

EXPLORING NEW OPPORTUNITIES FOR EXTENSION

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EXECUTIVE SUMMARY

The questions are – how quickly can the Cooperative Extension System respond to the dramatic changes in agriculture and how responsive can the system be to changes in community structure, evolving demographics, increased globalization, and broader public expectations? While several exemplary models of Extension programming can be identified, systemic changes throughout the Extension organization are needed to address the depth of agricultural, social, and economic conditions. To enhance the ability of Extension to become more relevant, resilient, and responsive, CSREES should request federal resources and leadership in five areas:

- infrastructure
- workforce
- programs
- technology
- resource development

Outcomes resulting from expanded federal resources and leadership for Extension include:

- increased responsiveness and organizational flexibility
- engaged partnerships at the local, state, and federal levels with public agencies, consumer groups, and the private sector.
- timely and effective translation of research into Extension practices
- higher accountability of outcomes from basic research
- design and delivery of “outcome-based” Extension programs
- rapid, informed communications systems to deliver science-based information, educational programs, and decision-support systems
- more relevant research priorities for agricultural and social sciences through broader end user and stakeholder input

Changes in agriculture and community structures offer new program opportunities for the Cooperative Extension System to improve economic, environmental, and social conditions in the U.S. and around the world. Opportunities include:

- genomics/biotechnology
- state and federal regulatory policy
- conservation and environment
- food and fiber production
- health disparities
- resilient communities
- globalization/international development
- human capital
- community and food security

Community and food security is used as an example of how the Extension System can form engaged partnerships at the local, state, regional, and federal levels to deliver outcome-based programs. The outcomes of Extension’s community and security partnership include community-based security plans and knowledge of how to prepare for, respond to, mitigate, and recover from a terrorist attack.

PROBLEM/NEED

"The difficulty lies not in new ideas, but in escaping from old ones." J. M. Keynes

The questions are – how quickly can the Cooperative Extension System [“Extension” is used hereafter to refer to the Cooperative Extension System, composed of USDA-CSREES, land-grant universities and colleges, and county extension offices] respond to dramatic changes in agriculture and how responsive can the system be to changes in community structure, evolving demographics, increased globalization, and broader public expectations? While several exemplary models of Extension programming can be identified, systemic changes throughout the Extension organization are needed to address the depth of agricultural, social, and economic conditions.

The capacity of the Extension System to change is swiftly eroding through decreasing human resources and decreasing financial capital. In addition, the federal partner has been less engaged in leading Extension over the past few years.

Various state and federal government agencies have education/outreach agendas, but their capacity to deliver programs is extremely limited or nonexistent. Extension retains its comparative advantage for delivering science-based, consumer-driven programs to help individuals and communities adopt new practices and respond to change. In addition, the Extension system is built on a unique infrastructure that includes the presence of local educators (county agents) in rural, urban, and suburban communities across the country, and their partnerships with land-grant universities, state governments, and the federal government.

Extension has been successful in achieving its mission of serving the agricultural sector, rural families, and rural communities. These accomplishments have made the U.S. food supply the safest, cheapest, and most abundant in the world. How can Extension take advantage of its unique resources to better serve traditional audiences, and at the same time provide outcome-based programs for diverse audiences in rural, suburban, and urban settings?

To enhance the ability of Extension to become more relevant, resilient, and responsive, CSREES should request federal resources and leadership in five areas:

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Infrastructure

Extension will:

- transform from a predominantly agricultural base by engaging faculty members from other schools across the university such as medicine, business, engineering, nuclear physics, microbiology, and education.
- use multi-disciplinary teams that share expertise through multi-county or regional collaborations for delivery of science-based programs to a broader audience interested in urban, suburban, and rural issues, as well as production agriculture.
- form multi-functional teams across research, education, and extension programs and become an active participant on these teams.
- incorporate input from a wider variety of stakeholders and end users regarding the priorities for research and extension programs supported by public dollars.

- forge strategic program partnerships with other federal agencies (including USDA agencies), private industry, non-profit organizations, consumer groups, and other educational institutes.
- develop innovative mechanisms for streamlining CSREES administrative processes.

Workforce

Extension will:

- hire diverse staff (particularly those with bilingual capabilities) and provide the necessary training to retool county and state staff with 21st century skills and competencies such as managing diverse teams, community facilitation, mobilizing resources through partnerships, and creative uses of information technology.
- staff new positions with underrepresented/underserved populations so that the face of Extension reflects its audiences.
- conduct applied research and cross-train with research and teaching to acquire expertise in new scientific/technological information and multi-disciplinary problem-solving skills.
- provide “global competency” training for staff that will enable them to assist local clientele to understand, and succeed in, an increasingly interdependent world.

Programs

Extension will:

- deliver market-tested, “outcome-based” national educational programs in such areas as genomics, regulatory compliance, health disparities, community and food security, conservation and environment, communities, information technology, global and international development, human capital, and food and fiber production.
- develop and deliver national programs for non-traditional audiences in urban/suburban communities that include various ethnic/minority/age groups.
- address the diverse needs of agricultural production systems ranging from large commercial enterprises to consumer-driven niche markets of smaller scale.
- accelerate the translation for existing and emerging research into applied practice.
- engage extension customers in determining new research priorities for agricultural and social sciences.
- participate in linking research, teaching, and extension methodologies that add value to each of these perspective missions.

Technology

Recent research advances in information technology, biotechnology, and nanotechnology have put agriculture at the threshold of an exciting frontier of opportunities to advance economic growth, sustainability, and the building of human capabilities. Extension will:

- develop new educational curricula, programs, and delivery systems to facilitate adoption of these technologies.
- aggressively pursue national programming across all states to educate the general public and subpopulations, such as the elderly and youth, on how to use technology and the World Wide Web.
- train its workforce to manage and use technology, and build staff competencies in IT communications, Web site development, direct customer assistance technologies (such as use of voice-over-IP), electronic management of science-based information, technical applications (such as GIS and nanotechnology), and delivery of research-based extension information and educational programming through such means as e-Extension, distance learning, and Web-based modules.
- equip itself with the most current hardware and software and participate as a leader in the implementation of the IT revolution.

- develop a CSREES database to facilitate the annual reporting process by the partners that would allow easier tracking of data and enhance accountability.

Resource Development

Extension will:

- pursue other funding avenues for programs and staff such as fee-for-service and partnerships with other federal and state agencies beyond CSREES.
- train state and county staff to become competitive-grant writers by working in teams with research and teaching faculty.

OUTCOMES

Outcomes resulting from expanded federal resources and leadership for Extension include:

- increased responsiveness and organizational flexibility
- engaged partnerships at the local, state, and federal levels with other public agencies, consumer groups, and the private sector
- timely and effective translation of research into Extension practices
- higher accountability of outcomes from basic research
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OPPORTUNITIES

Changing demographics, rapidly developing technologies, and expanding global markets forecast a new and much different America faced with new issues and challenges. These changes offer new opportunities for Extension to improve economic, environmental, and social conditions in the U.S. and around the world by delivering programs in the following areas:

Genomics/Biotechnology

Extension has an opportunity to provide education, certification, and training programs to producers and consumers regarding the basic science, technology transfer, and relative benefits/risks of genetically modified agricultural products with enhanced food safety, improved nutritional value, enhanced bio-based product potential, new methods of preventing/treating diseases, and enhanced ecosystem health resulting from decreased use of pesticides/herbicides. Partners may include HHS, NSF, and DOE.

State and Federal Regulatory Policy

Extension will provide information and educational programs to the agricultural sector regarding the multiple state and federal regulations affecting human health and natural resources. Extension can also form effective partnerships between the public and agricultural sectors by disseminating and interpreting information, conducting discussion groups and seminars, and relaying information back to state and federal agencies regarding impacts of policies and regulations. Primary partners include EPA and FDA.

Conservation and Environment

Increasing human populations, excessive consumer consumption, and changing public attitudes toward the environment are placing increased program demands and clientele expectations on Extension at the local, state, and national levels. In many states, natural resource and environmental management

programs are becoming more important than traditional agriculture production and commodity programs. Current issues include air quality (indoor and outdoor, including dust and odor); sprawl and the urban/rural interface; sustainable development for communities, forestry, and agriculture; terrestrial and aquatic ecosystem restoration; and water quality and quantity. Primary partners might include NRCS for third-party vendor training, NASA for remote sensing, Forest Service for wildland fire threats to communities and private landowners, and BLM on grazing land impacts.

Food and Fiber Production

University Extension faculty/specialists could expand their role in the transfer of highly specialized knowledge from research laboratories to large-scale food production systems regarding production efficiency, conservation of natural resources, protection of the environment, and consumer demands. In addition, county educators may provide business development education for small niche producers in areas such as organic products, bio-based products, new agricultural products with pharmaceutical properties, alternative crop uses, and food products straight to the grocer's shelves. Partnerships might include private agri-science companies for larger producers and SBA for small farmers.

Health Disparities

As many as 15 million people exhibit a preventable, "pre-diabetic" condition (overweight, high cholesterol, and hypertension) leading to cardiovascular disease. This national condition will consume enormous resources over the next decade if not treated. Citizens of non-European heritage (African American, Hispanic, Asian, and Native American), especially children and the elderly, are most vulnerable and are not adequately served by our health care system. Extension can help reverse this trend through educational programs to change individual and family behavior regarding food intake, nutrition, and physical activity, thereby eliminating barriers to healthy choices. Partnership with the federal and state agencies through HHS, Education, FDA, and USDA Food and Nutrition Service is the opportunity for Extension.

Resilient Communities

Extension could revitalize community development programming throughout the Land-Grant System with training for university specialists and county educators. Extension may form relevant partnerships with other university departments and state and federal agencies to engage rural and suburban/urban residents in asset-based community development strategies. Extension will focus on the outcomes of resilient communities that will attract private investment and expand infrastructure including technology and human capital through local-based sustainable development. Partners will include DOL federal and regional offices, USDA community development agencies (such as RC&D, RD, and FS), DOC, SBDCs, and SBA.

Globalization/International Development

For communities dealing with increased immigrant populations, for entrepreneurs struggling to distinguish between foreign competition and new market opportunities, and for a citizenship still dealing with the aftereffects of September 11, 2001, Extension is in a unique position to help Americans understand and shape our country's international engagement. Extension should look beyond our own borders for solutions to problems here in the U.S., including learning from other countries' experiences in structuring, financing, and delivering extension services. Training and professional development opportunities for Extension staff are needed so that they will be on the forefront of interpreting the local implications of global events and trends. With today's communication technology and culturally diverse communities, staff development can often be implemented without leaving the U.S. Potential partners include AID, FAS, and the Department of State.

Human Capital

Development of human capital, education, and preparation of the future workforce are major public issues. Extension opportunities exist in such areas as leadership development, science and math education, information technology training for adults and young people, basic adult literacy training, daycare, before- and after-school program services, and workforce development. Extension's 4-H and youth development system, providing non-formal education for more than 7 million young people and several million adult and youth volunteers, is underutilized by the federal, state, and local government in its efforts to build human capital. The successful national program for children, youth, and families at risk serving rural, suburban, and urban populations and hiring for underrepresented and minority staff should be expanded. Partnerships might include such federal agencies as NSF, DOE, DOL and Justice; non-profit youth serving organizations; and business and industry.

Community and Food Security

Extension has an opportunity to provide leadership for development of community-based security plans and disseminate knowledge of how to prepare for, respond to, mitigate, and recover from a terrorist attack. Potential partners include DOD, FEMA, EPA, and HHS.

APPENDIX

EXTENSION'S ROLE IN COMMUNITY AND FOOD SECURITY

The need for *local* security planning, preparation, response, risk assessment, mitigation, and recovery by communities and families as part of the national homeland security effort offers an immediate and timely opportunity for Extension to demonstrate value. The following description of how Extension can connect local communities and their residents to the national security strategy represents a powerful and contemporary role for the Cooperative Extension System.

"The deep and serious problem of homeland security is not one of science, it is one of implementation."
John Marburger, Director, OSTP, April 11, 2002.

Community-based Extension educators provide the local link in the implementation of homeland security. Many are experienced and skilled at communicating with the public, designing programs, providing training, facilitating group meetings, mobilizing volunteers, and developing essential partnerships with other local agencies, educational institutions, and the private sector. Local Extension workers are credible entities in communities – there before, during, and after a terrorist attack. **The role of the county Extension staff** is to help communities, families, and individuals determine local security issues and potential threats, recognize threats, create security, develop plans of action in the event of a break in security, and develop plans to minimize and contain damage, clean up, and recover from a break in security. Extension will provide science-based information to assist the "first responders," including local emergency fire and rescue, health agencies and hospitals, veterinarians, crop consultants, offices of civil preparedness, law enforcement, public schools, churches, and institutions of higher education.

The role of higher education is to assist the county Extension staff in delivering educational modules in community and food security. University specialists will develop modules and courses on security for agricultural producers, natural resource managers, processors, suppliers, retailers, and consumers. Train-the-trainer sessions for state and county staff and volunteers will be used. Extension will be involved with researchers and teaching faculty to develop new academic courses and degree programs in community and food security. Extension specialists will coordinate security expertise across university departments, such as medicine, engineering, microbiology, veterinary science, community development, business, and education.

University Extension specialists will participate in coordinated research efforts to provide faster translation of research into public information, education, and decision-support systems concerning community and food security. Rapid, informed communications systems are necessary. University Extension will coordinate communications between the counties and the federal government. Extension specialists will help counties apply new technologies that identify threats, contain/minimize damage, and recover from terrorist attacks. Extension will participate in local university efforts to secure their employees, research facilities, information networks, county offices, and other USDA state and local facilities.

Some of the efforts of land-grant universities and county Extension offices may best be organized and implemented through the **Regional Rural Development Centers**. For example, regional centers may serve the needs of universities and CSREES by organizing and coordinating train-the-trainer opportunities for state staff who will in turn train local county Extension agents in such areas as planning community security, applying new or existing technologies, and using security decision-support systems.

The **role for CSREES** in community and food security is to serve the universities and regional centers by assisting the counties in the security planning and implementation process. Opportunities for CSREES in this regard include coordinating the creation of national training/certification/educational programs on community and food security. Funds are also needed to develop university curricula to educate students in the areas described above. The primary role of CSREES is not only to run a fair and equitable competitive awards process, but to lead the partnership in setting program priorities through shared leadership, to hold the awardees accountable for quality products, and to assure the dissemination of research results.

CSREES should provide integrated research, education, and extension programs concerning community and food security efforts. These programs should incorporate an understanding of basic science/technology, rapid feedback from local responders, just-in-time research/data gathering methods, and real-time decision support mechanisms. CSREES should provide funding opportunities that allow stakeholders, partners, and end users to be involved in setting the research priorities for community and food security. CSREES will assure that Extension assists in conducting applied research utilizing expertise from across university departments.

CSREES will provide leadership and funding opportunities to enhance the infrastructure of the Extension system regarding security, such as laboratory support; surveillance; employee background/screening/tracking; access to research results; secure radioactive, chemical, and biological reagents; and inventories of radioactive, chemical, and biological reagents.

CSREES program leaders will help the states create new partnerships for funding opportunities concerning community and food security with such federal agencies as HHS, DOD, and FEMA. CSREES should provide matching funds in joint competitive programs, including integrated and coordinated basic and applied research/education/extension activities with other federal and USDA agencies concerning mutually agreed-on issues related to community and food security.

CSREES should lead the design and implementation of rapid, real-time communication systems between and among the universities, counties, and the federal agencies concerning community and food security. CSREES will identify points of contact within each county office, land-grant university, and college. Web sites, toll-free numbers, videos, and hard copies will be developed and maintained with current, community-specific, concise, multilingual, and easy-to-find information regarding security issues. The Extension Disaster Education Network (EDEN) could be expanded and updated as a central Web portal.

An open line of frequent and more interactive communication between CSREES and other federal agencies (horizontal communication) and the public (vertical communication, including land-grant universities, regional centers, county agents, and the general public) is needed. CSREES will assure that a mechanism is developed to sort and administer the flow of information among originators of security

information for food producers, processors, community leaders, families and the general public who will benefit from the system.

The **outcomes** of Extension's involvement in community and food security efforts include:

- safe and secure communities, families, and food systems
- rapid, informed, interactive, and vertically integrated communications systems

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June 2002