

STRATEGIES FOR ENHANCED ENGAGEMENT

Introduction

The Extension Committee on Policy (ECOP) and Experiment Station Committee on Policy (ESCOP) of the National Association of State Universities and Land-Grant Colleges' Board on Agriculture have charged the ECOP Strategic Planning Council and the ESCOP Planning Committee to pursue joint planning to better integrate extension and research efforts to more effectively address future national issues. To this end, the resulting ECOP/ESCOP Joint Planning Committee (JPC) reviewed several recent studies on the future of land-grant colleges and universities (LGCUs) and discussed the implications of the studies for how extension and research should function in the future. The JPC met on February 2-4, 2000, and again on May 17-19, 2000, to examine and integrate the opinions and recommendations from various reports of the Kellogg Foundation, National Research Council, and Chancellor Emeritus Meyer.

ECOP and ESCOP recognize and appreciate the significant time, effort and thought that have been put into these various studies on the future of LGCUs over the past decade. To understand the impact of these reports, the JPC agreed to review selected studies and resulting reports. The intent was to understand and interpret the essence of recommendations from these reports, and to develop system-wide strategies to serve as challenges for improvement within the research and extension communities.

Any desired improvement may potentially be difficult unless LGCUs undergo certain underlying cultural changes. There must be a shared vision that embraces the continuum from knowledge discovery to application, including all aspects of research and extension. This culture must foster and appreciate the creativity and scholarship of all faculty along the entire breadth of this knowledge continuum. In addition, it must facilitate and value the counsel of all stakeholders potentially affected by the use of this knowledge. LGCUs must continue to establish new partnerships with public agencies, private firms and consumer groups that have not been our traditional partners.

Any attempt to define critical issues and chart a course for positive change requires input from diverse internal and external stakeholders, and studies such as the ones reviewed represent a significant amount of that type of input. Numerous structural and operational changes for LGCUs were suggested throughout these studies and subsequent reports. We offer our thanks to those -- such as the W. K. Kellogg Foundation, National Research Council, Chancellor Emeritus James H. Meyer of the University of California-Davis and others -- who have provided guidance in navigating this time of rapid change.

The JPC affirms that the primary cultural change prerequisite to any meaningful structural or operational changes is embodied in the philosophy of engagement, as defined in the Kellogg Foundation report "The Engaged Institution." Engagement -- in the form of service-oriented research, outreach and university-community partnerships -- can address society's needs and enhance the university's ability to work on practical everyday problems.

The following document describes a philosophy of engagement, summarizes the challenges presented by the studies reviewed, illustrates current examples of engagement and outlines strategies for enhanced engagement. This document is offered by ECOP and ESCOP to stimulate discussion, encourage action and foster engagement throughout the LGCU research and extension system.

Philosophy of Engagement

The quality of life and growing prosperity of our nation and the world depend fundamentally on the discovery, dissemination and application of knowledge and on our individual and collective human capacity to understand and to use knowledge in addressing current and emerging private and public issues.

The essential uniqueness and great power of the land-grant university system is its philosophical and operational commitment to knowledge discovery, dissemination and application. Historically, this uniqueness and power was manifested predominantly in our state and national systems of agricultural research and cooperative extension. These systems -- by working in a coordinated, integrated fashion -- have made unparalleled positive contributions to the development and evolution of our nation's food and agricultural systems, thus improving the quality of life for communities, families and individuals and strengthening economic and social prosperity for all citizens.

The effectiveness and success of our agricultural research and cooperative extension systems have depended on two interdependent factors: (1) the coordination and integration of the cooperative extension and agricultural research systems' programs and (2) the engagement of these systems with the communities and people they serve. Integration of extension and research activities ensures the efficient dissemination and application of knowledge and technology and has helped inform the research process. Engagement is the interactive, two-way process of dialogue between the agricultural research and cooperative extension systems and the citizens of our nation and the world. The dialogue of engagement is grounded in responsiveness, reciprocity and mutual respect. Effective engagement is essential to effective discovery, dissemination and application of knowledge.

These principles of integration and engagement continue to be as relevant now as they were at the inception of the land-grant system. Integrated approaches to problem solving are both highly effective and resource efficient in today's world, where issues are increasingly complex and rapidly changing.

ECOP and ESCOP are committed to reaffirming, renewing and strengthening the land-grant ideal of knowledge discovery, dissemination and application through engagement. The committees believe in the fundamental importance of conducting scientific research across the full range of the discovery-application continuum; integrating research and extension planning and programming, deliberatively where appropriate; building individual and collective human capacity to use existing and new knowledge to address private and public issues; and engaging all citizens in the knowledge discovery, dissemination and application process.

Challenges from Various Studies to the Land-Grant Research and Extension System

In recent years, a number of studies have considered the future of land-grant universities and colleges of agriculture. What follows is a compilation and condensation of the recommendations contained in those studies reviewed. *This section merely presents a summary of these recommendations without taking any position on their merit.* Inclusion of specific recommendations from a particular report does not imply an endorsement of that recommendation, simply that it was emphasized in that report. Actions that ECOP and ESCOP recommend be taken by the Agricultural Experiment Stations and Cooperative Extension Services within the land-grant system are outlined at the end of this document.

Reports that were reviewed and are summarized here include:

- W. K. Kellogg Foundation** –
- "Food System Professions Education Initiative"
- "The Engaged Institution"

National Research Council, Board on Agriculture –

"Colleges of Agriculture and the Land-Grant Universities - a Profile"

"Colleges of Agriculture and the Land-grant Universities - Public Service and Public Policy"

Chancellor Emeritus James H. Meyer –

"Rethinking the Outlook of Colleges Whose Roots Have Been in Agriculture"

"The Stalemate in Food and Agricultural Research, Teaching and Extension"

"Transforming the Land-Grant College of Agriculture for the Twenty-First Century"

"Re-Engineering the Land-Grant College of Agriculture"

"The Historical Trek of the Land-Grant College of Agriculture"

Serving Stakeholders

Land-grant universities should become more engaged with and responsive to the public -- the stakeholders -- they serve. One way to ensure engagement is through increased stakeholder involvement in institutional decision making and resource allocation. Indeed, land-grant institutions should demonstrate stakeholder input in order to receive continued formula funding from the U.S. Department of Agriculture.

Increased stakeholder involvement will help to focus programs on the issues of greatest concern to stakeholders and will encourage universities to address a wider range of issues. To address these issues, USDA extension programs should link with other government agencies, including the departments of Health and Human Services, Justice and Commerce. Applied research in disciplines such as economics, sociology and public health should be enhanced to provide a research base for programs that address community and economic development, human development and public policy formation. Innovative funding programs should be developed to provide financial assistance to limited-resource farmers and other clientele.

Universities should assess the needs of producers, prioritize those needs and target programs to meet them, adjusting technology transfer and information delivery methods appropriately. Colleges should appoint external advisory committees charged with developing priorities, recommendations and strategies on emerging issues such as nutrition, food production, stewardship of undeveloped lands and environmental issues from both rural and urban perspectives.

Promoting Partnership

Universities will find that as they reach beyond their campuses to improve service to their stakeholders that they must look for and develop new and innovative partnerships with other educational institutions, commodity groups, business and industry, and community action groups. The university's surrounding community should be one of its partners. By forming a close partnership with its community, a university helps demonstrate that higher education reflects values such as informal citizenship and responsibility.

The university should also be engaged in service learning and other outreach activities. Through such involvement, the university will address significant societal problems such as creating genuine learning communities, encouraging life-long learning, finding effective ways to overcome barriers to change and building greater social and human capital in communities. The engaged university will work to solve practical everyday problems.

Structured for Success

Teaching, research and outreach activities related to agriculture should be thought of in a natural resources management context in which agricultural land is considered a natural resource. Land-grant leadership should work to develop programs that emphasize ecologically based management strategies that support the sustainability of agricultural production while reducing off-site consequences. More emphasis should be placed on programming that delivers information to consumers about food and nutrition, environmental quality and the wise use of natural resources.

Research and extension activities could be improved through greater integration of programs. One report suggested it may be helpful, where appropriate, to consider combining research and extension under one director. Institutions should at least place research and extension within the same college. Each institution should develop a mission that is up-to-date, fresh, altruistic and pertinent to its state's needs. Extension should determine who its clientele are and develop priorities and programs to meet their needs. Extension should also increase efforts to transfer to the private sector technology that may be used in solving the problems of farmers, agribusinesses and consumers. Research programs should focus on developing agriculture that is economically viable, internationally competitive and environmentally sensitive.

The efforts of individual colleges to change should begin from the bottom up in order to build a broad constituency and encourage ideas and support from the public and federal agencies. Colleges of agriculture should require students to complete at least one internship during their college experience.

Funding a Multidisciplinary Approach

The complex issues land-grant institutions must address require a multidisciplinary approach. To encourage such an approach, a significant amount (25 percent or more) of total funding should be used to develop regional centers, consortia and projects that mobilize multistate and multi-institutional resources, thus facilitating regional and multidisciplinary programs.

A portion of federal formula funding should be allocated for food and agricultural system research and extension and each institution should use a portion of its funding for programs, projects and activities that integrate teaching, research and extension. The emphasis should be on interdisciplinary and multidisciplinary programs and projects that engage students in research and extension activities as interns and aides. A new formula should be developed that reflects the full range of program beneficiaries. The federal government should require that states match formula research and extension funding going to 1890 institutions in the same manner as is required for 1862 institutions. Programs that bridge 1862, 1890 and 1994 institutions should receive special funding, such as challenge grants. Funding should be made available for efforts that expand access to and diversity in the food and agricultural sciences. Competitive challenge grants should be expanded and used to develop multidisciplinary and systems-based courses.

Competitive federal funding for food and agricultural research should be increased, using a two-tier review system of merit and relevance, while USDA should enhance its competitive grants program to support efforts to build human and system capabilities.

Achieving Accountability

If universities are to address societal issues successfully, they must redefine scholarship and faculty reward criteria to reflect participation in outreach and collaborative activities. While extension programs must be underpinned by academic research, public service should be the university's focus. The entire university should be accessible as a research base, and administrative structures, incentives and rewards should promote participation in public service across the university. It will also be necessary to promote institutional changes that are more tolerant of risk taking and that support flexibility, creative thinking, organizational learning and team building.

Evaluation of a federally funded research or extension program should be based not on whether it aids a particular segment of the population but on whether it enhances the public good either regionally or nationally. Data on goals and outcomes of extension programs and projects should be compiled and organized more systematically. Funding for national initiatives should be made available on a competitive basis to all institutions, not just land-grant universities.

Current Engagement - Examples of Success in Land-Grant Research and Extension

It is nearly an impossible task to reflect the successes of research and extension in communities throughout America. Since the beginning of the land-grant concept in 1862 (and through subsequent legislation in 1890 and 1994), land-grant universities have engaged with the communities they serve. What follows are a few examples of how the land-grant university has made a difference in the lives of those with whom it engages. There are thousands more examples that can further define engagement; these are merely a start, a suggestion of the breadth and depth of the programs that research and extension provide.

Serving Stakeholders

Local input is crucial if organizations are to justify continued public investment. Meanwhile, both state and federal policy makers demand accountability and outcome-based programming. The Government Performance and Results Act mandates that federally funded initiatives include the systematic measurement of performance. To meet a growing need for enhanced stakeholder input, the Louisiana Cooperative Extension Service (LCES) embarked in 1999 on an extensive strategic planning process called the Louisiana Community Futures Forums.

The process required that faculty be trained in facilitation skills and proper public meeting management. LCES hired a training consultant from Texas to train 60 extension faculty. The facilitators moderated two sets of forums -- an open forum to identify priority issues and concerns in each Louisiana parish and a focus forum to identify goals, objectives and actions aimed at addressing priority issues and concerns. Meetings were held from September to November of 1999 and involved more than 2,000 stakeholders from the state's 64 parishes. Parish reports, which included issues raised and plans to address the issues, were prepared and made available to participants and other interested parties.

The Futures Forums significantly enhanced LCES' credibility was significantly enhanced and captured community passion. Stakeholders expressed appreciation for the professionalism of the facilitators and the neutrality associated with the process. The diverse nature of the participants expanded the scope of the issues and associated action-proposals. Additionally, the facilitation skills learned have positively affected the entire advisory committee process. The data obtained from the Futures Forums are being evaluated for incorporation into a statewide strategic plan that will lead the Louisiana Cooperative Extension Service into the new millennium.

Promoting Partnership

As the North Carolina swine industry grew in the late 1980s and 1990s, and the state became the second largest hog producer in the nation, so did public concern about the management of wastes produced by the industry and odor from farms. The viability of North Carolina's swine industry, which is worth approximately \$2 billion annually to the state's economy and is a particularly important part of the economy in many rural areas, was and continues to be threatened.

North Carolina State University created the Animal and Poultry Waste Management Center in an effort to address issues threatening the state's swine farms as well as poultry operations. The center is a public sector-private sector partnership. Center members have a seat on the center board of directors and a voice in determining the center's direction. Center members currently are AgPro Vision, Alltech, Inc., DuPont Specialty Grains, Heartland Lysine, Inc., North Carolina's Southeast, Southern States Cooperative, the North Carolina Pork Producers Council, the North Carolina Poultry Federation, Inc., Auburn University, Iowa State University, Michigan State University, Mississippi State University, Ohio State University, Oklahoma State University, University of Georgia, University of Missouri and Virginia Polytechnic Institute & State University.

The center has played a pivotal role in developing new waste management technologies for North Carolina. Center efforts have focused particularly on evaluating waste treatment technologies and products associated with waste management. These evaluations provide farmers, the public and policy makers with unbiased, research-based information they can use to make informed decisions. The Center, for example, has developed a protocol that has been used to evaluate products designed to mitigate the odor from swine farms and has used the protocol to evaluate a number of such products. These evaluations give farmers the information they need to decide whether to invest in such products and policy makers the information they need to decide whether to require the use of products.

Similarly, evaluations of waste treatment technologies have led to the identification of technologies that appear to hold promise as potential alternatives to the commonly used lagoon and sprayfield system. All work sponsored by the center includes an economic evaluation, for Center officials have realized from the beginning that waste management technologies or products will be of use to farmers only if they are affordable. The Animal and Poultry Waste Management Center is a partnership working to secure a future in which farmers are able to make a fair profit from their operations while also protecting the environment.

Structured for Success

Unemployed single and displaced homemakers and incarcerated women often don't know where to begin when it comes to finishing their education, finding jobs and building careers. As welfare eligibility tightens, there is a greater need than ever before for strategies to assist these women in moving from welfare to work to self sufficiency.

The PHASE program (Project for Homemakers in Arizona Seeking Employment), begun in 1978 in Tucson, Arizona, assists women with job-related scholarships and in job placement, including job-seeking skills. Funding for the program comes from the Arizona State Department of Education and contributions from businesses and individuals. The program is a joint effort of Pima Community College, which often trains the students for immediate employment; legislators; corporate and individual donors; and the School of Family and Consumer Resources in the College of Agriculture at the University of Arizona.

PHASE has assisted more than 6,000 single parents, displaced homemakers and incarcerated women in Pima County since 1978. About 15 percent of the program's clients continue their studies at the University of Arizona, and to date, these students have a 100 percent graduation rate. PHASE has become a national model for similar programs throughout the United States. In 1999 the program assisted incarcerated women in particular, providing job and basic computer skills and nontraditional employment.

"If it wasn't for PHASE, I wouldn't be the person I am today," said Kim Turner, a previously unemployed single mother of four who with help from PHASE completed her high school GED, an AA degree and a bachelor's degree from the University of Arizona. She recently secured a social service job in Tucson.

"The vast book knowledge and life skills the instructors have combined in the classes and also the true commitment to helping and caring have made this workshop an inspiration to us inmates, as well as giving us a glimmer of hope and a new lease on life," said an incarcerated PHASE participant in 1999.

Funding a Multidisciplinary Approach

Cotton growers need a precise and reliable method to determine when cotton-insect control can be stopped late in the growing season without reducing yields. At the same time, greater precision is needed in making insect-management decisions early in the season when the probability of damaging insect infestation is low but crop susceptibility to injury is great.

In 1993, a multistate, multi-agency, and multidisciplinary research and demonstration project between Mississippi and Arkansas was designed to meet these needs. The project expanded in 1994 to include

researchers from Louisiana, Tennessee, Texas and Virginia. Most of the project work has been research to develop and validate COTMAN, a computerized expert system for cotton management. Cotton producers have cooperated with on-farm research and demonstrations of the decision rules in COTMAN. The greatest progress has been in validation of end-of-season rules for termination of insecticide treatments: Growers have been able to avoid as many as five late-season insecticide applications with no effect on yields. The multidisciplinary research team is now concentrating on validation of early season management rules for insect control, irrigation and plant growth regulator treatments and on rules for defoliation in late season.

Economic impact evaluations of on-farm experiments in Mississippi show an average reduction of about two late-season insecticide applications with potential savings of about \$30 per acre. Cotton growers may be able to save millions of dollars by using the end-of-season treatment rules while reducing the amount of insecticide they use substantially and reducing the chance that insects that attack cotton will become resistant to insecticides.

Achieving Accountability

Understanding the views, needs and concerns of rural Nebraskans is important in planning and developing effective public policy. The University of Nebraska's annual Nebraska Rural Poll provides a snapshot of rural views and tracks trends and changes in rural attitudes and behaviors over time.

The annual poll, launched in 1996 by the university's Center for Rural Community Revitalization and Development, surveys the opinions of about 7,000 randomly selected Nebraskans in the state's 87 rural counties. The mail survey asks rural Nebraskans about issues ranging from community and individual well-being to work and current policy issues. It's one of the largest surveys of its kind in the country.

University of Nebraska Institute of Agriculture and Natural Resources researchers analyze poll results to provide a rural perspective on a range of issues. The analysis quantifies how rural Nebraskans as a whole and by group view different issues. For example, 34 percent of respondents to the 1999 Nebraska Rural Poll said educational quality greatly decreased or decreased in their local schools after state aid formulas changed.

In the short run, the poll provides a glimpse of rural views on important, sometimes controversial issues. Over time, it tracks changes and trends in rural Nebraska, providing a clearer big-picture understanding of all of Nebraska. Federal, state and local policy makers, law makers and rural communities use such scientific poll results to help with planning and decision-making. Policy makers say the poll gives them a realistic picture of rural Nebraskans' needs and puts a human face on the state's rural residents.

Future Engagement - Strategies for Enhanced Engagement within Research and Extension

The following objectives and recommendations are offered to the land grant research and extension communities as a guide for long-term enhancement of engagement. ECOP and ESCOP will work together to facilitate implementation of the recommended actions for each objective to move the LGCU system toward an even more responsive, accessible, integrated and engaged organization.

Objective 1 Enhance commitment to engagement for all sectors of research and extension.

Recommendation: Identify and communicate the benefits of engagement to all sectors of research and extension and to external clientele.

Recommendation: Examine the ethical aspects of engagement with external clientele groups and establish policies on appropriate forms of engagement.

Objective 2 Build research and extension leadership around all aspects of engagement.

Recommendation: Develop a shared vision of engagement for research and extension and articulate it broadly, inside and outside the land-grant system.

Recommendation: Put forward a common view on appropriate roles of faculty and administration in engagement and communicate it throughout the land-grant system.

Objective 3 Establish effective research and extension organizational structures and processes.

Recommendation: Ensure effective administrative and programmatic structures are in place within the research and extension system, as well as in ECOP and ESCOP, to meet the challenges of engagement.

Recommendation: Review and revise institution and system-wide administrative processes to facilitate engagement.

Objective 4 Expand the resource and capacity base for research and extension.

Recommendation: Develop a more diverse resource base from federal, state and private sources and align resources with the objectives of engagement.

Recommendation: Sustain institutional core competencies in research and extension and enhance those unique strengths through program integration and partnerships.

Objective 5 Increase meaningful involvement of research and extension partners.

Recommendation: Establish meaningful involvement of a diverse representation from stakeholders, constituents and the public through regular, constructive face-to-face dialogue.

Recommendation: Involve partners more fully in planning and resource allocation decisions.

Objective 6 Refine research and extension reward and recognition systems.

Recommendation: Review and revise reward criteria based on effective engagement, both for individuals and teams, and consider implementing alternative reward and recognition models.

Recommendation: Establish institutional and system-wide mechanisms for recognizing and rewarding significant contributions at activity, output and impact levels for individuals, teams and partners.