Cooperative Extension's Role in Shaping the Future of Land-Grant Universities

by Lamartine Hood and Wayne Schutjer

➢ **Public policymakers are rediscovering society's need for a higher education system that contributes solutions to social and economic problems, and land-grant universities are being challenged to respond. Within these universities, cooperative extension alone has the experience with various audiences, the credibility with local and state officials, and the practical operating approach required to meet the challenge. Indeed, cooperative extension has a unique opportunity to shape the future of land-grant institutions.**

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LAND-GRANT universities were created over 100 years ago to be socially involved problem-solving institutions. In 1914, cooperative extension, with federal funding, joined research and formal education as a major program component at land-grant universities. This community-based educational network enabled the public universities to share their resources and expertise with local residents. The resulting land-grant university was a noble undertaking. University professors, especially in the agricultural colleges, responded to the extension mandate. Many conducted research, taught formal courses, and offered extension programs throughout their states. Thus, formal and informal education was directly linked to research. Scientists were informed about the practical problems encountered by farmers and, in turn, helped farmers adopt new technologies and practices, whether they were food safety, soil conservation, pest management, crop fertility, or animal health.

During the post-sputnik period of the 1960s, research became the highest priority at land-grant universities. Caught up in the science-gap struggle, they emphasized basic research, disciplinary contributions, and the development of scientific theories. The university contribution to problem-solving was seen largely as limited to research. Cooperative extension, with a commitment to off-campus education and practical solutions to rural problems, was viewed as nonacademic and tangential to the intellectual life of the university. A similar view of continuing education prevailed.

With the advent of local and state government budget squeezes in the late 1970s, the context for the land-grant universities began to change. After the Vietnam War ended, inflation and federal budget deficits reduced real federal funding for both social programs and economic development. At the same time, societal and environmental problems did not abate. They may, in fact, have gotten worse. However, designing solutions and funding action programs were increasingly seen as the purview of local and state governments. To meet that challenge, these governmental units have sought the assistance of the land-grant universities.

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Thus, Sputnik brought about a stronger basic science emphasis and research orientation in land-grant universities. Subsequently, as responsibility for problem-solving and funding shifted from the federal level to the local level, interest was renewed in a greater commitment by land-grant university faculty toward applied problem-solving research, technical assistance, and off-campus education. As Ted Mather has noted in his article "A Stronger Public Service Role for Universities," the chief need of local governments today is options analysis and problem-solving rather than long-term continuing research. After several decades of pressure within the university community for basic research contributions, an added voice is being heard with pleas for relevance, applied research, community involvement, student internships, and hands-on education.

As the land-grant universities move to meet the challenges of relevance and greater faculty involvement, cooperative extension has a unique opportunity to provide leadership. Cooperative extension has experience with urban audiences, consumer groups, low-income youth and adults, and diverse audiences. This experience was born out of a necessity to broaden extension audiences in the face of a declining traditional clientele base and criticism of the leadership of the agricultural sector and the land-grant universities. Leaders of the farm sector and colleges of agriculture were criticized for focusing on lower farm production costs and

increased farm exports and for not being responsive to emerging economic, environmental, and social concerns articulated in such widely read books as Jim Hightower's *Hard Tomatoes, Hard Times* and Rachel Carson's *Silent Spring*. Cooperative extension also has a successful track record of working with local government and brings credibility to university efforts to collaborate with those units. In fact, the tripartite funding of extension by local, state, and federal governments has demanded that extension be responsive to needs identified at all levels of government.

Finally, cooperative extension provides a practical working model of how a university-based outreach program can translate the scholarship of research scientists into solutions to problems for individuals and communities and can provide scientists with an understanding of problems facing these groups.

Cooperative extension helps low-income homemakers in both urban and rural areas improve family meals through the federally sponsored Expanded Food and Nutrition Education Program. *Photo courtesy of Steve Williams*

Broadening The Clientele Base Of The University

When land-grant institutions were established by Congress in 1862, they brought a new concept of education to American life. Their mission was "to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." At the heart of the curriculum were agriculture and the mechanic arts, but other scientific studies were not excluded.

Since 1862, land-grant institutions have broadened their missions in response to a growing urban population and industrial base. Yet the research and education programs in colleges of agriculture still focus on agricultural and rural issues. Rural-oriented programs will continue to be a significant part of the overall extension education effort. Nevertheless, extension is uniquely qualified to address many issues specific to urban and metropolitan environments. These program areas include:

- Applying environmental science and technology to urban problems, such as solid waste management.
- Addressing issues critical to the health of individuals, effective functioning of families, and personal development of youth.
- Helping to identify and understand important, emerging public policy issues, such as housing, and to assess their consequences for the environment, families, and communities.

By developing effective programs that address urban problems, extension is gaining greater public visibility. It is becoming known in urban situations as an "action agency" that not only "gets things done" but provides leadership in working with other groups and agencies on important social issues.

Extension's effectiveness in the urban environment has not gone unnoticed by legislators and other decision-makers. The increased legislative recognition is reflected in increased financial support for extension by urban counties as well as affirmative voting by legislators in some states on extension-oriented legislation. In Pennsylvania, the stagnant federal budget contribution has been more than offset by growing state and local support for cooperative extension. During the past five years, the share of the extension budget provided by state and local governments in Pennsylvania has increased steadily while the share provided by the federal government has fallen from 36 to 28 percent.

Cooperative extension's programmatic involvement in urban sectors has enhanced the diversity of the student body and ultimately of the faculty and staff of the land-grant universities. College-bound students have come to realize through their exposure to extension programs that contemporary colleges of agriculture offer interesting and relevant undergraduate programs. At Penn State, the result has been increased numbers of enrolled students from urban and other nonfarm backgrounds in such curricula as food science, landscape architecture, and agricultural business management.

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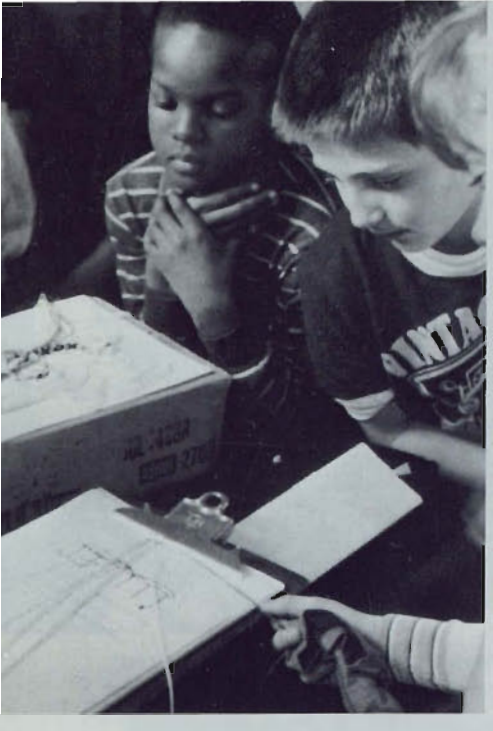
As cooperative extension education programs reach more and more citizens in Pennsylvania, staff in urban extension offices are increasing. Philadelphia County now has the largest county extension staff in the state, with nearly 40 employees. As programs are expanded for extension audiences in urban areas, it is nonetheless important to maintain essential programs for rural inhabitants, who traditionally have been the benefactors of land-grant institutions. At the same time, extension programs in youth and neighborhood development and urban horticulture are appropriate and valuable for urban dwellers. Service to both rural and urban groups will continue to enhance state and local funding for extension and support for the land-grant university.

Linking University Outreach To Local Government

With a strong local presence and public-sector funding base, cooperative extension provides a potential link for the total university to local government, community groups, individuals and families. Its experience with, and access to, local government and community leadership uniquely qualify cooperative extension to help interested faculty in all of the university's colleges conduct action programs, research, and continuing education at the local level.

An important example of the capacity of cooperative extension to serve as a university resource for outreach programs is its role in



Land-grant universities support extension programs critical to the personal development of youth. In urban centers throughout Pennsylvania, 4-H agents cooperate with industry and social agencies to provide educational programs such as "On My Own and OK," shown here.
Photo courtesy of Steve Williams

the promotion of community development. The enlightened resolution of community issues requires the active involvement of local government institutions, from rural township supervisors to neighborhood community action groups in urban centers. In Philadelphia County, for example, the extension staff works in cooperation with the Philadelphia Housing Authority to promote community leadership in housing projects. Similarly, Penn State's College of Agriculture cooperates with the Pennsylvania Development Associates Program to place recent university graduates in local development offices for one-year assignments. The project, jointly funded by Bell of Pennsylvania, greatly enhances community development capacity and provides an effective channel for university-based development efforts including PENNTAP, a technical assistance program for businesses, and the State's Ben Franklin Partnership Program for university-industry collaborative projects.

Cooperative extension is also recognized across much of the nation as an "honest broker" of ideas, able to organize and conduct public policy discussions on topics of concern to the broader university. Thus, for example, as colleges of education, agriculture, medicine, and liberal arts seek to introduce research and action programs in both rural and urban areas for young people faced with such pressures as drug abuse and teenage pregnancy, cooperative extension helps faculty access local support groups and service agencies.

Finally, cooperative extension has a credible history of working with local government officials and citizens to identify local needs through the conduct of public forums and more formal needs assessments. As a result, cooperative extension is playing a critical role in many university efforts to determine program priorities from the perspective of local officials and the general public. In this way cooperative extension helps the total university obtain the knowledge necessary for fuller participation in the social and economic problems facing society.

Effectively Linking Research And Outreach

The strength of land-grant education programs is its base in research and other creative work. Conversely, a major strength of land-grant research is its relevance to specific problems facing individuals and communities. Within most land-grant universities, colleges of agriculture represent the research-education model at its best. Traditionally, colleges of agriculture have developed and improved agricultural production technology in response to farmers' needs and disseminated that technology back to farmers through the extension system. Today extension links a broader research capability to a more diverse audience. In Pennsylvania, for example, cooperative extension is using remote-sensing satellite technology to help county officials determine property values for tax assessment.

As the broader university seeks to expand the scope of education programs to more fully meet the needs of society, colleges of agriculture and cooperative extension are well positioned to lead this effort. At the same time, cooperative extension must continue to refine and enhance its own linkages between research and educational programs. Today, the nature of the problems faced by citizens is changing, the definition of clientele is becoming broader, and institutional barriers are being altered. To provide university-wide leadership in science-based outreach education, cooperative extension itself must maintain a strong relationship with relevant research from all sources. An example of a major effort to ensure that extension workers have access to research is the National Database for Family and Economic Well-Being. This electronic database was developed by the federal extension service and Penn State to facilitate curriculum programming by providing briefs, articles, bibliographies, media material, census data, publications, and program ideas on a computer bulletin board service for the cost of a long-distance telephone call. The service is available 24 hours a day, has no user fee, provides immediate program information, and includes quick updates. The database has responded to 25,000 individual inquiries since its beginning.

A major strength of land-grant research is relevance to specific problems facing individuals and communities.

Interaction between research and extension is also being enhanced by giving a defined research responsibility to faculty with responsibilities in extension. The research assignment is typically focused on applied work related to the individual's extension program. The dual appointments help integrate statewide extension programs and personnel into the on-campus academic units.

County extension staff are becoming more specialized and discipline-oriented as campus-based faculty become more involved with extension. Many have master's and doctoral degrees and research experience; they are quite capable of being active players

For More Information:

"A Stronger Public Service Role for Universities," by Ted Mather in *The Land-Grant University and Local Government: Examining a Growing Relationship.* 1988. W. K. Kellogg Foundation. Battle Creek, Michigan.

Hard Tomatoes, Hard Times: The Failure of the Land-Grant College Complex by Jim Hightower. 1972. Agribusiness Accountability Project, Washington, DC.

Silent Spring by Rachel Carson. 1962. Houghton Mifflin, Boston, MA.

New Priorities for the University by Ernest A. Lynton and Sandra E. Elman. 1987. Jossey-Bass, Inc., San Francisco, CA.

Taking the University to the People by Wayne D. Rasmussen. 1989. Iowa State University Press, Ames.

College of Agriculture Programming in Urban and Metropolitan Areas. Urban Studies Task Force. December 1989. Penn State University, College of Agriculture, University Park, PA.

on research teams and indeed often seek research roles. Although county staff may not have formal research appointments, they contribute a unique perspective of research needs and can be vital partners in conducting field research and developing demonstrations for clientele.

Cooperative extension works with local government and community groups to address critical issues. During a virulent avian influenza outbreak in Pennsylvania, a county extension director hosted daily briefings for farmers, industry leaders, veterinarians, and local officials.

Photo courtesy of Jay Irwin

The Extension System Response

The adage "you can't lead from behind" provides good advice for cooperative extension in the 1990s. Cooperative extension can shape the future of the land-grant universities and, in many instances, is doing so. However, to successfully move forward in that role cooperative extension must maintain strength in serving a broad clientele base, work effectively in response to local needs, and ensure that off-campus education is firmly founded in research and creative endeavors.

Issues Planning. Progress is being made in issues or problem-oriented planning for extension education, which focuses resources on priority problems of a broad group of clientele. This approach recognizes that relevant extension education is not driven by disciplines but is a science-based multidisciplinary response to an identified problem. In Pennsylvania, College of Agriculture faculty working with citizens' groups and local and state officials identified nutrient management as a key requirement for improving water quality. In response, faculty and extension staff developed educational programs for farmers. Faculty included agronomists, agricultural engineers, and agricultural economists.

Colleges of agriculture represent the research-education model at its best.

At the national level, nine areas provide the basis for issues programming:

- Alternative agricultural opportunities
- Building human capital
- Competitiveness and profitability of American agriculture
- Conservation and management of natural resources
- Family and economic well-being
- Improving nutrition, diet, and health
- Revitalizing rural America
- Water quality
- Youth at risk

Changing The Federal Partnership. In many states the move to more fully utilize the extension organization or experience in the outreach program of the total university is raising questions about the relationship between the federal Extension Service and state cooperative extension programs. Within the university, cooperative extension must develop joint programs with continuing education, university-based economic development, and multi-college youth programs in response to local problems. At the federal level, national program leadership and funding are increasingly moving toward national problem definition and directed cooperation and coordination with the Soil Conservation Service, the Agricultural Stabilization and Conservation Service, and other federal line agencies. The relationship between federal-and state-extension programs is becoming more contractual. In the future, many states are likely to participate only in those federally funded projects that are of highest priority for the state and do not direct resources away from the broader outreach mission of the university.

Continuing the federal-state partnership is critical to the future success of cooperative extension. Flexible federal funding and a sharing of a national perspective on problems are essential. But university-based cooperative extension cannot become a line agency of the U. S. Department of Agriculture and at the same time lead the land-grant universities' response to local needs.

Enhancing Science-Based Extension Education. As the land-grant universities accommodate the challenges of a greater involvement in societal problems, the link between research and education, which was the essential genius of the land-grant model, must be a central feature of the response. It is critical that administrators in the land-grant institutions support the integration of research and outreach and that organizational structures promote integrated program planning and the interaction of personnel at all levels. Cooperative extension must have access to research and creative endeavors in all colleges, including business, engineering, health, liberal arts, and arts and architecture.

Individual universities approach the integration of research and extension in different ways. At the University of Wisconsin, cooperative extension is a part of total university extension, and the research base of the total university is available to cooperative extension. At Penn State, an integrated research and extension program planning and management process has been introduced to strengthen the linkage. Within the Penn State model, joint research-extension program committees provide leadership for both activities. At the University of California, the research and extension link is being strengthened by administratively and programmatically incorporating extension faculty into the agricultural academic units on the Berkeley, Davis and Riverside campuses. In each case, the goal is to ensure a relevant research agenda and a science-based extension education program that are responsive to local problems.

These are exciting and important times for the land-grant university system as it seeks to be responsive to the renewed demands for a fuller participation of the university in the socio-economic life of the nation. Cooperative extension, with a rich tradition of relevant quality programs and citizen involvement, is in the enviable and challenging position of providing direction and focus to the response.