

EXTENSION PROGRAM

The Kansas State University Cooperative Extension Service extends to all citizens research-based information that helps them improve their standard of living and quality of life. Its job is two-fold. The first is to extend current, science-based information from the university through educational programming on subjects of agriculture, natural resources, family and consumer sciences, 4-H youth development, community development, and energy to the people of Kansas. The second is to bring back to the university problems that can be solved by careful study and research within these program areas. The extension service is a partnership of the United States Department of Agriculture, the land-grant university system, Kansas State University, and the local, elected extension council or governing body representing local citizens. Much of its effectiveness can be credited to the part played by Kansas in planning extension educational programs, making it a true local, state, and federal partnership.

In 1969, the **Southwest Area Extension Office** was established with **Ray Mann** as the director (1969-1991). This was the first area extension office established off-campus to provide administrative and subject matter support to county extension faculty and citizens on a regional basis. This integrated network of local, regional, and campus-based faculty and expertise is important to the quality and relevance of applied research and timely information delivery. Initially, area extension faculty and farm management fieldmen were housed at the experiment station, but in 1972 they moved to 1501 Fulton Terrace in Garden City for improved office space. Upon Mann's retirement in 1991, **Paul Hartman** became the area extension director and continues in that position.

In June 1996, the Southwest Area Extension Office moved from Fulton Terrace to the Forrest Park Building at 2510 John Street, but the Farm Management office remained at the Fulton Terrace location. Then in 2000 the area extension office moved back to the experiment station, now called the Southwest Research-Extension Center (SWREC), when the new office building was completed. In 2006, the Farm Management Association established a satellite office at the SWREC. The Southwest Farm Management Association main office is now located in Dodge City.

The purpose of the Southwest Area Extension Office is to provide leadership and assistance in planning, conducting, and coordinating educational programs for southwestern Kansas in cooperation with other area and state extension specialists and research faculty. The specialists assist county extension faculty in the area with educational programs and serve as resource and support personnel to address local needs and issues. Also, specialists serve as liaisons with state and federal agencies, agri-business, commodity organizations, consulting groups, and local farmers. Area extension specialists convey the concerns of western Kansas agricultural producers, homeowners, family and youth to personnel at SWREC and appropriate departments at K-State that cooperate on various research and educational projects.



Rita Dome, Office Professional



Eva Rosas, Office Professional

The counties included in the southwest area have fluctuated over the years. When the university established area extension offices in 1969, the state was divided into five areas, with 22 counties in the southwest area. Currently there are four administrative extension areas in Kansas and there are 24 counties under the administrative leadership of the southwest area extension director and 26 counties being served by the area's extension specialists.

The following is a listing of the area extension faculty and office professionals, with examples of educational programming and activities in the area.

SOUTHWEST AREA EXTENSION DIRECTOR

Extension Directors: Ray H. Mann (1969-91), Paul D. Hartman (1991-present)

The extension director is administratively responsible to the dean of agriculture and director of extension. The role is to provide administrative leadership in the area. Major responsibilities include:

- Providing administrative leadership, direction, and support in matters pertaining to personnel hiring, supervision, and evaluation of faculty
- Cooperating with county commissioners and 24 county extension executive boards
- Budget formulation, negotiation, and management under Kansas Extension Council and extension district law
- Educational program planning, delivery, and evaluation
- County extension council and executive board organization and maintenance
- Supporting professional development activities of faculty and support staff;
- Administration of area office budget, area and county faculty and staff
- Serves as a liaison between the county, area, and state extension operations
- Public relations with county commissioners, legislators, and other civic and community leaders

Ramona Hinde, Office Professional

SW Area Extension Directors Paul Hartman and Ray Mann



EXTENSION PROJECTS

4-H YOUTH DEVELOPMENT

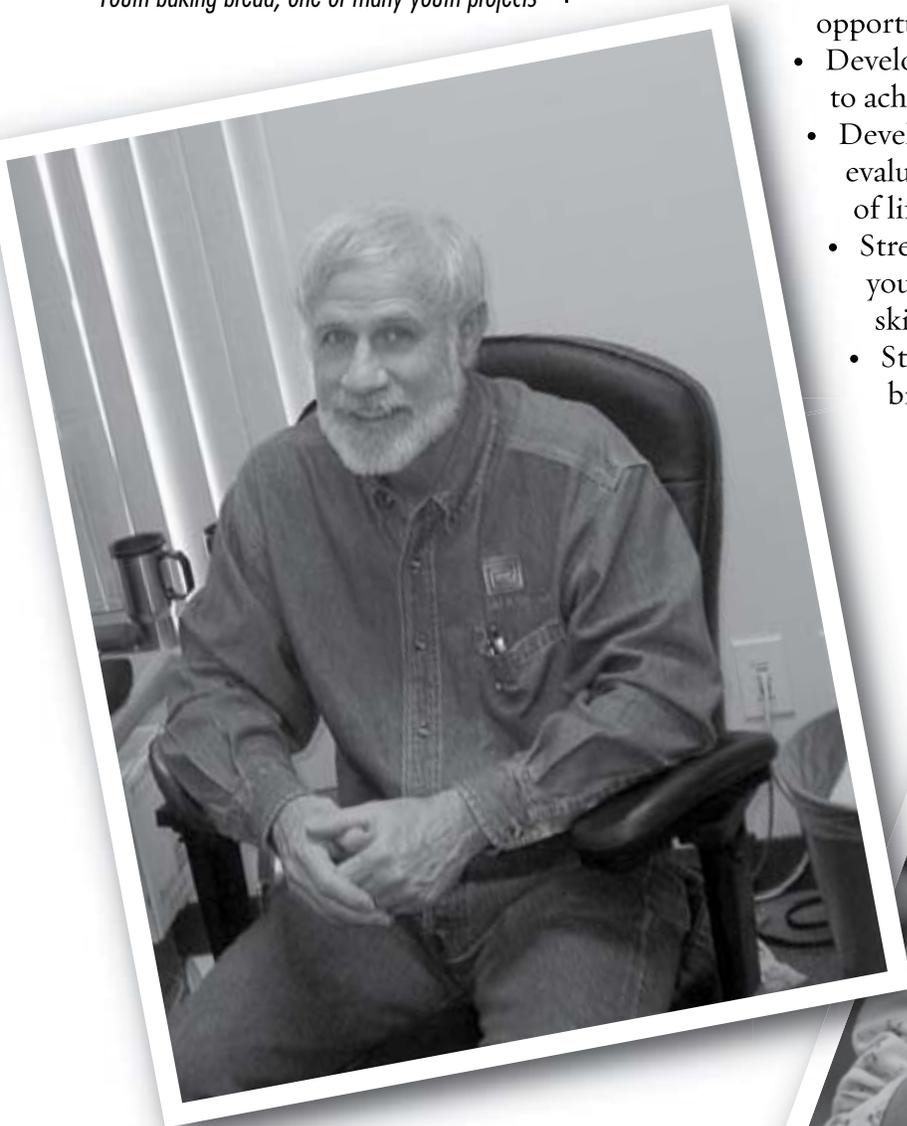
Extension Specialist, 4-H Youth Development: Loren E. Whipps (1972-76), Fredrick R. Rohs (1976-1982), Christy Ladd (1982-1984), Errol Burns (1984-1988), Conall E. Addison (1995-2003), Rodney Buchele (2003-present).

Responsibilities:

- Develop, strengthen, and support youth development competencies of extension professionals
- Develop, strengthen, and support youth development competencies of adult and youth volunteers
- Strengthen the relationship between research and practice using the curriculum resources of land-grant and other research-based systems
- Provide imaginative, motivational, and experiential learning experiences to help youth build competencies and master life skills
- Practice an ethic of access, inclusion, and opportunity for all youth
- Develop strategic collaboration and partnerships to achieve the 4-H mission
- Develop training and methods for program evaluation of elements of delivery and mastery of life skills
- Strengthen internal communication of 4-H youth development principles as related to life skills development
- Strengthen external promotion of the 4-H brand name to all audiences

Rod Buchele, 4-H Youth Development Specialist

Youth baking bread, one of many youth projects



CROPS AND SOILS

Extension Specialist, Crops and Soils: Dale H. Edelblute (1955-80), James A. Schaffer (1980-83), Edward G. Gatliff (1983-84), Dwight G. Mosier (1986-91), Curtis R. Thompson (1993-present)

Extension agronomist Dale Edelblute utilized county agricultural agents and county extension meetings to bring crop production research results to producers in southwestern Kansas. After his 25 years of service, Edelblute's legacy of excellent extension education remains today in the farming community. He was instrumental in development of and producer education for the county soil survey books. The area agronomist position evolved around county programming, including applied field research, agronomy field demonstrations, and county meetings. Previous agronomists James Schaffer, Ed Gatliff, and Dwight Mosier, as well as current agronomist Curtis Thompson, have continued cooperating with county agricultural agents, research faculty, and other area faculty to extend production knowledge to growers in the area and beyond. Additional responsibilities have evolved over the years, with involvement in statewide agronomic training, the agronomy department, extension publication writing, and active participation in regional and national professional societies as well as other professional agronomic groups.

AGRICULTURAL ECONOMICS

Extension Specialist, Agricultural Economics: Loren Whipps (1969-transferred to 4-H in 1972), T. Roy Bogle (1973-transferred to the Agricultural Economics Department in 1975), Randall B. Baden (1976-78), Mark A. Krause (1983-86), Kevin C. Dhuyvetter (1986-89, reappointed 1990, transferred to the Northeast Area Office in 1994), James D. Sartwelle, III (1995-97), Troy J. Dumler (1998-present)

The extension agricultural economist is responsible for directing extension economics education programs in southwestern Kansas in cooperation with county agents and state/area specialists in the Department of Agricultural Economics. Specifically, the economist conducts research to deliver educational programs on the profitability and risk associated with crop and livestock production systems in western Kansas. Recent research has primarily focused on cropping systems – both irrigated and non-irrigated. That work includes selection of crop rotations and tillage systems, and economically optimal uses of yield-increasing crop inputs such as fertilizers and irrigation water. The economist works on determination of equitable cropland rental arrangements, management of machinery costs, and analysis of agricultural policy alternatives. Additional responsibilities of the area economist include conducting applied research in conjunction with specialists and research faculty of related disciplines when it supports the area economics education programs. The applied research conducted individually and in cooperation with other disciplines is then disseminated to Kansas agricultural clientele and interested parties worldwide through public meetings, publications, media releases, newsletters, individual consultation, and electronic sources.



Dwight Mosier (right), Agronomy Specialist

Curt Thompson, Agronomy Specialist

Jim Schaffer, Agronomy Specialist



LIVESTOCK PRODUCTION

Extension Specialist, Livestock Production: Eugene N. Francis (1969-1980), Scott B. Laudert (1981-88), Kelly K. Kreikemeier (1989-90), Thomas P. Eck (1992-94), Twig T. Marston (1995-1997), G. Lance Huck (1998-2000), Ron Hale (2001-present)

The primary focus of the animal science program is to provide support to livestock producers. That includes leadership in planning, coordinating, and conducting educational programs in animal science for 26 southwestern Kansas counties, including meetings, tours, and field visits. Field and classroom training is provided to agricultural extension agents to enhance their animal production knowledge. The specialist assists agents in planning and developing animal science programs in the counties and serves as a resource for agents faced with challenging questions from producers and the public. The specialist works with other extension specialists and research faculty in animal science, agronomy, agricultural economics, veterinary medicine, and grain science to provide experience-based information and cutting-edge research in addressing the needs of the livestock industry. Major educational programs have included but are not limited to:

- Livestock nutrition requirements
- Feeding and feeding management
- Weaning and receiving management
- Beef quality assurance
- Proper user of commercial livestock products
- Biosecurity
- Nutritionally related health problems
- Irrigated forages and crop residues
- Animal identification



The livestock extension specialist is a member of the Beef Empire Days board of directors and assists with overall annual event planning. Eugene Francis, former area livestock specialist (1969-1980), and Al Maddox, former Finney County agent (1965-1971), provided leadership and organized Beef Empire Days, the beef industry's celebration event for southwestern Kansas. In recent years, this specialist served as the co-chairman of the Live and Carcass Show and was involved with all aspects of planning and managing the show, including data collection, analysis of carcass rankings, and the carcass show. Other events this position works with are the Feedlot Special, the Most Profitable Animal, the B.E.S.T. Steer Trial Contests, and the Grandstand Judging Contest. The position is responsible for data collection, analysis and awards. Involvement with Beef Empire Days allows this specialist to build working relationships with a number of feedyard management personnel.

Kevin Dhuyvetter, Agricultural Economics Specialist

Troy Dumler, Agricultural Economics Specialist

Ron Hale, Livestock Production Specialist

CROPPING SYSTEMS

Extension Specialist, Cropping Systems: John D. Holman (2006-present)

The nature and purpose of the position responsibilities are to plan, implement, and direct a research (70%) and extension (30%) program in cropping systems focused on traditional and nontraditional crop production systems for southwestern Kansas, a semi-arid climate that encompasses full-to-limited irrigation and strictly rain-fed operations. Creating more profit potential for water-limited cropping systems is a high priority. Emphasis will be on developing a mechanistic understanding of physiological relationships for predicting crop response to environment and cultural practices. Cropping systems research will be conducted with a team of scientists at SWREC and other Kansas State University units. Other responsibilities include providing leadership for cropping systems research and collaboration in related areas; publication of results in the peer-reviewed literature in a timely manner; partnering with colleagues on joint publications; and pursuit of extramural funds.

ENTOMOLOGY

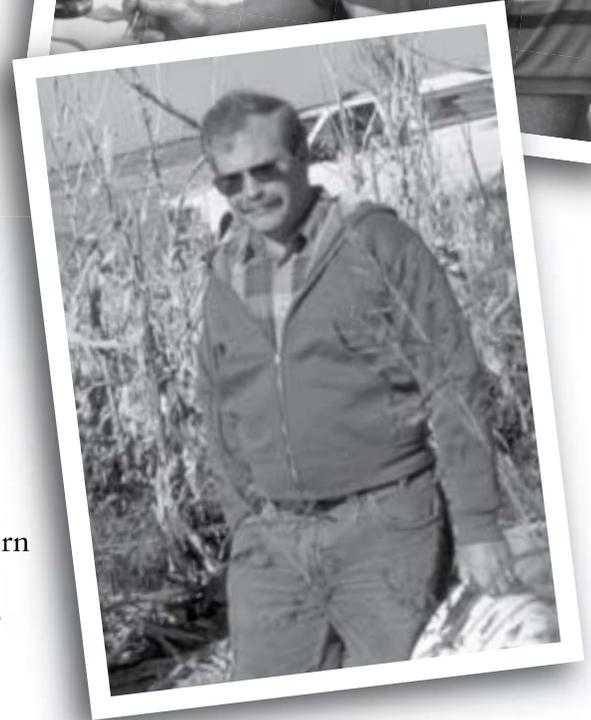
Extension Specialist, Entomology: Donald E. Mock (1973-1980) and **Phillip E. Sloderbeck** (1981-present),

In 1973, Don Mock, was appointed area extension specialist at the Southwest Area Extension Office. He developed a grain sorghum **field scouting program** in three southwest Kansas counties. This was part of a USDA/Kansas Pest Management Project. This project quickly expanded to include corn and soybeans. The program was considered a success, and many of the early field scouts in that program set up private consulting businesses by 1976, including Servi-Tech and Scientific Crop Services.

During the early 1980s, Steve Welch and Fred Poston of the entomology department in Manhattan developed a calculator model to predict when the southwestern corn borer would begin laying eggs. Phil Sloderbeck, area extension entomologist, used the model to assist growers in timing their scouting for corn borer egg masses. In the summer of 1982, an extension program was established to train farmers and consultants how to use the model. That year, 28 predictions were made based on larval samples taken by cooperators and personnel from the State Board of Agriculture and K-State. This led to the publication of the Southwest Kansas Entomology Update Newsletter that was mailed to county agents, aerial applicators, crop consultants, and other agricultural industry representatives for the next 20 years. The development of these models continued into the 1990s with addition of the European corn borer model. Eventually, the addition of computerized economic decision models that calculated economic thresholds based on crop potential as well as treatment costs were developed.

Phil Sloderbeck, Entomology Specialist

Phil Sloderbeck collecting corn borer data in corn plots.

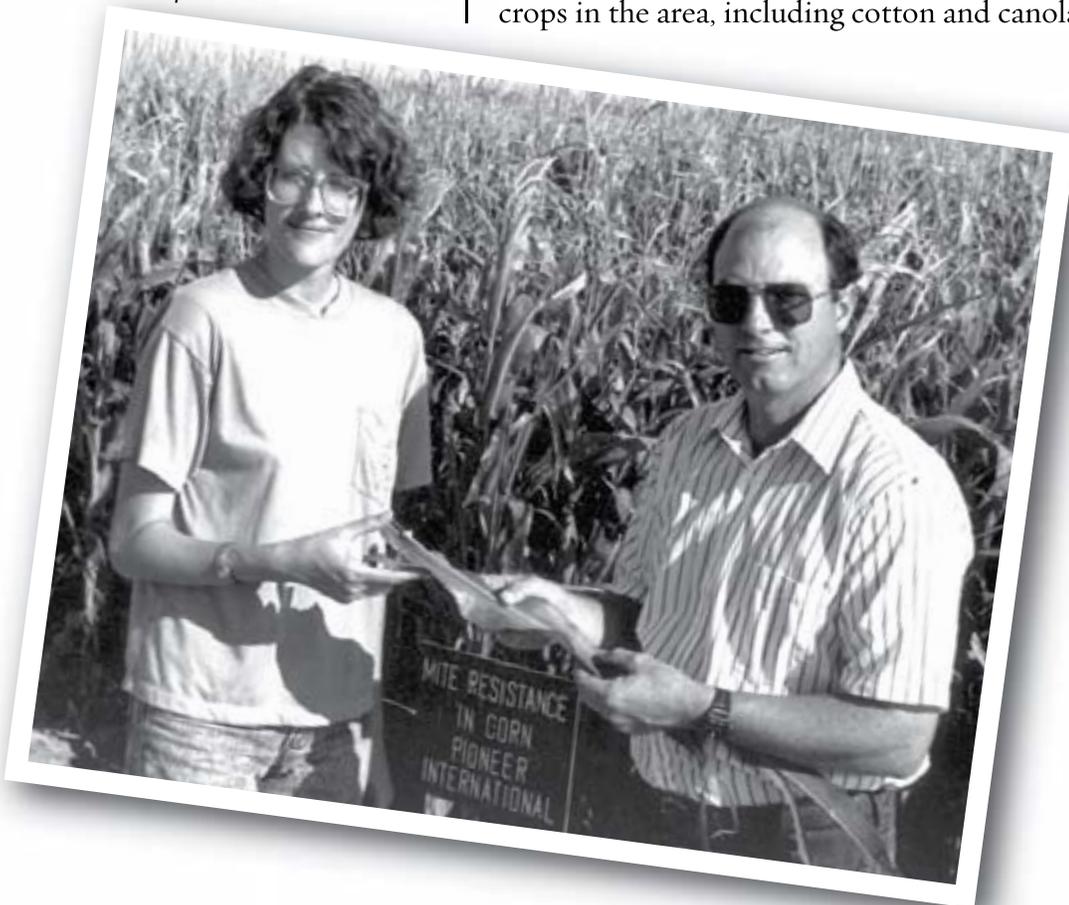


In the late 1980s, there were reports that greenbugs in sorghum could not be controlled with chlorpyrifos (Lorsban) and parathion. Sloderbeck and cooperators were the first to document that these greenbugs were resistant to these organophosphate insecticides and that this resistance was based on elevated esterase levels. They developed a gel-electrophoresis technique to test for resistance. For several years, greenbug surveys were conducted to follow pesticide-resistant greenbug populations and help producers choose appropriate treatment options.

In March 1986, the **Russian wheat aphid** was first detected on wheat in Texas. An official announcement was made on April 1. News of this new insect pest was the topic of a radio interview for KBUF in Garden City on April 3. Within hours, a call was received from a Colorado county agent who was seeing damage similar to that described in the radio interview. Samples of those aphids were collected on April 4, and by April 5, the Russian wheat aphid was found in Stanton County. During April and May several newsletter articles were sent to county agents, crop consultants, and aerial applicators in the area describing the potential problem, updating them on the spread of the aphids and treatment options. This quick response undoubtedly helped many producers manage this new pest. Fortunately, this insect has not become the pest problem in western Kansas that was initially feared. It continues to be a problem in eastern Colorado and is an occasional pest in the western tier of Kansas counties along the Colorado state line.

From the 1990s through the present, extension entomology efforts focused on providing information on advancements in the Bt corn technology and on providing insect management information for new crops in the area, including cotton and canola.

Lisa Wildman and Gary Dick (below) worked with Larry Buschman and Phil Sloderbeck on spider mite resistance in corn.



FAMILY AND CONSUMER SCIENCES

Extension Specialist, Family and Consumer Sciences: Dorothy Neufeld (1969-1982), Carol H. Young (1982-2003), Debra J. Bolton (2005-present)

The purpose of this position is to:

Provide visionary leadership to county extension agents, extension boards, local program development committees, and community leaders in analyzing situations, identifying needs, obtaining extramural funding, and in developing educational programs for children, youth, adults, families, and communities

- Provide leadership in expanding long-term, outcome-based extension programming in family and consumer sciences (FCS) in general, and in a specific area of family studies, community development, and human nutrition
- Establish and/or maintain collaborative relationships with other area organizations and groups to help further the K-State Research and Extension mission
- Act as liaison between the extension agents and extension specialists with FCS responsibilities to promote effective and efficient interaction
- Provide training opportunities for extension agents, including:
 - » Evaluation of local FCS program effectiveness
 - » Leadership development
 - » New agent orientation and training
 - » Developing collaborations including resource development
 - » Supporting extension agents in developing and carrying out personal professional improvement plans; and
 - » Proactively ensure that potential clientele have equal access to programs without regard to race, color, religion, sex, national origin, age or disability
- Actively participate in personal professional development growth opportunities
- Foster diversity and teamwork

Carol Young was one of the architects of the Five-State Multicultural Conference held in Garden City. The conference was important for the region because it trained professionals from education, social services, health providers, and community leaders on diversity awareness, multicultural competence, family advocacy, and leadership. For 13 years, the conference attracted various human resource professionals from Nebraska, Colorado, Iowa, Missouri, and Kansas. Debra Bolton continues the work in diversity for the area, having been one of the founders of the Coalition of Hispanic Organizations and Professionals and serving on various civic committees and nonprofit boards in the area.



Debra Bolton, Family and Consumer Sciences Specialist

Carol Young, Family and Consumer Sciences Specialist

FARM MANAGEMENT

Extension Specialist, Farm Management Fieldmen: John Smerchek (1969-1970), Danny Trayer (1969-1974), Jon Herod (1969-1994), Ralph N. Germann (1969-1993), Milt McMinimy (1970-1973; re-appointed 1979-1982), Parman Green (1974-1977), Harry Lobmeyer (1977-1983), Bob Lisec (1981-1989), Don Gronau (1980-1992), Jon R. Janssen (1973-1981), Jim Sturdevant (1983-1991), Douglas Eck (1990-1992), Douglas D. Stucky (1992-present), Anthony Tarrant (1992-1995), Leslie Krehbiel (1995-1997), James Dawson (1992-2005), Roy Aycock (1994-1997), Dave Rogers (1997-2000), Gary Snyder (1998-present)

The Kansas Farm Management Association (KFMA) is a cooperative program between K-State Research and Extension and six local farm management associations. A team of dedicated farm management economists throughout the state consult with members during on-farm visits.

The KFMA program provides each member with financial and economic information that can be used to improve farm business organization, farm business decisions, and farm profitability. KFMA economists are supported by a team of economists and staff in the Department of Agricultural Economics at Kansas State University to provide leading-edge information and analysis.

Mahbub Alam evaluating corn yield under different irrigation treatments.



IRRIGATION AND WATER MANAGEMENT

Extension Specialist, Irrigation and Water Management at the Southwest Area Extension Office: David Pope (1973-1976), James G. Thomas (1976-83), Mahbub Alam (1996-present).

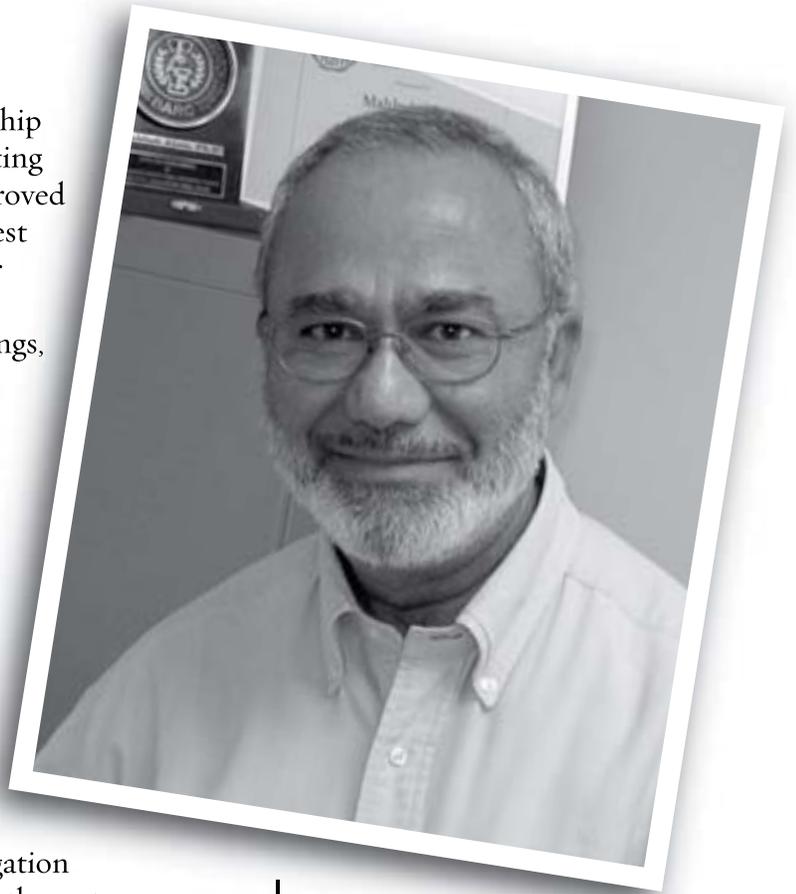
The position of extension specialist, irrigation and water management was held by Pope and Thomas for 10 years, from 1973-1983. When James G. Thomas left in 1983, the position fell vacant and remained so for 13 years. In 1993, the Irrigation/Water Management Committee was formed with the charge of developing a statewide research and extension irrigation and water management plan for Kansas. The committee strongly recommended filling the position of extension specialist, irrigation and water management for the southwest area. Alam was recruited from Colorado State University in 1996.

Alam developed an educational program to improve irrigation and water management according to the guidelines of the committee. He provided the leadership and assistance in planning, coordinating, and conducting educational programs in irrigation management; improved water management technology; demonstrated the latest irrigation methods, waste water utilization, and water quality in cooperation with state and area extension specialists. The educational programs included meetings, demonstrations, tours, consultations, and field visits. Irrigation updates for classroom trainings and field demonstrations for practical know-how are provided for the benefit of enhancing the knowledge of county agents, crop consultants, the irrigation industry, and others.

Irrigation scheduling and water management demonstrations initially were set up in 12 counties with the help of Kansas Corn Commission funding support. Data collected from these fields provided support to research-based recommendations and hands-on training. Computer spreadsheets were developed to track soil water balance by entering irrigation and rainfall events. These spreadsheets eventually led the water management team to develop an independently operable computer software program, KanSched, for irrigation scheduling. This is a user-friendly program capable of developing visual charts to guide the producer. In 2002, Alam was asked to expand his program to include the northwest area of Kansas.

The educational program was further enhanced with the development of the Mobile Irrigation Lab (MIL) with partial funding support from the Kansas Water Authority through the Kansas Water Office, Kansas Corn Commission, and the Ogallala Aquifer Program of the USDA. The MIL program also supports center pivot testing and analysis and in turn helps producers minimize waste of water and improve system efficiency. Kent Shaw was appointed in 2005 as MIL coordinator and provides additional support to this program.

Demonstration on the use of subsurface drip irrigation (SDI) was initiated when K-State research found the technology viable for field crops in western Kansas. SDI may help conserve water. The research findings of both the Northwest Research-Extension Center in Colby and the Southwest Research-Extension Center at Holcomb provided research-based information in implementing the technology. At present, SDI has been installed in about 20,000 acres in Kansas. This technology was also tested to see if animal wastewater from feedlot lagoons could be applied below the soil surface to avoid environmental concerns. This application was found to be suitable with proper design, operation, and maintenance. Demonstrations were also conducted to use hog wastewater through sprinkler irrigation system.



Mahbub Alam, Irrigation and Water Management Specialist



Mahbub Alam explaining sprinkler characteristics during a field demonstration program.

Activities of the extension specialist, irrigation and water management may be summarized as:

- Assist county agents with planning and developing irrigation demonstrations, applied field research, and system evaluation for efficiency in their counties and serve as a resource person for the agent when faced with challenging questions or concerns from producers, industry, or the public
- Help to implement the K-State Mobile Irrigation Lab program and planning of field activities that provide irrigation scheduling training to county agents, farmers, farm consultants, and agency staff engaged in farm programs
- Conduct tests to evaluate center-pivot sprinkler irrigation systems for water distribution uniformity, fuel efficiency, and other factors for profitable irrigated cropping systems. Perform field testing of the computer software KanSched and provides feedback for further improvements.
- Conduct applied research in cooperation with county agents and state and area extension specialists. The results are used to support recommendations and provide additional hands-on credibility to the educational programs.
- Serve as a liaison between research and extension faculty to provide timely and relevant information to the public.
- Maintain Web site for relevant information and dissemination of evapotranspiration (ET) information for irrigation scheduling and conservation of water.
- Develop written materials for the publication of water management extension bulletins, news releases, and journal articles.

WATER QUALITY

Extension Specialist, Upper Arkansas Watershed: Robert Frisbie
(2000-present)

K-State Research and Extension watershed specialists provide leadership in the development and implementation of science-based information and educational programs that reflect local conditions and input. They guide activities aimed at reducing non-point source pollution and improving water quality in high-priority watersheds. The overall goal of this program is abatement of non-point sources of fecal coliform contamination and improved water quality through adoption of best management practices by farmers, homeowners, and other landowners in targeted watersheds in Kansas.

General responsibilities are to:

- Develop professional leadership based on technical competence within the multicounty area.
- Work with landowners and farmers within the watershed, industry representatives, and agency collaborators to develop action plans that serve the industry and their communities, improve production and profitability, and contribute to environmentally sound operations to maintain and improve the watershed (networking).
- Develop educational programs based on local watershed priorities and coordinate watershed extension programming with and through extension agricultural agents and respective industry and agency representative. Coordinate efforts with members of the watershed team (or other watershed multicounty specialists and K-State Research and Extension faculty) and agents representing other areas of expertise in assigned multicounty area.
- Be actively involved in multicounty/state networking involving K-State faculty/staff and all public and private interests in watershed management. Assess clientele/industry needs for new technology and research. Work as a member of the watershed team to develop and implement statewide program efforts coordinated through the watershed extension programming team.
- Identify and cooperate with relevant organizations, agencies, and institutions that deliver educational information pertinent to watershed management.
- Maintain a flow of current research-based information to the local farm and community interests with the watershed.
- Facilitate applied research and on-farm demonstrations pertinent to management for improving water quality in cooperation with K-State researchers and extension specialists utilizing available resources.
- Work with extension specialists and agents to develop and implement project proposals in high-priority areas to help bridge any gaps between research and implementations



Bob Frisbie, Water Quality Specialist

Kent Shaw and Coulter (Bucky) Heinz testing a producer center pivot sprinkler system as part of the Mobile Irrigation Lab Project.

DISCONTINUED EXTENSION PROJECTS

COMMUNITY DEVELOPMENT

Extension Specialist, Community Development at the Southwest Area

Extension Office: Larry D. Hendrix (1974-1986), Duane Williams (1986-1988), Kirk A. Zoellner (1989-1992)

ENVIRONMENTAL QUALITY

Extension Specialist, Environmental Quality: Thomas Willson (2000-2006)

FORESTRY

Extension Specialist, Forestry: Melvin J. Baughman (1971- 1975), Raymond G. Aslin (1975- 1978), Dale A. Starkey (1978), Jon P. Skinner (1994-1996).

HORTICULTURE

Extension Specialist, Horticulture: Milan T. Jones (1969-1973).

PLANT PATHOLOGY

Extension Specialist, Plant Pathology: Venance H. Lengkeek (1978-1981)

WILDLIFE DAMAGE CONTROL

Extension Specialist, Wildlife Damage Control: Edward K. Boggess (1975-1982),

Mahbub Alam and Danny Rogers (Department of Agricultural and Biological Engineering) conducting field evaluation of Eldon Schmidt's subsurface drip irrigation system.

