Strengthening Rural Communities in Illinois

Rural communities across the United States face many problems and challenges, including rapid changes in technology and low prices for farm products. Researchers from Southern Illinois University at Carbondale (SIUC) are working to address these dilemmas and to strengthen Illinois’ rural communities through a research and outreach effort called Rural Development Opportunities (RDO). RDO is a component of C-FAR’s Rural Community Development Strategic Research Initiative, also known as I-FARRM (Illinois Farming Alternatives and Rural Revitalization Methods). RDO’s primary objective is to document current agricultural trends and how they impact Illinois’ economy while simultaneously identifying new niche market opportunities and initiating alternative agricultural and rural enterprises.

RDO is run by faculty and staff in SIUC’s Rural Economic Development Research Unit. Roger Beck, professor of agribusiness economics, and Andrew Carver, assistant professor of forestry, are codirectors of the RDO project. Other researchers working on the project include Margaret Flanagan, Elizabeth Gardner, Jean Mangun, William Peterson, and Matt Rendleman, as well as about a dozen graduate and undergraduate students from several academic programs. “A primary goal of this research is to give rural communities the tools they need to boost their economies and plan their futures according to their own visions,” said Beck.

One objective of the RDO project is to identify opportunities for farmers to diversify their offerings. Illinois agriculture relies overwhelmingly on corn, soybeans, and livestock production; therefore, diversification can help add much-needed income when prices for farm commodities are low. Possible diversification opportunities include:

- growing specialty crops, such as buckwheat, canola, grapes, or organic produce
- producing value-added products
- starting an agritourism business

(continued on page 3)
C-FAR Connections Benefiting Illinois

An estimated 800,000 people in the state of Illinois are connected to C-FAR either as individual members or through organizational affiliations. C-FAR stakeholders comprise a broad political base, including environmental purists, production pragmatists, institution administrators, researchers, retirees, and others dedicated to the well-being of our food and agricultural systems. These individuals form C-FAR’s collective intelligence, and our working group structure creates an open forum for debating the industry priorities and concerns that need to be addressed to secure a strong economic and healthful future for the people of Illinois and our country.

As one might imagine, the diversity of thought and experience represented by C-FAR stakeholders produces spirited, at times even acrimonious, debate. What truly open political forum does not? But out of these dynamic discussions, C-FAR members have connected. C-FAR leaders have also established productive connections with Governor George H. Ryan and Illinois Director of Agriculture Joe Hampton. These officials and their staffs are regularly apprised of C-FAR activities and research, and C-FAR efforts have prompted new state programs. For example, C-FAR research laid the foundation underpinning AgriFIRST and other value-added initiatives. AgriFIRST, introduced in the FY02 Illinois State budget, will provide $3 million for agribusiness expansions, marketing opportunities, and value-added ventures.

Last spring, C-FAR leaders connected with the Illinois House Agriculture Committee and the Illinois Senate Agriculture and Conservation Committee, meeting with these groups to present progress reports and answer any questions regarding C-FAR. Such meetings keep a vital core of the general assembly informed about C-FAR activities and aware of C-FAR contributions.

Through these connections, we’ve all come to realize the critical importance of Illinois’ food and agricultural systems and the many people they serve. Our efforts to advance the position and socioeconomic efficacy of Illinois food and agriculture have only just begun. New technologies and their ongoing social and economic impacts will continue to present evolutionary challenges.

Greater funding will be necessary to address priority food and agriculture issues in an orderly fashion. If we all stay connected, however, Illinois can lead the way.
Strengthening Rural Communities in Illinois
(continued from page 1)

such as a bed and breakfast, winery, farm tour, pick-your-own pumpkin patch, or hunting preserve
setting aside timberland to lease for hunting purposes or to use in maple syrup production
managing tree farms for timber or Christmas tree production

Agribusiness economics researcher William Peterson and his associates have projected that if current trends continue, by 2007 about one-third of small farms (those under 500 acres) will disappear, while farms over 2,000 acres will increase by 22 percent. “Reduction in the number of small farms may cause some rural communities to gradually disappear,” says Beck. “We are exploring new opportunities for farmers that will enhance their income and strengthen their local communities.” In southern Illinois, RDO researchers are investigating value-added forest products and the development of a wood products cooperative for area timber mills. Currently, about half of all logs harvested in southern Illinois go out of state for processing. Investigators are exploring processing options that would keep more capital and wealth within local communities.

Margaret Flanagan, SIUC’s development specialist, and assistant researcher Elizabeth Gardner manage the agritourism component of RDO. “What we do is help people articulate what they would like to do and then help them do a reality check by developing a business plan,” said Flanagan. “Is there enough demand for the product or service? What kind of skills and equipment are needed? What are the financial requirements to start the business? How much income would be generated? In the case of a bed and breakfast, the client must ask, ‘Do I really want to open up my home?’”

Flanagan and Gardner offer help in developing formal business plans and in applying for loans, if necessary. RDO has provided support to several farm-related enterprises, such as Cobden’s Shawnee Hill Smithery, Raymond’s Five Star Organic Farm, and Dongola’s Fragrant Fields. A destination tourism theme called “Barns, Farms, Vines, and Antiquities,” which includes a Shawnee Hills winery tour and a barn tour, has also been developed for Union County.

The RDO project has also facilitated the establishment of the Southern Illinois Community Foundation. Flanagan has brought together regional leaders, with the goal of building a community foundation designed to create charitable opportunities that will enhance the area’s rural philanthropic tradition.

To better understand people’s attitudes about family farms and rural economic development, Jean Mangun, assistant professor of forestry, and her associates are surveying community leaders in both rural and urban areas. Researchers have developed a number of surveys to determine, for example, how people’s backgrounds influence their attitudes toward rural economic development and how much more people are willing to pay for farm specialty products and services. These findings will help alternative and organic farming groups determine the perceived value of their products and their stewardship of the land.

Using sophisticated software, RDO researchers are developing tools for rural communities to use in economic and land use planning. Beck and his research associates are using a program called IMPLAN to perform regional economic analyses based on employment and income data, imports, exports, and other economic factors. IMPLAN is a sophisticated tool that can track how changing a single economic variable will impact the other variables under consideration. The program can also predict how changes in one region would affect another region’s economy.

Matthew Rendleman, associate professor of agribusiness economics, leads research studies using another program, called GAMS, that determines how much economic development is possible in a region, given various limits on resources such as land, labor, or capital. Economic modeling and GIS (geographic information systems, which can be used to generate maps showing economic, demographic, natural resource, and other information by geographic area) are being used to determine the likely outcomes of agricultural policy decisions.

Researchers are also applying GIS technology to map land use strategies. “This technology allows decision makers to apply scientific methods and do a quantitative analysis of the relative benefits of various land uses,” said Carver. Identifying potential sites for large livestock facilities that will have minimal impact on residential areas, locating prime areas for catfish ponds, and planning urban expansion given many variables and constraints are examples of how GIS can be used to provide a scientific basis for rural development decisions.

To demonstrate how easily GIS technology can be used, researchers set up a plan for St. Clair County, where some of the Midwest’s most ecologically valuable land is located. Carver hopes that this study will create support for the development of a Web-based service designed to help rural counties develop their own GIS land use plans. “This low-cost, easy-to-use technology can help local governments design land use plans that allow for the expansion of urban areas while protecting valuable farmland, waterways, and forestland, as well as resident wildlife and native plants,” said Carver.
Governor Ryan has a strong and personal understanding of the role agriculture plays in our state economy and our future growth. Throughout his youth, he saw firsthand the economic impact of agriculture as he worked with his grandfather and uncle in the cattle buying and sale barn business. First Lady Lura Lynn Ryan, formerly Lura Lynn Lowe of Aroma Park, also comes from a farm family with roots in agriculture dating back to 1832. In addition to livestock farming, the Lowes were pioneers in hybrid seed development and founded the Lowe Seed Company, which sold hybrid seed throughout Illinois and in Iowa. Mrs. Ryan's father, a graduate of the University of Illinois, was actively involved with the university’s agronomy department, sharing the Lowe hybrid seed corn formula with faculty.

Agriculture is Illinois’ leading industry. A quarter of all Illinois jobs are directly dependent upon agriculture, and the industry pumps billions of dollars into our economy every year. Our state is a leader in the nation’s agricultural output, and as governor, I am focusing the efforts of my administration to maintain our strong share in the marketplace.

Last year, to address this challenge, I brought together, through the Ag Assembly, stakeholders in the Illinois food and fiber industry to develop a vision for the future. They confirmed my vision of what it takes to keep Illinois agriculture viable.

I created AgriFIRST—a $3 million grant program—to show my commitment to creating a long-term program to advance and expand the state’s food and fiber industry by developing new technologies, methods, and products that will create future jobs and opportunities. AgriFIRST is designed to identify and develop value-added business opportunities and to increase profitability of the state’s food and fiber industry.

Research initiatives, like those funded through C-FAR, address value-added agriculture and many other issues I see as critical to the future of Illinois agriculture. I am proud to say that the state’s funding for C-FAR has increased to $15 million annually, and I continue to fully fund this program. These dollars help build partnerships between the State and the food and fiber industry to finance industry-driven research that benefits farmers, nutritionists, consumers, and conservationists.

Research is clearly a part of our future, playing an integral role in maintaining and expanding our domestic and international markets. Domestically, research must continue to provide new technologies to advance the use of renewable fuels, provide more nutritious food products, and reduce odor in livestock operations.

Internationally, research continues to provide the impetus for new and expanded markets. I’ve been a champion for opening new markets for farmers, successfully opening a new trade office in Shanghai. I have also worked to develop a personal relationship with Mexican President Vicente Fox, personally led a trade mission to South Africa, and spearheaded a humanitarian effort to Cuba. We are looking forward to the fruits of these endeavors.

I am committed to maintaining our state’s position as a leader in producing a variety of agricultural products. I am certain that relationships, like that between the State and C-FAR, will help us position Illinois agriculture for the future while maintaining our market leadership.
Meeting the challenges and opportunities ahead

Joe Hampton fits the true definition of family farmer. In 1969, following two years of service as company commander in the United States Army’s Third Armor Division, Hampton returned home to farm with his father and brother near Windsor. Hampton’s son Chris joined the operation in 1996.

Hampton has been involved in Illinois agriculture at all levels, from grassroots to international. He has been a local 4-H leader for 15 years and is a founding member of both the Windsor Area Ambulance Service and Shelby County Crimestoppers. Hampton has also served on the Corn Marketing Board, the 4-H Foundation Board, and the Illinois Council on Food and Agricultural Research (C-FAR); has represented agricultural interests in the General Agreement on Tariffs and Trade negotiations before the European Union; and has served on various international fact-finding missions.

Hampton is a graduate of the University of Illinois College of Agriculture and has served on the college’s advisory board.

Governor George Ryan appointed Hampton director of the Illinois Department of Agriculture in January 1999. Hampton is the chief advocate for Illinois agriculture, working through the department’s Bureau of Marketing and Promotion to seek added value for Illinois products. He is responsible for the administration of more than 90 statutes and some 650 employees.

Illinois is a ‘one-stop’ shop for agricultural products and services and the supplier of choice to customers around the world. Our farmers are the leading producers of soybeans, the second-leading producers of corn, and the fourth-leading producers of hogs in the United States; and Illinois consistently ranks among the top states in agricultural exports and cash receipts from farm commodities. This high level of production sustains a diverse, multibillion dollar industry that employs nearly one of every four Illinois workers and includes 1,400 food companies and thousands more agribusinesses.

Illinois enjoys a leadership position in the global marketplace because of its ability to adapt. New machinery, production techniques, and conservation practices have changed agriculture tremendously, and farmers’ willingness to implement new technologies has enabled Illinois to remain ahead of the competition. Our ability to innovate, however, is being tested like never before. Agriculture is undergoing a fundamental shift from the producer-oriented industry that I remember from growing up as a farm boy at livestock terminals and local grain markets to a customer-oriented processing and service industry that affects my planning as a producer today. Our challenge is to recognize this shift and move swiftly to preserve the agricultural jobs that are essential to the economy of Illinois.

Producers need to establish alliances and form cooperatives in order to seize market opportunities. The industry needs to interpret consumer tastes and preferences and to develop new products that add value to our commodities and enable them to capture a larger share of the marketing dollar. Achieving these goals will require a close partnership with the Illinois Council on Food and Agricultural Research (C-FAR). C-FAR strives to sustain our agriculture economy through the implementation of new, more profitable farming practices that protect our environment, as well as through the development of new and expanded uses for our raw commodities. It also works to further our knowledge of food safety and the security of our food system, and opportunities abound to educate and enlighten consumers with C-FAR research.

In the meantime, our colleges and universities need to prepare a more highly skilled and highly specialized workforce. A USDA study of agricultural employment through 2005 concluded that 32 percent of the job opportunities for college graduates with agriculture degrees will be in science, engineering, and related specialties. Twenty-eight percent of the openings will be for marketing, merchandising, and sales representatives. Students who can add value to the raw commodities produced on our farms and sell those products in an increasingly global marketplace will have a distinct advantage, according to the study. Agriculture in the twenty-first century will not be business as usual. Innovation based upon sound research and a willingness to adapt will be essential to meeting the challenges that lie ahead.

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C-FAR Research Leveraged for Soybean Aphid Watch

The 2001 Soybean Aphid Watch, a new online reporting system, is currently tracking soybean aphid infestations in the Midwest. Susan Ratcliffe, University of Illinois Extension entomologist, noted that the new site is patterned after a western corn rootworm tracking system that was developed through C-FAR’s Information Systems and Technology Strategic Research Initiative (IT-SRI). “The online aphid tracking concept was derived from C-FAR-funded research that developed a Web-based reporting system for producers to forward western corn rootworm scouting data, which was then available to others in a map-type format,” said Ratcliffe.

During the summer and fall of 2000, the soybean aphid was found in Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, West Virginia, and Wisconsin. The broad distribution suggests that the aphid has been in North America for more than one year and has perhaps been undetected for three or four years. A native of China and Japan, the soybean aphid is a small, yellow aphid that can be found on stem apices and young leaves of growing soybean plants, as well as on the undersides of leaves of mature plants. In addition to feeding on soybeans, the soybean aphid is capable of transmitting a number of viruses that infect soybeans, including alfalfa mosaic, soybean mosaic, bean yellow mosaic, peanut mottle, peanut stunt, and peanut stripe. Transmission of these viruses has not yet been documented in the United States, however.

Funded by the North Central Regional Pest Management Center and the Illinois Soybean Operating Board, 2001 Soybean Aphid Watch is a collaborative effort designed to help researchers and producers determine the abundance and distribution of the soybean aphid. Due to her experience with the IT-SRI project, Ratcliffe is the contact person for Soybean Aphid Watch and is coordinating the University of Illinois’ involvement in the project. Crop professionals, Extension experts, and entomologists report infestations via the Internet. The reports include such details as township and section number, host plant, aphid density, and leaf appearance. If producers suspect aphid infestations in their fields, they should report this information to their certified crop consultant or local Extension specialist. “The development of this online aphid tracking system is a clear example of how C-FAR funds are leveraged to benefit Illinois and beyond,” said Ratcliffe.

In addition to laying the groundwork for Soybean Aphid Watch, C-FAR has funded, through its Sentinel Program at the University of Illinois, a special one-year research effort for FY01 to determine if the soybean aphid poses any significant threat to Illinois soybean crops.

Visit the 2001 Soybean Aphid Watch at www.pmcenters.org/northcentral/saphid/aphidindex.htm
Alternative Crops Research Program at WIU

With the support of C-FAR funding, Western Illinois University (WIU) initiated a new research program that has the potential to substantially increase the income of Illinois producers. The Alternative Crops Research Program, established in August 2000, focuses on developing new crops for the Midwest and helping revitalize local economies. The goal of the program is to identify alternative crops that can fit into the corn and soybean rotations already in place and will assist with pest problems and increase crop diversity.

Winthrop Phippen, an assistant professor specializing in breeding and genetics of alternative crops, is leading the efforts to examine the potential of three alternative cash crops: Cuphea, milkweed, and niger seed. Phippen is the first WIU Department of Agriculture faculty member who was hired primarily to conduct research rather than to teach.

In cooperation with the United States Department of Agriculture Laboratory in Peoria, Phippen and his research associates have begun groundbreaking research focused on commercializing the production of Cuphea, a wild undomesticated plant. Cuphea contains lauric acid, the primary ingredient in cosmetics, soaps, and detergents. Currently, coconut and palm kernel oils that are imported into the United States are the main sources of lauric acid. In an average year, 500,000 tons of these oils are imported, costing about $300 million. “Cuphea has tremendous potential because the market already exists,” said Phippen.

The cash crop potential of common milkweed, traditionally considered a nuisance weed by farmers throughout the Midwest, is also being examined. Researchers are attempting to domesticate and harvest the plant for its silk, medicinal properties, and pest-control abilities. The hypoallergenic nature and high thermal rating of milkweed floss make it a superior fill product for pillows and comforters. Other parts of the plant also have potential for use in latex production, nematicide applications, and the cosmetics industry.

Niger, an oilseed crop that is primarily grown in Ethiopia and India, is also under investigation as a new crop alternative in the Midwest. Niger is most commonly known as a high-dollar birdseed for use in finch and other bird feeders.

“While the domestication and commercialization of these potential alternative crops is a long-term process, I am confident that we will create crops that will help Illinois growers and the state,” said Phippen.

Farm.doc Website Enhancement

Producers can find even more extensive farm management support through the updated and improved farm.doc website (www.farmdoc.uiuc.edu). The site provides substantial new information and has been redesigned to enhance its user-friendliness.
calendar
2001–2002

August 21  Semi-annual Meeting (Renaissance Springfield Hotel – Springfield)
September 4 Board of Directors Meeting
November 6 Board of Directors Meeting
January 15 All Working Group Meeting (Holiday Inn – Traders Circle – Normal)
January 17 Board of Directors Meeting
February 13–14 Membership Retreat and Annual Meeting (Eagle Creek Resort and
Conference Center – Findlay)
February 26 Board of Directors Meeting
March 7 Expanding Agricultural Markets Working Group Meeting
March 8 Rural Economic Development Working Group Meeting
March 11 Agricultural Production Systems Working Group Meeting
March 12 Human Nutrition and Food Safety Working Group Meeting
March 13 Natural Resources Working Group Meeting
July 9 Board of Directors Meeting

March WG meetings (to review External Proposals) will be held
at the Hawthorne Suites Hotel, Champaign.

Several additional activities will be scheduled at a later time.
Please call the C-FAR office or check the calendar on the
C-FAR website at www.ilcfar.org for further details.