organic food is an increasingly hot button with consumers.

REE Activities in Organic Agriculture

David Klurfield, National Program Leader, Human Nutrition, Agricultural Research Service (ARS), USDA, reported that – consumer beliefs notwithstanding – there is as yet no evidence that organic food is healthier or more nutritious than conventional food, although organic food may have fewer unwanted residues (e.g., chemicals) or more of the desired residues that are “lost” in conventional production and processing. The massive Women’s Health Initiative has spent \$415 million over seven years investigating the connection between diet and health, but it found no effect of organic diet on the health endpoints under study, such as heart attacks and cancer. The authoritative Pesticide Data Program has found that organic food also contains residue, even when it was never knowingly exposed; a Swiss study found that there was little or no difference in residues between organic and conventional wheat; and a French study found that levels are actually higher in organics, although this doesn’t effect plasma levels in those who eat organics. A study at the Agricultural Research Station in Ames, Iowa, found that 99 percent of the pesticides we consume are phytological rather than synthetic in origin, and the Institute of Food Technologists has concluded that the impact of organic food on human health has yet to be determined.

In response to questions, Klurfield said that there have been significant changes in the micronutrient content of some foods, such as a sharp decline in Vitamin E in iceberg lettuce. However, even if conventional agriculture does exhaust some of the micronutrients in the soil, this will have a larger impact on size and yield than on nutritional content. It should be possible to selectively breed crops that are better suited to organic cultivation.

Thomas Bewick, National Program Leader, Horticulture, Cooperative State Research, Education and Extension Service (CSREES), USDA, reported that the Integrated Organic Program (IOP) is the principal funding mechanism for organic research, but other programs provide indirect benefits to organic agriculture. IFAFS provided a useful model by taking an integrated approach that involves stakeholders in the planning and evaluation, and by placing special emphasis on measurable results and information dissemination. As a result, IOP projects typically combine research, extension and higher education; combine several disciplines; and bring together partners in several states and institutions. Since the authorizing language in the 2002 Farm Bill mandates consultation with the NAREEE Advisory Board, IOP makes annual reports to the Board. Funding has been fixed at \$4.7 million/yr for the past four years, with which IOP has funded a total of 41 projects, with most of funding going to crop breeding (a fairly expensive undertaking) and lesser amounts to animals, standards, economics, and long-term planning. Much of this funding has gone to the Northeast and North Central regions, but IOP hopes for better regional distribution in the future. New in FY2008 will be a multistate program in the effects of organic soil management on productivity.

In response to questions, Bewick admitted that the farmers on his review panel don’t always see the value or applicability of the proposals they evaluate, especially those in the economic area. IOP is working hard to attract better and more relevant proposals in the area of economics, especially market impacts; Board members suggested that they send the RFP to consumer

economists, as well as agricultural economists, and make sure that they coordinate with the Agricultural Trading and Economics section of the National Research Initiative.

Virginia Harris, Agricultural Statistician, National Agricultural Statistics Service (NASS), USDA, reported on preparations for the 2007 Census of Agriculture. With regard to organic agriculture, NASS has made a special effort to ensure data quality, with clearer questions and more explicit reference to certification, acreage, crops, and livestock, in addition to sales and new acres being converted to organic. The results will be presented in two new tables on the status of organic production at the state and county levels.

In response to questions, Harris said that conversion to organic takes three years before certification; most organic acres are in California, although the number of acres is growing in the upper Midwest. Some conservation land is being converted to organic, although more of it is going into bioenergy. Much of the value of the 2007 Census will be in providing a sampling base for future surveys of organic producers. NASS does not focus on individual organic crops, although such data could be teased out of their results. Nor does NASS collect data on prices, premiums or exports of organic crops or on the impact of organic practices on the soil – perhaps another REE agency already collects such information, although NASS could do a relevant survey for a client. Board members suggested that NASS, perhaps in collaboration with the Economic Research Service (ERS) should seek was to link production data with data on markets and purchases, in order to address the larger question of impacts on consumers.

Catherine Greene, Agricultural Economist, ERS, USDA, said that ERS collect a wide range of data on certified organic agriculture, including number of acres (by commodity and state), specific markets (fruit, vegetables, livestock, eggs), and consumer demographics and behavior. ERS conducted a risk-management study of organic handlers and a special focus (oversampling) on organic dairy producers; future special focus studies will include soybeans and apples. The agency's Agricultural Marketing Service has conducted analyses of certification standards, including the impacts of proposed changes that would reduce the cost of certification to less than \$5,000 per farm. The Foreign Agricultural Service is working with foreign growers on standards, and also to promote the sale of U.S. organics, but because the Department of Commerce doesn't have separate codes for organic products, it's currently impossible to collect data on imported organic products. ERS also maintains several organic "briefing rooms" at its website, and the current edition of *Amber Waves* features a special data section on organic agriculture.

In response to questions, Greene added that 5.0 percent of specialty crops are organic, 2.5 percent of all food crops, and only 0.2 percent of corn and soybeans. ERS data reflects the number of organic growers who are certified by national organizations; the Census of Agriculture is the only mandatory survey of growers, but Greene expects that there will be a reasonable agreement between ERS and NASS data.

Jeffrey Steiner, National Program Leader, Agricultural Systems, Competitiveness & Sustainability, ARS, USDA, reported that his program has held several workshops with industry

and thus has been about to achieve fairly good agreement on priorities and concerns. They also have good numbers on the amount of research that USDA supports on organic research: \$15.4 million on research directly supporting organic growers, about half of on farms under certifiable organic conditions, and another \$45.4 million on research that indirectly supports organic agriculture. This marks a 91 percent increase between 2002 and 2007, even in the absence of a presidential initiative, and the resulting science will in most cases be applicable to both organic and conventional. The current portfolio is heavy on productivity and pest management, but USDA supports a wide range of research at 23 different centers:

- Risks of long-term rotation vs. those of organic;
- High-methiamine corn;
- Microrhyzae and fertility;
- Organic systems strategies (five separate centers);
- Cover crops to raise total sales;
- Rotation crops to eliminate weeds;
- Prevention of parasites in small ruminants (two centers);
- Ecosystem services of no-till vs. organic (with NCRS);
- Economic benefits of different rotation crops (with ERS);
- Garbage to compost.

In response to questions, Steiner added that his \$15.4 million total includes the \$4.7 spent by CSREES through the IOP, but it does not include the approximately \$17.0 million in matching funds that IOP attracts.

Mark Lipson, Policy Program Director, Organic Farming Research Foundation (OFRF), reported that by OFRF estimates USDA will spend between \$26 million and \$28 million on organic research in 2007. This represents only 1 percent of the USDA research portfolio can support only a minimum research capacity, what Lipson described as “low second gear.” Based on the organic market share, the number should more like 3.5 percent today and 10.0 percent by 2013. By comparison, the European Union will spend more than \$100 million on organic research this year. The organic community is encouraged by recent developments, and by USDA’s efforts to include stakeholder input in IOP and other programs, but research on organic agriculture still has a long way to go.

Input from External Stakeholders

In answer to questions, Lipson cautioned that “organic agriculture” is not monolithic – the emphasis should be on broad, underlying systems, properties and behaviors, and on equally broad outcomes, such as “soil.” This is a youthful constituency, and existing training programs in organic and sustainable agriculture are oversubscribed, pointing to the need for additional courses and programs. This youthful enthusiasm arises in part from the convergence of organic agriculture with other cultural trends, such as slow food, local foot, rural communities, and environmental damage control. This may suggest the need for demographic research on who these people are and how best to help them.

In the discussion that followed, Board members observed that there is no sharp line dividing organic and conventional agriculture; if anything, the two fields seem to be moving on parallel tracks. REE has responded fairly quickly to the new interest on the organic side, and the calculation of budget expenditures should include matching funds from the states for CSREES programs. Stakeholders are not asking for a trans-USDA working group on organic research, but such a group might be useful in reducing overlap, finding new opportunities and further sharpening the agency's focus. It would also be desirable to encourage commodity commissions and other producer groups to invest more in organic research, and indeed in all agricultural research, but they won't do so until they see the benefits to ordinary growers. Other points of interest:

- Where does water fit in the organic picture?
- How will energy prices affect the future of organic? (If cheap energy encouraged centralization, will expensive energy promote decentralization?)

FOCUS SESSION 2: RURAL ECONOMIC AND COMMUNITY DEVELOPMENT

REE Activities in Rural Economic and Community Development

Alton Thompson reminded the Board that when it last visited the topic of rural development, in October 2005, it recommended that REE conduct a metaanalysis of existing programs, conduct research and extension on rural entrepreneurship, and further study of the issues surrounding migrant field workers.

Colien Heffernan, Administrator, CSREES, USDA, reported that rural economic and community development is central to the mission of CSREES. She sees rural entrepreneurship as a tool for supporting and sustaining "people's right to live where they want to live." Bioenergy is a new concern, not only for CSREES, and she recently met with U.S. Department of Energy officials to discuss issues of common interest.

Frank Boteler, Deputy Administrator for Economic and Community Systems, CSREES, USDA, described a new paradigm that has taken hold in rural development: the rural economy is not a monolithic entity based on farms and farm-related infrastructure, but rather a diverse and segmented landscape that needs learning networks and matching money to grow its many different economies. Instead of relying on fixed-rate loans that react to local needs but stifle innovation, rural economies need venture capital and technical assistance that will allow them to build capacity and resilience based on local strengths and opportunities. This change in paradigm will mean a dramatic change in the role of USDA in rural development. Building the proposed biofuels economy will bring new challenges in the future. For example, the ethanol industry is actually growing too fast in some parts of Iowa, forcing prices down; what's needed is sustainable growth in new and existing areas. The principal programs in this area are:

- Agricultural Systems;
- Economics and Commerce;
- Families, Youth and Communities; and

- Technology and Engineering.

Sally Maggard, National Program Leader, Economic and Community Development Systems, CSREES, USDA, reported on the need for a scientific basis and research-based guidance and support for rural development. The principal mechanisms for building this base are the four Regional Rural Development Centers, which use a competitive, multistate partnership approach that integrates research, extension, education and extension. One “cluster” of projects focuses on small farms, another on rural change, a third on the “new Hispanic South,” and a fourth on sustainable community innovation. Specific projects focus on topics of local interest, such as water, public lands, venture capital, or entrepreneurship on Indian reservations. CSREES has collaborated with the Kellogg Foundation to hold a series of local listening sessions, to learn more about specific needs, concerns and opportunities; this information then becomes a resource for the use of Extension agents in building local support networks.

Mary Bohman, Director, Resources and Rural Economics Division, ERS, USDA, described several overlapping areas of research, including energy and entrepreneurship. Most new ethanol plants are being built in rural, population-loss counties; ERS has yet to study the impacts for counties without ethanol plants. In an October 2006 research conference, ERS learned that there is no single model of rural entrepreneurship. It is a multilevel phenomenon that requires multiple research approaches. It is clear, however, that farm operators can often become off-farm entrepreneurs, although there is no preferred or typical “career path.” Cooperatives, and especially ethanol cooperatives, represent a new model, and future research will focus on the interactions between farms and the local economy. One model, called the “new rural development,” suggests that entrepreneurs – along with artists, scientists, engineers and lawyers – are part of a “creative class” can support local development. But it is also clear that there are also “creative places” that attract these individuals (or tolerate s their nonconformity), creating the conditions for innovation and economic growth. However, this pattern doesn’t seem to hold in the Great Plains, for reasons that are poorly understood. Innovative research will be needed to develop and track indicators of the economic, demographic and social conditions that give rise to rural entrepreneurship.

USDA Rural Development (RD)

Edgar Lewis, Agricultural Economist, Rural Business-Cooperative Service, USDA, described the efforts of USDA’s RD mission area to encourage entrepreneurship in underserved rural communities. The 1890 Land Grant Colleges and Universities Initiative began with a presidential directive in 1992, in partnership with historically black colleges and universities. Its initial efforts were relatively modest (\$50,000 to \$125,000) pilot projects to determine what services were needed and how best to deliver them. Regulations and procedures were released in 1999, and the projects and budgets have since become more diverse and ambitious. In most cases they are designed to establish technology and resource centers that will build capacity in the target communities by providing financial, legal and management advice; technical assistance and outreach; and partnerships among local, regional and state groups that support new business formation. In some cases the assistance is relatively modest, for example

upgrading the local courthouse to make it wheelchair-accessible. In other cases they are far more sophisticated, such as a local relending program that has funded a commercial greenhouse and a business incubator that provides training and technical assistance to small food-processing companies.

At this early stage, performance indicators include the number of enterprises started or expanded, number of businesses assisted with technical training or information, and dollar value of financial, technical and training assistance. Participants are currently building a database that will document the programs impact in terms of jobs created or saved, number of conferences sponsored and number of loans packaged. In the discussion that followed, Board members suggested that ERS could help RD to develop this database, and to ensure that it included valid economic indicators as well as programmatic outcomes. Members also suggested that RD contract with an external entity for an evaluation of the program.

Priority-Setting Process for Rural Economic and Community Development

James Wade, Director of Extension and Outreach, National Association of State Land Grant Universities and Colleges (NASLGUC), presented the findings of a NASULGC study of the priority-setting process in the Cooperative Extension Service (CES). Its report, *Strategic Opportunities for Cooperative Extension* (October 2007), points out that CES is funded primarily by states and counties, who typically provide a 4-to-1 match for federal funds. CES already provides a variety of educational, training and technical assistance in areas that are relevant to rural development, and interviews with 63 CES directors and administrators revealed a strong consensus on the topics that will have the greatest importance in the future. All of these priorities touch on rural economic and community development:

- Create pathways to energy independence – 89 percent;
- Ensure an abundant and safe food supply for all – 85 percent;
- Sustain profitable plant and animal production systems – 84 percent;
- Prepare youth, families and individuals for success in the global workforce and in all aspects of life – 84 percent;
- Assist in effective decision-making regarding environmental stewardship – 82 percent;
- Help U.S. residents to become physically, mentally and emotionally health – 82 percent;
- Assist communities in becoming sustainable and resilient to the uncertainties of economics, weather, health, and security – 58 percent.

In response to questions, Wade said that NASULGC intends this report as a statement of consensus, rather than a roadmap for any or all states. To accomplish these goals, CES will need to transform itself, becoming more flexible in identifying and serving the needs of diverse communities, strengthening and its funding streams, and improving the quantity and quality of Extension personnel. In the end, most of these priorities have to do with human capital, and Extension personnel themselves have identified several gaps in promoting rural development:

- A significant, competitive rural development research program;
- Funding specifically designated for entrepreneurship;

- Interagency cooperation (REE, RD, NRCS);
- Research and education base for rural investment programs;
- Quality evaluations of the impacts of rural investment programs; and
- National commitment to a comprehensive rural development policy.

In the discussion that followed, Board members noted that the U.S. Department of Health and Human Services (HHS) has been working on new models of community health care; CES would do well to learn what these new strategies and paradigms involve. Similarly, business schools have conducted a great deal of research on entrepreneurship, some of which must be applicable to rural settings. And while rural cooperatives have been active in ethanol and biodiesel, and this report recommends windmills, no one seems to be addressing methane capture. However, methane capture is part of the REE Science and Extension Strategic Plan, and ARS is beginning to work on it as part of a comprehensive energy solution.

Input from External Stakeholders

Chuck Hassebrook, Center for Rural Affairs, suggested that there are some development strategies that will work in even the most challenging setting. One strategy is to encourage small entrepreneurial businesses that bring in outside money and provide nonfarm employment. Loans, training and technical assistance are necessary but insufficient; rural microenterprises also need business services and ways to market themselves to urban customers. There has been little research on how to make a community attractive to entrepreneurs. Another strategy is to develop high-value markets for agriculture. Urban and foreign consumers will pay a premium for meat and vegetables from organic and/or humane growers, and this is a market that can reinvigorate small and medium-size producers. Conventional growers need information to make the transition to organic, as well as some assurance that they'll find a market for their products.

Hassebrook believes that CES is most effective when it is taking new research to users and may not be as effective in helping them find existing information. Land Grant universities, for their part, often lack a sense of mission or commitment to rural development. However, promising steps are being taken. The Leopold Center for Sustainable Agriculture, at Iowa State University, is a recognized source of information on ecology, marketing and policy; the Nebraska College of Technical Agriculture, an affiliate of the University of Nebraska, requires both faculty and students to take classes in entrepreneurship, and graduating students are given a 100-head "starter herd."

In response to questions, Hassebrook urged the Board to champion the cause of rural communities, saying that research and extension policy can be a powerful driver. For example, CES spent millions teaching growers to put pigs in crates, but nothing on alternatives, and nothing on how to get them out of crates again. Tax incentives can also be effective in encouraging rural entrepreneurship.

Ferd Hoefner, Sustainable Agriculture Coalition, agreed with Hassebrook, saying that the value-added producers grant program in the new Farm Bill was good rural development policy, as well

as good agricultural policy. Several other promising provisions are included in either the Senate or House version of the bill, including the Rural Enterprise Assistance Program, Rural Business Investment Program and Beginning Farmer and Rancher Programs. We will know more about their fate in coming months. Another provision of the Senate bill, the Rural Enterprise Facilitation Program, would provide money for needed research, extension and evaluation as the platform for a regional, competitive assistance initiative. Even when they are enacted, however, the final shape and impact of these initiatives will depend on USDA program decisions.

Jim Zuiches closed the Focus Session by thanking the presenters and promising that the Board would complete its report on rural economic and community development within eight weeks.

GENERAL SESSION

Martin Massengale announced the results of the election of the Executive Committee:

- Edward Runge
- Mary Wagner
- Carol Keiser
- Martin Apple
- Marianne Smith-Edge
- David Thomassen
- Daryl Lund

Daryl Lund reported on the National Stakeholder Workshop on ARS National Program 213 (formerly 307), Bioenergy. The purpose of the workshop was to help ARS identify and prioritize critical research topics. ARS expressed appreciation for the Board's interest in bioenergy, and Lund was impressed by the high level of interaction among ARS, ERS and CSREES on this topic.

Gale Buchanan noted that USDA takes the planning for bioenergy seriously, and that several joint task forces from USDA, DOE and other agencies are working on this and related topics, such as biomass, sustainability, carbon footprint, and greenhouse gases. A comprehensive report is expected in June 2008. He hopes that coordination and planning will make up for a lack of budget in these areas.

There being no public comment, the meeting recessed at 5:45 p.m., pending the evening's reception and presentation.

FOCUS SESSION 2 (continued):

Rural Entrepreneurship and the Regional Rural Development Centers

Bo Beaulieu, Director, Southern Rural Development Center (SRDC), reviewed survey data showing that there are a growing number of proprietorships in rural America, most of them

producing services rather than goods. There are about 15 million self-employed persons in rural America, but they don't earn much money – about \$15,000 per year on average. Because of ongoing demographic trends, these rural entrepreneurs are increasingly diverse, including many older persons and minorities. SRDC has held a number of well-attended roundtables and listening sessions to identify their needs and concerns. In many cases, the capacity was lacking to deliver programs they said they needed; as a result, SRDC has developed a “people’s plan” that emphasizes skills, money, networks, and policies that can help, delivered through a “virtual resource center.”

SRDC has also conducted additional research on entrepreneurship – eight published articles in the last year – and it beginning to identify regional “hot spots.” They have also learned that there isn't necessarily a connection between creativity and entrepreneurship, although artists and craftsmen can also become small businessmen. The most successful approach appears to be one that concentrates on connecting rural communities and strengthening existing capacity. SRDC can help by providing information through workshops and research-based issue briefs, but the initiative and the energy must come from the community. Rural entrepreneurs have been slow to adopt e-commerce, largely due to lack of infrastructure and training, but success will also require increased investment in rural economies.

In response to questions, Beaulieu said that entrepreneurs are those who create companies, thereby employing others, rather than sole proprietors (e.g., tax preparers or beauticians); their activity has a multiplier effect. Small Business Development Centers, the Manufacturing Extension Service and other federal entrepreneurship programs often focus on technical assistance for larger companies, and to ignore the smallest service-based entrepreneurs. Their counselors are former entrepreneurs who provide confidential advice to million-dollar companies; “basic training” for a small rural company is a poor use of their time, but an excellent use of an Extension agent. However, CES and the RDCs need a lot of effective partners, such as the Federal Reserve Banks (for access to capital) and regional insurance companies (for health insurance). Board members suggested that CSREES do more to collect rural entrepreneurship success stories SRDC and other regions.

WEDNESDAY, OCTOBER 31

GENERAL SESSION

REE staff provided a brief overview of where the Farm Bill stands. To increase coordination and efficiency within REE, the President's bill proposed to merge ARS and CSREES, renaming the REE mission area the “Office of Science.” Other provisions called for \$150 million in mandatory funding for biofuels and \$100 for specialty crops. The House has passed its version of the bill, as has the Senate Agriculture Committee, and the full Senate is due to consider the bill on November 5, after which the two houses will resolve their differences in conference

committee. A lot remains to be done, but leadership has put the bill on the fast track and hopes to have it completed by Christmas.

With regard to REE, the House bill would create six National Program Offices, by discipline, coordinated at the level of the Secretary, subsuming responsibilities currently split between ARS and CSREES. It funds bioenergy at \$250 million/yr for five years, but leaves specialty crops discretionary. It creates a NIFA from the NRI and IFAFS, within CSREES, but does not reorganize or rename REE. The Senate version creates NIFA by giving it all of CSREES' current authority, reorganized in four programs by mechanism rather than discipline (i.e., fundamental, applied, higher education, infrastructure). The Senate version is more aggressive on specialty crops, providing \$16 million/yr in mandatory spending for specialty and another \$16 million/yr for organic, but it doesn't include any of the bioenergy proposals.

In answer to questions, staff explained that the Senate version does not mention the fate of ARS or NAL. The director of NIFA would be appointed by the President, confirmed by the Senate, and report to the Secretary. The proposed changes are so sweeping that, no matter what the Congress passes, it will mean a lot of work for USDA staff. But that work will pay off in greater efficiency, enhanced partnership, and a better focus on scientific quality. If anything, the Senate version would actually increase the focus on science.

With regard to the NAREEE Advisory Board, the Senate version places the Board under NIFA and is silent on funding but calls for 24 members; the House version calls for a budget of \$500,000/yr (currently \$350,000) but is silent on size.

Strategic Planning Session

Board members suggested that their recommendations would be more useful to REE if they went beyond current programs and activities, so they tried to identify three or four big questions that are on the horizon, and that REE should be planning for. Defining that horizon can be problematic – 20 years out is important, eventually, but tomorrow can also be life and death; best to maintain a balance between the short and long terms. Several suggested that the Board should also act as a sounding board, advising REE on the broader impacts of its current activities and responding to questions about what comes next. This might be done by having the administrators prepare questions for the Board in advance, so they can become the focus of Board meetings.

Board members identified several specific issues that will become important in the future:

- *Labor.* – How will we mobilize and train (or retrain) the knowledge-based agricultural workforce we need to compete in a globalized market?
- *Climate change.* – What will be the impacts of climate change, and what can we do now to “pre-adapt” for the future?
- *Energy.* – Bioenergy is a current focus, but how will changes in the U.S. energy economy affect the structure and operations of the agriculture sector? If cheap energy led to

mechanization and centralization, will expensive energy lead to greater labor inputs and decentralization?

- *Water.* – In the short run, the Clean Water Act will be reauthorized in 2008, and the impacts on agriculture could be significant. In the long run, rising population will put greater stress on water supplies, and climate change represents a large but uncertain variable.

Board members also identified several organizational or procedural changes that might make their work more effective. For example, they would like to receive the briefing books for future meetings in CD form, a week or two before the meeting, in order to prepare themselves more adequately for Board discussions. Several said that they would also like to do more discussing, and less listening to agency presentations. Some members asked for greater diversity in Board membership and in presenters, in order to represent a broader range of opinion. Several members sought ways in which they can be more effective in carrying information to their constituencies and mobilizing support for REE and agricultural research, as well as raising the agricultural literacy of the general public.

National Agricultural Library

Marianne Smith Edge said that the need for more information and outreach about NAL was universal, and that its lack of visibility is illustrated dramatically by the fact that it is not mentioned in the Farm Bill. Does NAL benefit from the reorganization NAL? Does the Board have any recommendations about placement, or funding? She urged the Board and the NAL Working Group to make appropriate recommendations, but this will have to wait for a later date. Walt Massengale promised action on this issue before the March meeting.

There being no public comment, the meeting adjourned at 11:15 a.m. The Organic Agriculture and Rural Development Working Groups met in breakout sessions after adjournment to develop recommendations for their reports.

ACTION ITEMS

- The Board may wish to discuss REE responses to past recommendations in greater detail.
- Walt Armbruster will circulate a draft Specialty Crops report for comment.
- Board members will continue to assist NAL in educating their constituencies on the value of the information services supported by NAL.
- CSREES will send IOP solicitations to consumer economists, as well as agricultural economists.
- USDA-RD will investigate the feasibility of contracting with an external entity for an evaluation of the 1890 Land Grant Colleges and Universities Initiative.

- The Organic Agriculture and Rural Development Planning Committees will prepare recommendations based on their respective focus sessions. It remains to be determined whether these recommendations will become part of the minutes.
- The NAL Working Group and Executive Committee will consider additional recommendation concerning the placement of NAL in a reorganized REE.
- NAREEE staff will circulate briefing books (or CD/flashdrive equivalents) two weeks in advance of the March meeting.