

MINUTES OF THE Senate COMMITTEE ON Agriculture

The meeting was called to order by Senator Allen at  
Chairperson

10:11 a.m./~~p.m.~~ on January 20, 1988 in room 423-S of the Capitol.

All members were present ~~except~~

Committee staff present: Raney Gilliland, Legislative Research Department  
Jill Wolters, Revisor of Statutes Department

Conferees appearing before the committee: Dr. Walter Woods, Dean of Agriculture, KSU

Senator Allen called the committee to order and welcomed members and guests present. The Chairman called for action on the minutes of the first committee meeting. Senator Doyen made a motion the minutes be approved; Senator Montgomery seconded the motion; motion carried. The Chairman welcomed and called on Dean Woods to discuss the extension evaluation and the "Agriculture 2000" report.

Dean Woods gave copies to the Committee of "Agriculture 2000" (attachment 1) and "A review of the Cooperative Extension Service Mission Direction at Kansas State University" (attachment 2). Dean Woods explained how the booklet information was compiled by obtaining information from citizens of Kansas. The Dean explained the reductions planned in the extension service in order to remain within budget limitations.

During questions by the senators, the Dean agreed that the number one priority, if funds were restored, would be that extension agents would not be reduced. Dean Woods agreed that he would work up information for the committee explaining needs of the extension stations including financial statements and with a list, by priority, that would help the legislature make good decisions for helping the extension service.

Senator Allen thanked Dean Woods and adjourned the committee at 10:59 a.m.





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COPY

# AGRICULTURE 2000

THE KANSAS PLAN



F. Anderson

attachment 1  
1-20-88



To: The Citizens of Kansas and Friends of Agriculture

Dear Friends,

Early this spring, I asked a select group of citizens, the Agriculture 2000 Committee, to prepare a blueprint of citizen expectations for the Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service through the next decade.

In response, the Agriculture 2000 Committee prepared recommendations. The citizens of the committee felt these recommendations would best serve the state, strengthen economic performance, assure environmental quality, preserve the resource base, and provide for the general well being of the people.

To obtain an even broader opinion base, citizens across the state were invited to review the Draft Recommendations and make suggestions at five Public Response Meetings at Manhattan, Iola, Garden City, Hoxie, and Hutchinson.

We are greatly indebted to members of the Agriculture 2000 Committee for making **Agriculture 2000, The Kansas Plan** such a comprehensive, broadly based statement of the discovery and outreach capability expected from the Agricultural Experiment Station and the Cooperative Extension Service.

In the coming decade, we will use the Agriculture 2000 recommendations to strengthen programs central to the future of Kansas, including agriculture, natural resources, human capital, and economic development.

All Kansans are invited to review these recommendations and respond with suggestions that will best serve the state and strengthen economic performance.

Sincerely,



Walter R. Woods  
Dean and Director

# AGRICULTURE 2000 COMMITTEE MEMBERS

Roy Applequist, Assaria  
Paul Best, Hoxie  
William Beezley, Girard  
Patricia Clark, Havana  
Gerald Clary, Syracuse

Ross McCausland, Wichita  
Bob McClellan, Palco  
Jack McKee, Clay Center  
Jeanne Mertz, Manhattan  
Steve Morris, Hugoton

Edie Dahlsten, Lindsborg  
Howard DeLange, Girard  
Fred Germann, Dwight  
Francis Gwin, Beloit  
Mark Hamm, Pratt

Wilburn Nelson, Manhattan  
Carrol Niles, Lyndon  
Pauline Nunemaker, Lawrence  
Rodney Oliphant, Offerle  
Rolland Parr, Rossville

Charles Hamon, Valley Falls  
Bernie Hansen, Manhattan  
Gerald Lasater, Atchison  
Wilbur Levering, Topeka  
Robert Lewis, Larned

Terry Schoenthaler, Ellis  
Gaylord Shields, Oberlin  
Alan States, Logan  
Ralph Walker, Sharon Springs  
George Wilson, Syracuse

## **SUBCOMMITTEES**

### **CROPS, HORTICULTURE, AND FORESTRY**

Steve Morris, Chairman, Ross McCausland, Charles Hamon, and Paul Best

### **NATURAL RESOURCES AND ENVIRONMENTAL QUALITY**

Alan States, Chairman, Bob McClellan, Mark Hamm, Ralph Walker, and George Wilson

### **BUSINESS AND FINANCIAL MANAGEMENT**

Francis Gwin, Chairman, Jack McKee, Wilburn Nelson, and Roy Applequist

### **ANIMAL AGRICULTURE AND GRAZING LANDS**

Fred Germann, Chairman, Gerald Clary, Patricia Clark, and Rodney Oliphant

### **HUMAN CAPITAL AND FAMILY NEEDS**

Jeanne Mertz, Chairman, Terry Schoenthaler, Rolland Parr, and Pauline Nunemaker

### **MARKETING, PROCESSING, AND UTILIZATION**

Bernie Hansen, Chairman, Howard DeLange, Gerald Lasater, Robert Lewis, and Carrol Niles

### **RURAL AND COMMUNITY REVITALIZATION**

Wilbur Levering, Chairman, William Beezley, Edie Dahlsten, Gaylord Shields

### **KSU COORDINATOR**

Hyde Jacobs

### **KSU FACILITATORS**

Charles W. Deyoe, William M. Eberle, Kurt C. Feltner, Don L. Good, George E. Ham, Marc A. Johnson, and John B. Riley

# AGRICULTURE 2000

## THE KANSAS PLAN

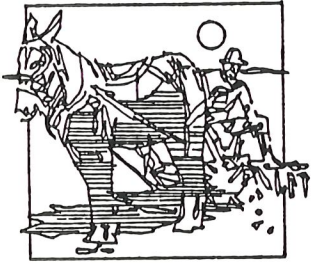


Photo by John Bock

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# HISTORICAL AND FUTURE PERSPECTIVES

## AGRICULTURE

Agriculture is the largest basic industry in Kansas, including 72,000 farms and dynamic supply, production, marketing, and processing industries. The value of farm production totals nearly \$6 billion annually, divided about equally between crops and livestock. The economic future of Kansas depends on the productivity of the state's human and natural resources.

## KANSAS STATE UNIVERSITY

The state's land-grant university began in 1863, adding the Kansas Agricultural Experiment Station in 1887, and the Kansas Cooperative Extension Service in 1914, making its threefold mission teaching, research, and extension. The benefits to agriculture have been many, including new crop varieties, leaner and meatier beef and pork, improved soil productivity, more effective pest and weed control, and numerous other farm, community, and agribusiness benefits.

## AGRICULTURAL RESOURCES

The true agricultural wealth of Kansas is its soil, water, and rangeland resources, which form the base for production agriculture. But these valuable natural resources are finite and cannot continue to be degraded. Kansas has 25 million acres of prime farmland and 3.5 million acres of irrigated land. However, 10.5 million acres of cropland are highly erodible, and groundwater tables in many areas are declining. Improved resource conservation systems are essential to long-term productivity.

Agriculture is about a \$6 billion industry in Kansas, and the main areas of crops and livestock together offer Kansas its greatest opportunity for economic development. The state will likely continue to increase investments in livestock, resulting in greater demand for grain, range, and forage crops. Grain, range, and forage crops serve the important livestock industry, which, in turn

utilizes crop residues, grain by-products, wheat pasture, and summer annuals. The livestock industry is a market for a large portion of the grain produced in the state.

In recent years, animal agriculture has totaled about 60 percent of the total cash receipts in Kansas. If forages, rangelands, and grain products marketed through the livestock industry are included, crops account for 60 percent of the gross agricultural product for the state, so both animals and crops are equally important.

The future is bright for animal agriculture. Kansas is a large state with extensive natural resources and a relatively low population, so it has the capability to expand animal numbers, confine animals in large units, build processing facilities, and dispose of waste products with less impact on society than almost anywhere else in the United States.

The Kansas economy will continue to rely on crops (field crops, horticulture, forestry, range, and forages) as its base. Growth in crop production is expected to rise one to three percent annually. Increased opportunities for advancements of Kansas crops include variety improvement, crop diversification, improved insect and disease control, biotechnology, and more effective water, plant nutrient, and pesticide use.

## THE UNIVERSITY ROLE

Kansas State University plays an important role in keeping Kansas farmers and agribusinesses competitive by conducting research, interpreting and extending research results, training students, and working with industries to improve the quality of life for all Kansans. State and federal funds will not be enough. The university will need to develop additional ties to industries to supplement funding. Lack of adequate facilities is limiting research and development efforts on crop production. Completion of the Plant Science Center is imperative to the future profitability of Kansas agriculture.



# CROPS

## PERSPECTIVES

Field crops are big business in Kansas, providing some \$3 billion in income. Kansas ranks first nationally in wheat production and in sorghum for grain and silage. Other important crops are hay, alfalfa, corn, and soybeans. Crops provide 41 percent of agriculture's cash receipts and 25 percent of the jobs in the state's food production system. Crop production supports many agribusinesses, including the important livestock, meat packing, flour milling, and other industries.

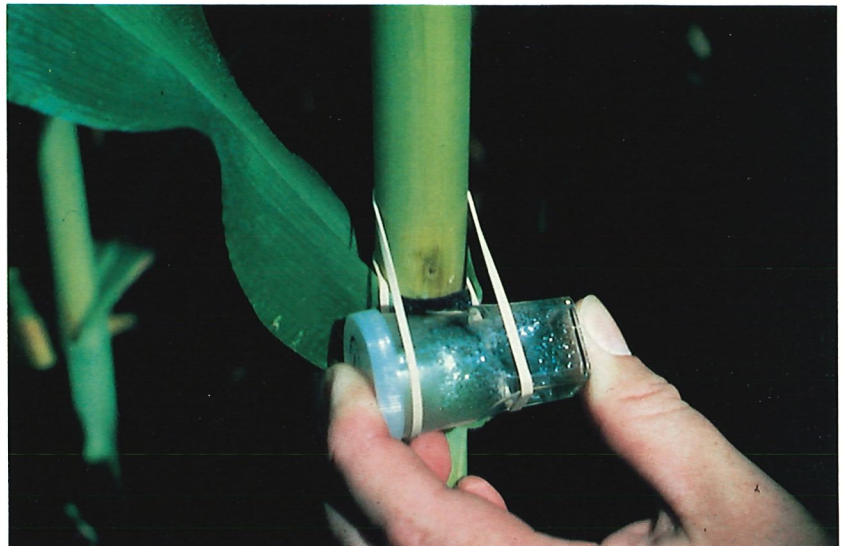
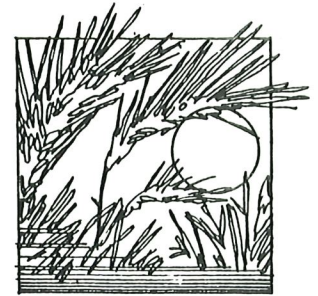
## PLANNING FOR GROWTH AND STABILITY

Opportunities exist to enhance Kansas crop agriculture in variety improvement, alternative crops, crop production, crop processing, the application of biotechnology to these areas, and in education, including classroom instruction and extension programs. New programs must build on present strengths of Kansas growers, researchers, and educators. Because crops are basic to Kansas agriculture, improvements will benefit all parts of the state's economy.



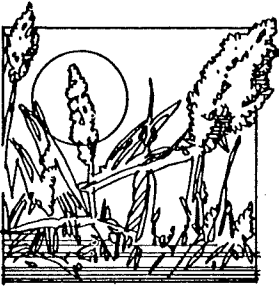
## OUTLOOK FOR BUSINESS AND PROFIT

Crop programs that increase yields, production efficiency, or prices have powerful multiplier effects. Substantial payoffs are possible through variety improvement; improved crop management; value-added processing of crop commodities; and the application of basic biotechnology research to crop improvement, production, and processing.



## RECOMMENDATIONS CROP PRODUCTION

1. Direct strong efforts in research and extension toward soil management and improving major Kansas crops. Research on wheat and sorghum along with other major Kansas crops should remain high priority.
2. Continue to test and publish crop variety performance results for wheat, grain sorghum, forage sorghum, corn, soybeans, alfalfa, and sunflowers.
3. Develop methods for farmers to more easily manage and make a profit. Promote value-added aspects of crop products.
4. Develop ways to increase the effectiveness of pesticides and plant nutrients in cropping systems.



## PLANT BREEDING

1. Give priority to white wheat development and marketing through research and education.
2. Intensify research on the nutritional value of grain sorghum as a livestock feed; strengthen plant breeding programs aimed at a steady and reliable source of improved pest-resistant and herbicide-resistant germ plasm.
3. Develop varieties with special qualities to serve new and existing markets and changing consumer preferences.
4. Increase the capability of the Wheat Genetics Resource Center to collect germ plasm and transfer genes.
5. Build a Sorghum Genetics Resource Center to collect, store, transfer, and maintain sorghum germ plasm.

## BIOTECHNOLOGY

Important advances in crops research and development are possible with biotechnology, a high-tech tool that can be used to create new crops plants as well as improve existing crops, thereby strengthening the competitive position of the state's crops industry. It is strongly recommended that biotechnology research be given high priority.

## ALTERNATE CROPS

1. Research and extension should be directed to alternate, industrial, and specialty crops that show economic potential under Kansas cropping and climatic conditions. Examples include pearl millet, dry beans, sunflowers, white wheat, and grass seed. Research with alternate crops should be designed to lessen farmer risk and to aid production and marketing practices. Such efforts should not diminish research and extension work on major crops.
2. The University and the State Board of Agriculture should cooperate in programs to develop markets for alternate crops.

## DRYLAND AGRICULTURE

1. Establish a Dryland Agriculture Research Center of Excellence to focus on profitable crop production.
2. Provide research-based recommendations for irrigation strategies using limited water and for making the transition from irrigated to dryland agriculture. Research and education efforts should be directed at complementary use of rain and irrigation water and at ameliorating the effects of salt accumulations and other irrigation-induced changes in the soil.
3. The value of green manure crops in protecting soil resources, in conservation cropping systems, and in government programs should be reevaluated.

## EDUCATION

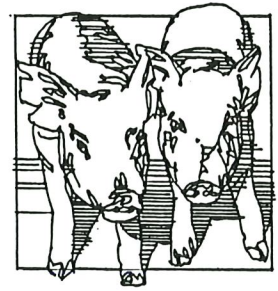
1. Kansas State University should maintain quality education programs for graduates and undergraduates in agriculture and related disciplines. Funds and facilities should be provided to retain and recruit quality faculty.
2. Extension should develop information delivery systems—including the use of video, audio, satellite, computer, and electronic delivery methods—that reduce the lag between the development and implementation of new practices.
3. In implementing new extension delivery systems, people should not be replaced with machines. The integrity of science-based recommendations must be retained.

## PLANT STRESS PHYSIOLOGY CENTER OF EXCELLENCE

A Plant Stress Physiology Center of Excellence should be established to develop plants resistant to environmental stress, particularly hot and cold temperatures, and to insects and diseases. Interdisciplinary research conducted in the center would support research programs in the departments of Horticulture, Entomology, Plant Pathology, Agronomy, and Agricultural Engineering.



# ANIMAL AGRICULTURE



## PERSPECTIVES

Animal agriculture in Kansas covers a wide range of domestic animals. Livestock and livestock products account for nearly 60 percent of cash receipts from farms and ranches in Kansas. Nearly one-third of the state's crop production and essentially all range and pasture production feed the animal agriculture industry. **Combined livestock and crops industries generate \$6 billion a year state income and together form the economic base of the state; therefore, animal agriculture is essential to the economic growth of Kansas.**

It requires first-rate research programs, effective extension programs, and quality classroom instruction.

## PLANNING FOR GROWTH AND STABILITY

A multidisciplinary approach to research, extension, and teaching is necessary for the future growth and stability of animal agriculture and grazing lands. A favorable climate, abundant quality water, surplus feed grain, and adequate forages and grazing lands give Kansas the potential for significantly expanding total animal agriculture, meat packing,

and livestock product processing.

Greater research and development efforts in animal production, animal product development, and grazing lands will produce greater economic benefits.

Because it leads the U.S. in beef slaughtered and has recently instituted an international meat and livestock marketing program, Kansas could serve as a national and international center for animal agriculture by the year 2000.

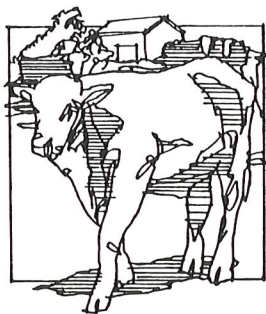
## OUTLOOK FOR BUSINESS AND PROFIT

To create jobs and support economic development, Kansas should focus on industries that add value to its basic agricultural commodities. Livestock production represents value-added production in its most basic form. Future research for a dynamic and responsive animal agriculture should focus on new technology to help Kansas become more competitive and profitable in the marketplace.

When animals are produced, grown, finished, slaughtered, and processed in Kansas, the combined effect from production to consumption is a tremendous economic asset to the state's economy.

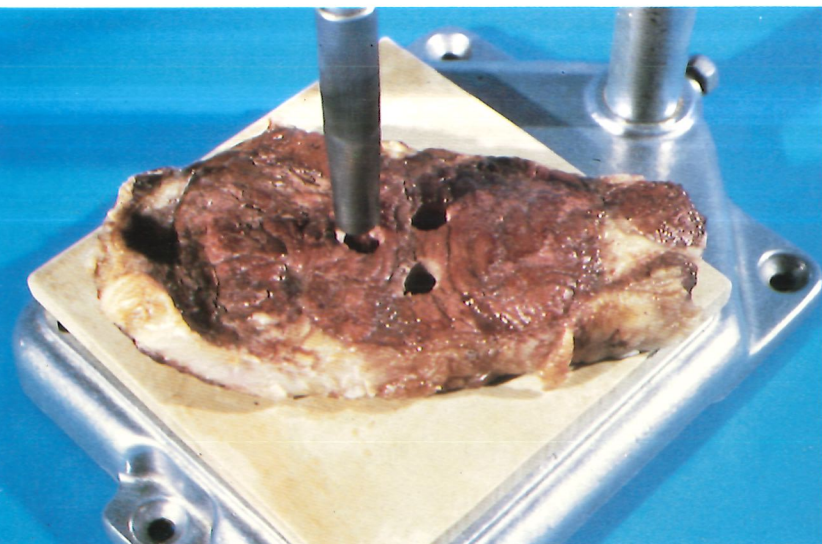






## RECOMMENDATIONS

1. Design and implement a broad-based research program in animal nutrition to improve the efficiency of animal production, including
  - Animal immune systems
  - Animal health
  - Reproduction
  - Lean to fat carcass ratio
  - Cholesterol content
  - Rumen microbes and biotechnological advances.
2. Develop a Center of Excellence for Animal Product Development. Develop new, value-added meat and



livestock products, with emphasis on quality control and product safety. Enhance the state's competitive position at each marketing step, from producer to consumer.

3. Improve reproductive efficiency in all segments of animal agriculture—gene manipulation, gene splicing, etc.
4. Conduct research on feed and ration effectiveness to establish the best and safest use and practical application of growth promotants, implants, and feed additives. Encourage adoption of improved management systems by farmers, ranchers, and feedlot operators.
5. Develop marketing systems that accurately reflect true value differences. The economic advantages of lean, quality meat; improved cut ability, proper animal type; and other market factors should be determined for use in the sale ring, packing plant, and retail outlet.
6. Study animal behavior, animal welfare, and production in relation to environment.
7. Research effective and safe use of animal waste.



# GRAZING LANDS

## PERSPECTIVES

Kansas grazing lands include 16.9 million acres of rangeland, 2.24 million acres of tame pastureland, and about 3 million acres of annual forages—approximately 43 percent of the state's agricultural land. In addition to forming important watersheds, grazing lands are the state's chief means of raising livestock and a resource for wildlife habitat and recreation areas. The six million beef cattle, over a quarter of a million sheep, and other ruminants provide economic return from Kansas's grazing lands. Because of their huge size and the fact that they provide the forage base for the state's livestock industry, grazing lands have a major impact on agriculture.

## PLANNING FOR GROWTH AND STABILITY

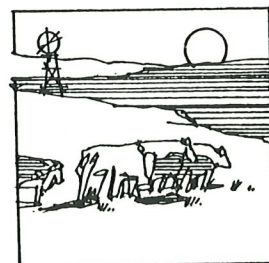
The potential for increased economic return from more productive grazing lands can be realized through basic and applied research to improve grazing systems, develop better forage varieties, and understand plant interactions and physiology.

## OUTLOOK FOR BUSINESS AND PROFIT

Profits for grazing lands are tied to the livestock industry. Cattle and other ruminants harvest and convert forages to meat and other value-added products. With complementary forages, intensive-early stocking, and the development and adoption of improved management systems, there is significant potential to expand the livestock and meat packing industry in the state. For example, using complementary grazing systems, where crop and livestock enterprises operate simultaneously, can double or triple net profits from mixed crop and livestock operations by extending the period over which grazed forages will meet livestock needs and by reducing the need for feed supplements.

## RECOMMENDATIONS

1. Research ways to integrate the use of crop residues with range, pasture, and forage systems. Determine grass and forage species effectiveness.
2. Conduct basic research involving plant regulatory mechanisms and microbial, mycorrhizal, and plant interactions.
3. Develop programs to explore year-round grazing and to use both the range and forage systems and the potential of complementary forage systems, intensive-early stocking, crop residues, and prescribed burning. Improved weed and brush control systems will be essential.
4. Develop range and forage management systems for cow-calf and stocker operations especially adapted to both short- and tallgrass prairie areas.
5. Emphasize improved range nutrition through grass and livestock management, feed supplements, growth promotants, and feed additives.
6. Improve the utilization of range and forage by ruminants, focusing research on feed efficiency, rumen microbes, biotechnology, and forages obtained from grazing lands and crop residues.
7. Study restoration of poorly adapted cropland to pasture and range.







# BUSINESS AND FINANCIAL MANAGEMENT

## PERSPECTIVES

Keeping up with technology is important in maintaining an advantage in world trade and in providing consumers with high-quality, inexpensive food products. The greatest opportunities will be in producing and marketing "value-added" foods from traditional crop and livestock products. It is essential to lower production costs of farming to increase world market shares of Kansas agricultural products. It also is necessary to develop new processing and marketing capabilities and alternative crops. Agribusiness will play a key role in making these changes possible and in improving the agricultural economy.

## PLANNING FOR GROWTH AND STABILITY

Stability and economic growth are required to maintain a profitable agricultural economy. Stability will likely come through a combination of *diversification* to reduce income risk, *financial strength* to absorb periodic losses, and *marketing and processing capabilities* to develop new markets. Financial investment strategies should be developed in coordination with marketing and production strategies.

## OUTLOOK FOR BUSINESS AND PROFIT

An integrated approach is essential in business and financial management. Significant effort should be directed toward developing new customers for farm products through product and market development. Market share should be increased by minimizing costs on the farm and in processing and manufacturing plants. Management is a key to production and processing efficiency, but the impact of interest rates, required capital, and debt management need constant review. Production and marketing alternatives, particularly for new or

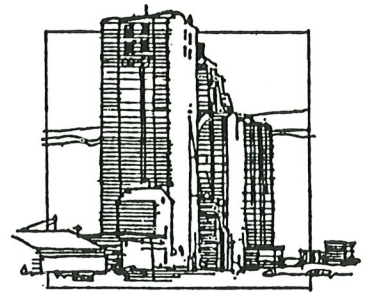
alternative products, need to be analyzed with careful attention to repayment schedules. Farmers and agribusinesses should carefully evaluate decisions and risks.

## RECOMMENDATIONS

1. Develop and implement farm-level educational programs that employ the latest information-gathering and management analysis techniques and that use sound farm and resource management principles.
2. Communicate to farmers and agribusiness people useful information concerning changes in international and domestic economic policies, global markets, and foreign policy changes.
3. Develop budget and computer-based decision aids for analyzing government programs. Keep farmers informed about farm program developments and requirements.
4. Teach financial record keeping for farms and agribusinesses.
5. Disseminate technical information on food and machinery technology to farms and agribusinesses. Emphasize value-added products.
6. Instruct farmers to understand markets, find market opportunities, and work within the market system. Identify farming systems that economically use available resources and technology.
7. Research farm input costs and risks to design economical farm production and financial strategies.



# MARKETING, PROCESSING, AND UTILIZATION



## PERSPECTIVES

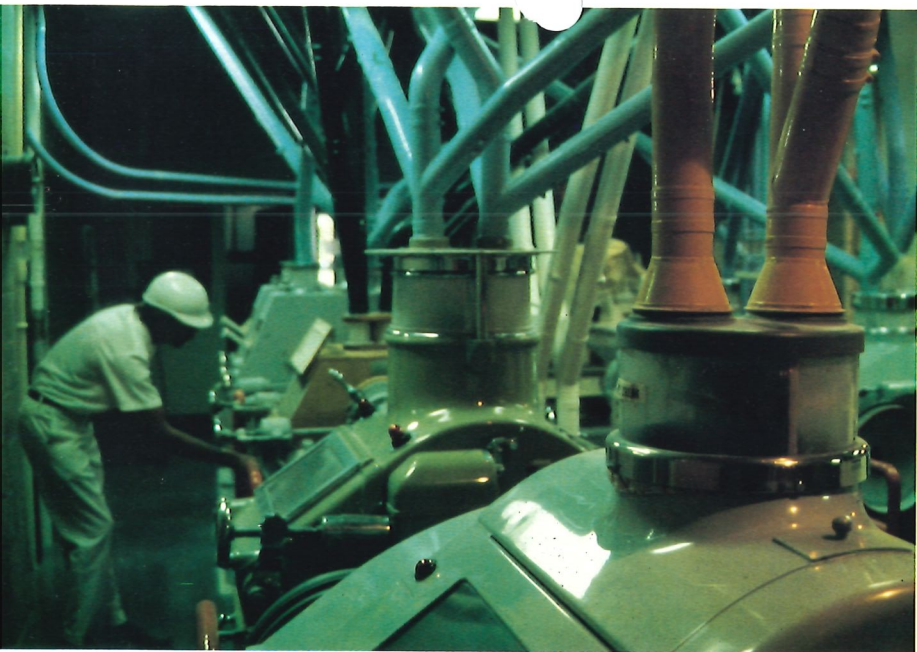
Kansas dominates the nation's agricultural economy far out of proportion to its population. It ranks number one in terms of total wheat production, wheat flour milling capacity, wheat flour milled, and grain sorghum produced. It recently became the number one beef processor and producer of red meat in the nation. Kansas ranks second among all states in total cropland, prime farmland, grain drills on farms, and number of cattle and calves on farms. The state consistently ranks high among all states in agricultural export sales. The United States will always require a strong agricultural base to meet its food needs. Kansas is well positioned by history, geography, transportation, and economy to continue to provide a significant share of the nation's food supply.

## PLANNING FOR GROWTH AND STABILITY

Grains for flour and animal production are the mainstay of the Kansas economy. Future economic growth depends on efficient production of large quantities of quality wheat and feed grains to sustain and expand flour milling and beef production and processing. The state's economy can benefit from increased value-added use of wheat domestically, either through higher per capita consumption of wheat products or expansion of nonfood uses of wheat, corn, sorghum, and soybeans. Kansas also can benefit from increased consumption of red meat and poultry and new products from them. Exports of grains will continue to contribute to the state's economy, so attention should be given to improving overseas markets not only for quality grains and grain products but also animal products dependent on grains.







## OUTLOOK FOR BUSINESS AND PROFIT

Looking ahead, Kansas should focus on traditional agricultural strengths. New crops or new agricultural industries may play an important role, but the state's proven strengths in wheat production, flour milling, feed grain production, and beef production and processing should be the foundation. Development must be based on market and delivery systems that assure high quality and competitive products.



## RECOMMENDATIONS

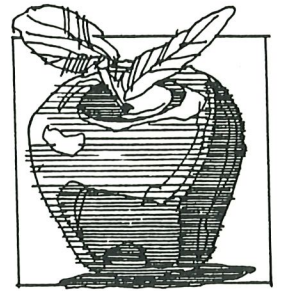
1. Utilize new biotechnology techniques to build upon the current strengths of KSU research to develop new value-added products for the benefit of Kansas industries.
2. Strengthen research and educational programs to improve processing efficiencies, wholesomeness, and nutrition of agricultural products through cooperative research with business and other universities.
3. Conduct research and educational activities to establish marketing standards for crop and livestock products that reflect true economic value.
4. Aggressively seek domestic and foreign markets by educating both buyers and sellers about the availability and quality of various Kansas crop and livestock products.
5. Strengthen educational information programs supporting the marketing, processing, and utilization of Kansas agricultural products.
6. Integrate processing and marketing research of dairy, meat, and grain industries.
7. Aggressively seek energy efficiencies during production, processing, and marketing of raw and value-added products.
8. Demonstrate how consumers influence the marketplace and how producers can influence consumers.



# HORTICULTURE

## PERSPECTIVES

Horticulture is an expanding \$2 billion industry in Kansas. Many producers are turning to horticultural crops to diversify production and sales. New opportunities exist for residential and commercial horticulture services and maintenance industries. Quality of life depends not only on adequate food production but also on a pleasing environment. Landscape horticulture provides employment for horticulturists, chemical applicators, and ground maintenance workers. Horticulture also supplies the recreation industry—parks, golf courses, athletic fields, and others.



## OUTLOOK FOR BUSINESS AND PROFIT

Changes in eating habits and lifestyles have created an increased demand for fresh fruits and vegetables. In the United States, consumption of fruits and vegetables has increased by 26 pounds per person in the last 10 years. Because of the “Baby Boom,” the demand for single-family housing, public parks, green-ways, and exercise trails has greatly increased. That demand is reflected in increased need for residential and commercial landscape services and for ornamental plants and materials.



## PLANNING FOR GROWTH AND STABILITY

Horticultural crops in Kansas are vulnerable to heat and drought stress, so breeders are working to develop plants with improved tolerances. One crop with significant potential is the dry bean. Research trials have shown the Great Northern type of dry beans is as well adapted as pinto beans, which are already grown in a few northwestern counties. With proper market development and the introduction of heat-tolerant varieties, this alternate crop could be grown for the domestic and export markets. Melons adapted to Kansas are another crop that could be grown profitably. Additionally, much of the horticultural plant material sold in Kansas is grown in other states. Capturing a significant part of that market would boost the state's economy.







## RECOMMENDATIONS HORTICULTURAL CROPS

1. Maintain research and extension programs to support the state's home and commercial horticultural fruit, vegetable, floricultural, ornamental, and turfgrass industries.
2. Develop strategies for protecting food and ornamental horticultural crops from insects and diseases, including biotechnology research in breeding programs to develop resistant germ plasm.
3. Strengthen breeding programs for dry beans and melons and develop high quality horticultural varieties with improved yield, ease of harvesting and processing, and nutritional value.
4. Develop post-harvest handling and storage techniques to maintain product quality and extend storage and marketing shelf life.
5. Develop methods to calculate the potential profitability and risk in producing and marketing horticultural crops, with a focus on the risk and repayment requirements for specialty or alternate horticultural crops.
6. Disseminate horticultural information promptly and effectively, using the latest information delivery techniques. However, machines must not be substituted for professional expertise.



## STRESS PHYSIOLOGY CENTER OF EXCELLENCE

Establish a Stress Physiology Center of Excellence to research development of food crops with improved resistance to heat and cold and to insect and disease pests. Such advances are essential if Kansas is to strengthen its capability to produce, process, and market horticultural crops and products. Interdisciplinary research conducted in the center would support research programs in the departments of Horticulture, Entomology, Plant Pathology, Agronomy, and Agricultural Engineering.



# NATURAL RESOURCES



## PERSPECTIVES

The true wealth of Kansas is its people and its soil and water resource, and much of that wealth is connected to agriculture. However, wind and water erosion are major concerns, because 23 million acres, including 10.5 million acres of cropland, are highly erodible. Approximately 7.2 million acres will require conservation treatment prior to 1995, so farmers can remain eligible for USDA benefits. Additionally, the demand for water exceeds supply. Consequently, improved management practices are needed.

## PLANNING FOR GROWTH AND STABILITY

Because soil, water, and fuel resources are crucial to agricultural production and rural revitalization, Kansas must protect and maintain its environment and natural resources. Renewable resources must be used more efficiently, and nonrenewable supplies must be more effectively conserved. Groundwater in western Kansas is expected to last about 30 more years, so improved tillage and cropping practices are necessary to preserve groundwater and make better use of rainwater.

## RECOMMENDATIONS

Conservation of natural resources, particularly water and soil, is essential if the state is to maintain a quality environment and achieve growth and prosperity. Public funds for conservation are not likely to ensure adequate protection of natural resources as mandated in state and federal laws. The University must validate, through basic and applied research, recommended conservation practices and develop and promote agricultural systems that protect natural resources.







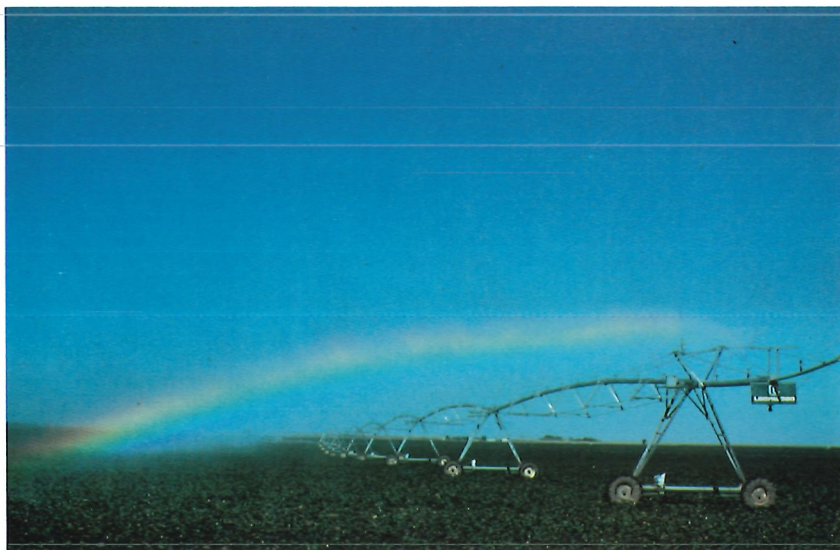
Photo by John Thelander

## AGRICULTURAL SYSTEMS

1. Develop ways to best use soil and water without contamination from fertilizers and pesticides.
2. Model the effects of conservation practices and policies on the natural resource base.
3. Organize educational programs, cooperatively with other state and federal agencies, to provide timely information on the conservation provisions of farm programs.

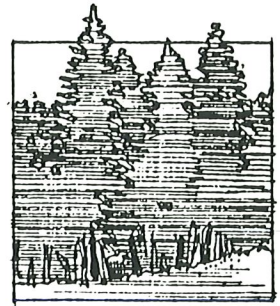
## BASIC AND APPLIED RESEARCH

1. Develop models to help producers understand the effects of alternate cropping systems and energy sources on productivity, profitability, and chemical requirements.
2. Determine the potential for modifying and using low quality water resources such as the Dakota Aquifer.
3. Conduct research to learn the effects of changing or eliminating tillage practices, the effects of cultural practices on soil and water conservation, and the potential for recycling or reusing water resources.
4. Perform basic research to improve tillage and cropping methods, safely renew the resource base, and protect or decontaminate the environment.
5. Develop computer models to help producers evaluate the economic consequences of production systems that support conservation.





# FOREST RESOURCES



## PERSPECTIVES

The 1.5 million acres of forest in Kansas are widely dispersed along streams, on generally non-tillable lands, and connected with other land uses. About 96 percent of the state's forest is owned by over 50,000 persons, mostly farmers. There are over 85 sawmills in Kansas producing an annual output of 30-40 million board feet from a resource that has the potential to produce 2 to 2.5 times that amount. Over 75 percent of the gross harvested volume is used for fuelwood (about 400,000 cords per year). Kansas farmers annually produce eight to nine million board feet of high quality black walnut for furniture, veneer, and gunstock markets. Natural forests protect over 6,500 miles of streambanks and provide cover for fish. Specialized forest plantings protect about 1.9 million acres of cropland and reduce soil erosion by about 5 million tons per year.

## PLANNING FOR GROWTH AND STABILITY

The forests of Kansas are stable and substantially underdeveloped, with an expected increase of nearly 33 percent by the year 2000 because forest growth will exceed the rate of harvest. In the past 20 years, saw timber output increased 182 percent, while fuelwood output increased 375 percent. Species such as black walnut are being overutilized, while others, like cottonwood, are being underutilized. Some 100 Kansas communities have tree management programs. More than 200 towns and cities need to begin urban forestry programs. In total, Kansas cities and towns still need over one million new streetside trees, 500,000 new residential and commercial area trees, and over 100,000 new trees in parks. The State Water Plan provides for trees to protect streams, rivers, and wetlands. Increased conservation on farms will be an opportunity to further forest management and tree planting plans.

## OUTLOOK FOR BUSINESS AND PROFIT

The gross annual volume of timber harvested could double and bring approximately \$9 million annually in increased farm income, create 2,300 new jobs, and increase gross state income by \$140 million.



## RECOMMENDATIONS

1. Continue research and extension programs to strengthen the state's forest resources, including rural fire protection, tree improvement, community forestry, forest management, and forest utilization and marketing.
2. Provide information on tree plantings and conservation plans on highly erodible waterways and wetlands. Educate people on the conservation compliance provisions of the 1985 Food and Security Act and on waterway and wetland protection provisions of the State Water Plan.
3. Increase efforts in urban forestry.
4. Conduct research and extension programs to help farmers and landowners more effectively manage, harvest, and market timber and its products.
5. Cooperate in wildlife enhancement programs to increase the economic, recreation, and aesthetic value of forest and allied resources.





# ENVIRONMENTAL QUALITY

## PERSPECTIVES

Organic wastes, fertilizers, and other agricultural chemicals supply essential nutrients for crop and livestock production, help control weeds and insects, significantly increase production, and reduce costs. But agricultural practice and environmental quality are interdependent and directly affect human and animal health and safety and plant growth.

## PLANNING FOR GROWTH AND STABILITY

Agricultural chemicals can be toxic and add to such problems as water contamination and cancer risks. Small amounts of pesticides have been detected in all large Kansas reservoirs and in nine percent of farmstead wells. About 65 percent of all Kansans depend on groundwater for drinking water. Farmers and ranchers will, increasingly, be required to apply agricultural chemicals safely, and this will require the development of improved and precise application and monitoring methods.

## OUTLOOK FOR BUSINESS AND PROFIT

Increased farm income from the use of fertilizers in Kansas is estimated to exceed \$947 million annually. Without herbicides, corn yields could decline 13 percent and soybean yields 18 percent. The use of vaccines and disease-controlling drugs are essential for animal health and efficient livestock production. Despite these benefits, the public is concerned about food safety and a safe environment. Future efforts should be directed toward safe and precise application of agricultural chemicals and toward preservation of soil and water resources.





## RECOMMENDATIONS

A quality environment that supports agriculture must be achieved and maintained. The University must lead in developing, testing, and promoting environmentally safe agricultural systems that also are profitable and practical.

1. Make agricultural chemicals safe and more efficient, develop profitable production methods that prevent environmental problems, and educate people so these methods of using agricultural chemicals and their alternatives can be understood and adapted in crop and livestock systems.
2. Determine how chemicals affect different farming practices like no-till or alternate cropping systems.
3. Develop methods to assure the optimal application of chemical inputs, considering variations from field to field and within fields.
4. Develop and promote agricultural practices that use new knowledge and techniques in such areas as soil microbiology, nutrient cycling, "on the go" sensing of organic matter, and recycling or reuse of water.
5. Conduct biotechnological research to develop agents to decontaminate soil and water.
6. Determine the feasibility of using cultural practices to influence the persistence and movement of agricultural chemicals in soil and water.

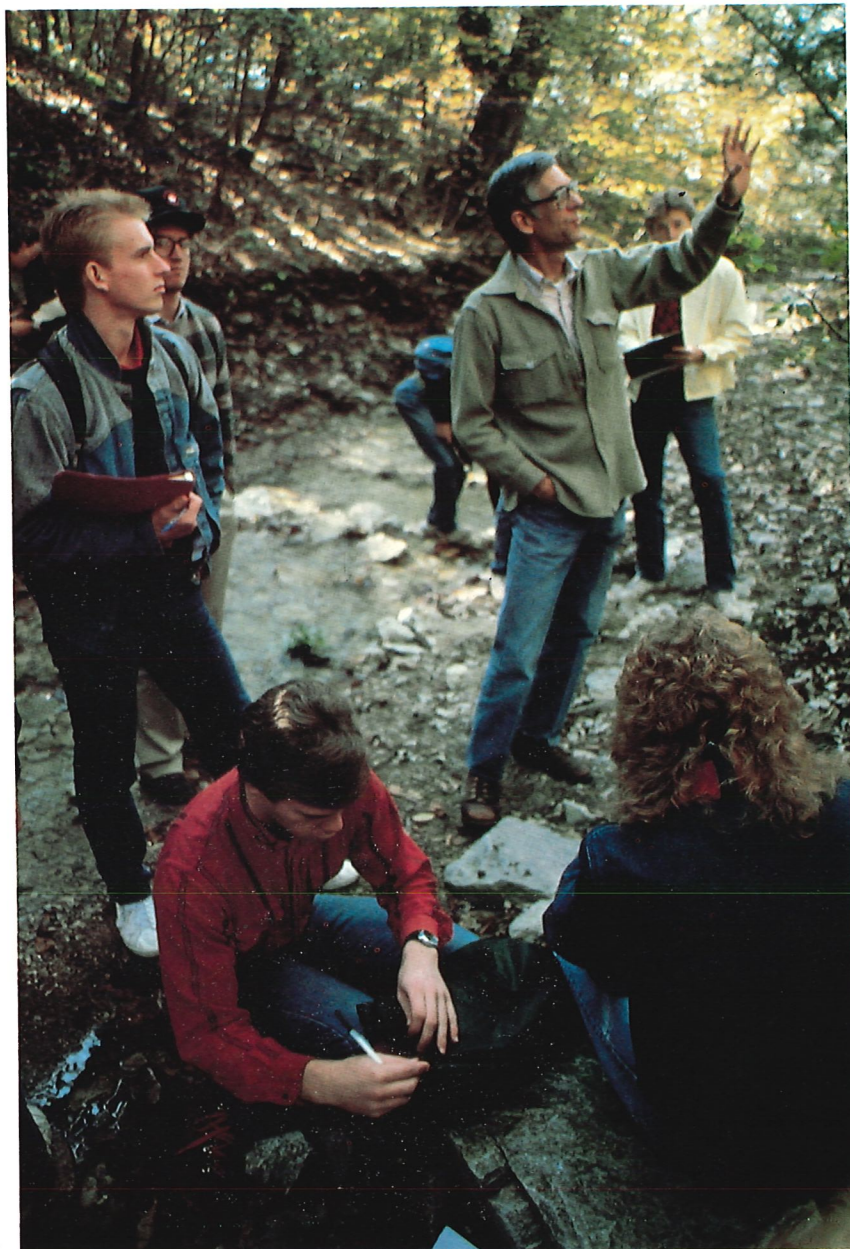
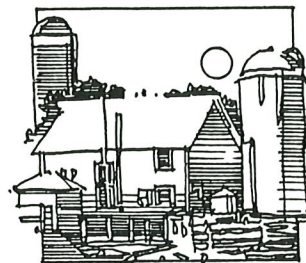


Photo by Keith Philpott





# HUMAN CAPITAL AND FAMILY NEEDS

## PERSPECTIVES

**Human Capital:** *People are the most important resource in Kansas.* People in agriculture must be prepared through education and experience to be part of the changing work place, yet those who graduate and those with advanced degrees in many agricultural and related fields are too few to meet the demands. Education is the hope for our future.

**Family Life—The Community:** Factors like age, size, incomes, and positions of families and, therefore, of their communities are rapidly changing. To meet these challenges, communities must increase participation in governance, business, and other activities that affect family and community well-being.

**Family Life—The Individual:** Youth today face new and difficult choices. Many families must deal with the stress of farm and debt management. Marital discord, women in the work-force, single-parent families, blended families, low-income homes, and middle-aged adults trying to both care for elderly parents and young children affect family life and often create unmet needs and problems.

## HUMAN DEVELOPMENT PLANNING

Programs must be maintained and developed to meet needs and benefit individuals, families, and communities. These programs should emphasize quality living and should focus on everything from health, food, and nutrition to creating new economic opportunities. Strengthening the family to deal with stress and linking communities to expand social and other programs must also be emphasized.

## RECOMMENDATIONS

1. Continue to develop family management programs that add to the quality of life in such areas as food and nutrition, clothing and shelter, stress management, money management, do-it-yourself skills, communication skills, child care, citizenship/public affairs, family wellness, job opportunities/career placement, legal services, and leisure time planning.





2. Strengthen extension homemaker units and family life programs that reflect the divergent situations and issues families now face. Clientele groups include new family units, single parents, low-income families, senior citizens, and single and traditional family households.
3. Maintain quality educational programs in primary, secondary, and trade schools, and university systems. Achieve balanced enrollment in undergraduate and graduate programs. Provide adequate opportunity to obtain general, professional, and technical education and to develop personal and social skills.
4. Redesign extension 4-H and youth programs to attract both rural and urban youth but focus on developing life and living skills. Attract and train leaders for youth programs.
5. Expand programs to promote public understanding of agriculture, particularly its role in society and the career opportunities agriculture offers. Such programs might include work experience in agriculture for all ages of youth; closer College of Agriculture contact with high school counselors to enhance their understanding of agriculture; and programs to inform adults about the interaction of agriculture and society. Extension personnel should be available as resource persons.
6. Continue successful, traditional extension delivery methods but explore video, satellite, and other electronic methods of communication. Agents are needed in every county to identify local needs and deliver educational programs.
7. Conduct leadership development programs for community and volunteer leaders. Programs should help attract local leaders as well as help them build community esteem and spirit.

8. Create a Center for Excellence in Family Management to provide and coordinate a central source of information for research and extension programs and to meet changing family needs.





# RURAL AND COMMUNITY REVITALIZATION

## PERSPECTIVES

Kansas is a rural state. There are 627 cities, of which 532 have populations under 2,500. Many rural counties had their highest population before the turn of the century, and 50 counties are facing continuing out-migration. Many of those leaving are young—the educated and the entrepreneurs—reducing the pool of people willing and able to lead rural Kansas. The role of farming in the rural economy is changing. Service industries have replaced manufacturing as the primary source of new jobs. The change to regional and discount merchandising has left small cities behind, and many agricultural processing jobs occur in other states. Government transfer payments, such as social security, have become a major source of personal income—more than 40 percent in some counties.

## PLANNING FOR GROWTH AND STABILITY

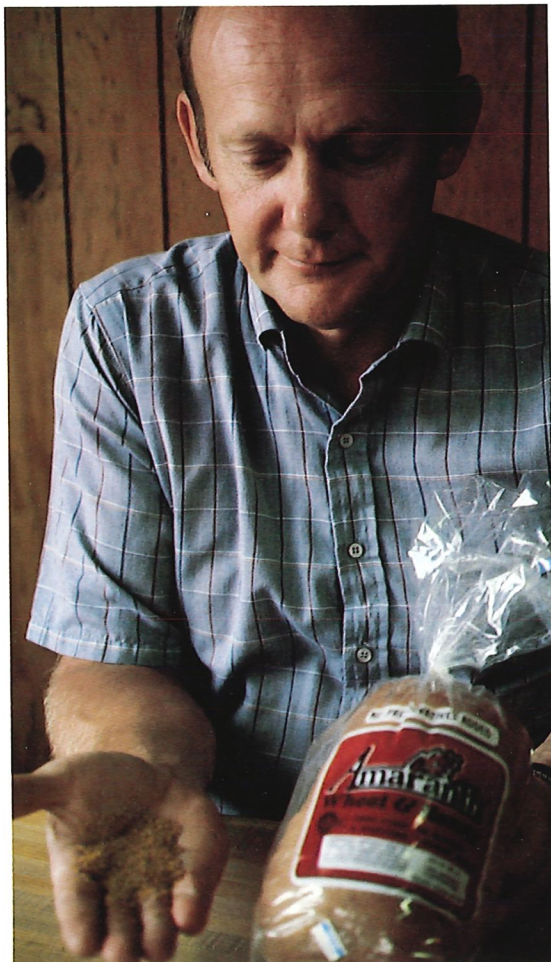
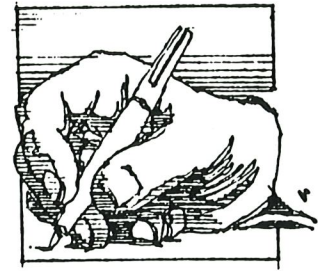
Communities provide four basic functions. They meet economic, service, social, and living needs of their people. Large cities are able to provide all of these functions; smaller rural communities are becoming hard-pressed to provide any of them, especially the economic function. Towns near large cities can survive and even flourish if they remain quality places to live and provide for basic social needs. Others will have to diversify their economic base and reduce “leakage” of human and economic resources by finding local suppliers for goods and services they “import” into the community and adding value to what they produce. There are five basic strategies for economic development—retaining and expanding existing firms, creating new local firms, bringing in outside firms, improving economic linkages among local firms, and capturing outside dollars.





## OUTLOOK FOR RURAL AND COMMUNITY REVITALIZATION

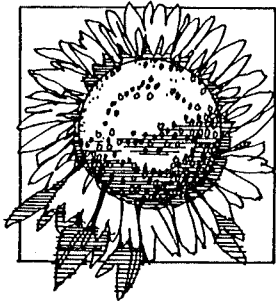
Many communities can remain viable if they plan economic development strategies, build an effective decision-making structure, and adapt to cultural change. Research and extension programs can assist local communities by providing perspective, increasing knowledge, developing skills, and helping to shape the decision-making environment. The table on the next page presents recommended components of a plan for revitalization, education, and research.



## OTHER RECOMMENDATIONS

1. Assist communities in identifying and expanding economic opportunities and effectively organizing and utilizing available resources and services in response to expressed community needs.
2. Expand training programs for extension agents to assist communities in economic development.
3. Provide for flexibility in extension agent responsibilities to more easily respond to emerging local needs.
4. Increase public awareness of the broad mission of extension and research as a resource for rural and community revitalization.
5. Coordinate extension and research efforts to respond to rural needs.





## COMPONENTS OF RURAL REVITALIZATION, EDUCATION, AND RESEARCH

### CHOOSING ECONOMIC DEVELOPMENT STRATEGIES

Retain and expand existing firms

Create new local firms

Bring in outside firms

Improve linkages between local firms

Improve capture of outside dollars

### BUILDING BASES OF SUPPORT

Increase understanding of policy alternatives and implementation

Improve fiscal and operational management

Build networks among local, state, and federal organizations

Support rural leaders with information, training, and education

### ADAPTING TO CULTURAL CHANGE

Help rural families adjust to economic and social change

Understand/interpret trends that shape strategic local decisions

Assist with problem-solving and public policy

Build leadership capacity to plan for the future



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A Review of the  
Cooperative Extension Service



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at Kansas State University

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A Review of the  
Cooperative Extension Service



\_\_\_\_\_  
at Kansas State University

Presented to the  
\_\_\_\_\_  
Kansas Legislature

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by President Jon Wefald  
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Kansas State University  
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Manhattan, Kansas

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## Office of the President

Anderson Hall  
Manhattan, Kansas 66506  
913-532-6221

January 4, 1988

Special Committee on Ways and Means  
State House  
Topeka, KS 66612

Dear Committee Members:

The review you requested concerning the Mission and Direction of the Cooperative Extension Service at Kansas State University is attached. The report represents a comprehensive statement of the educational programs, funding and personnel allocations and future priorities and recommendations.

I strongly endorse the report and suggest that the Cooperative Extension Service is effectively targeting its educational programs and resources to the needs of Kansas agriculture and the families, communities, and youth of the state.

The Cooperative Extension Service represents a unique partnership between federal, state and county interests. In Kansas, the strength of that partnership is reinforced with a network of elected extension councils which guide the program at the county level.

State and area specialists play an important role in keeping county Extension professionals abreast of new technology and responsive to the changing needs of the citizens of Kansas.

Because we aggressively sought a wide range of public opinion about collective and individual needs, I believe the long range priorities and recommendations in the report effectively reflect the future expectations of Kansas citizens for the Cooperative Extension Service.

I would welcome the opportunity to review the document and the Cooperative Extension Service with interested members of your committee or the legislature.

Sincerely,

A handwritten signature in black ink that reads "Jon Wefald". The signature is written in a cursive, flowing style.

Jon Wefald  
President



## Cooperative Extension Service

Office of the Director  
Umberger Hall  
Manhattan, Kansas 66506  
913-532-5820

January 4, 1988

President Jon Wefald  
Anderson Hall  
Manhattan, KS 66506

Dear President Wefald:

I am pleased to transmit a report on the Mission and Direction of the Cooperative Extension Service, Kansas State University, as requested by the 1986 interim Special Committee on Ways and Means. It is my recommendation that the report be forwarded to the legislature with a strong endorsement.

The report resulted from a concerted effort by the citizens of the state, by Extension administrators and staff and by a special review committee external to the University. A summary of the process used to formulate the report follows:

One, the Marketing Strategies Committee conducted a year-long study, gathered information from key leaders and user and non-user groups to determine how extension should serve the people of Kansas and their most probable problems, concerns and interests.

Two, a select group of citizens, the Agriculture 2000 Committee, prepared a statement of citizen expectation for the Kansas Cooperative Extension Service through the next decade after conferring with more than 325 Kansans in an open-meeting format.

Three, after the request for the study was made, Extension law was rewritten to provide for multi-county Extension districts and an increased role for county extension councils in economic development.

Four, the Memorandum-of-Understanding between Kansas State University and county extension councils now provides for the selection of all county extension agents based on program need.

Five, Extension programs were organized to address key issues in agricultural profitability and competitiveness, economic revitalization, human health and human resources.

The report traces the strong heritage of Extension and, more importantly, demonstrates its responsive and dynamic character and addresses the forward looking programs of today.

Sincerely,

Walter R. Woods  
Director of Extension

KSU, County Extension  
Councils and U.S. Department  
of Agriculture Cooperating.  
All educational programs and  
materials available without  
discrimination on the basis  
of race, color, national  
origin, sex, or handicap.

# Executive Summary

## Legislative Request

The 1986 interim Special Committee on Ways and Means outlined their request in a committee report as follows:

The Committee is particularly interested in resolving whether extension devotes inappropriate resources to home economics and youth work given: (1) declining federal dollars for extension; (2) the present condition of the agricultural economy; and (3) the status of the State General Fund. Therefore, the Committee recommends that the President of Kansas State University review the mission and direction of extension. In this review the President should develop priorities for extension and alternatives for financing, given constant or diminishing resources. The Committee requests that this review be completed and submitted to the Legislature on or before January 11, 1988.

## Objectives of the Report

The purpose of this report is to convey to the Kansas Legislature a thorough review of the mission and direction of the Kansas Cooperative Extension Service. The report, prepared in response to a request forwarded by Representative Ed Rolfs and Senator Gus Bogina, 1986 interim, Special Committee on Ways and Means, includes:

1. A review of the historic mission of the Kansas Cooperative Extension Service.
2. A synopsis of statewide adaptations in response to emerging social and economic needs.
3. A summary of program planning and delivery procedures which illustrate how elected county extension councils and extension educators identify priority needs and respond with research-based educational programs.
4. Proposed priority programs based on statewide needs, the research and knowledge base of Kansas State University and the potential for funding. Priorities include agricultural profitability and competitiveness, economic revitalization, human health and well-being and human development.
5. Recommendations concerning future priorities in extension, its organization and funding and staffing alternatives should extension councils choose to jointly employ extension agents or, subject to the approval of county commissioners, form extension districts.



## Mission

Kansas State University's responsibility in teaching, research and extension provides a knowledge base for improving family, farm and community life throughout the state. It also prepares the next generation for careers in agriculture, home economics, engineering and the sciences, as well as marketing, manufacturing, communication and education. K-State is also the traditional source of research and extension information for producing and processing agricultural commodities. With staff in each county, extension programs provide technical assistance and information that improve the position of producers, processors, communities and families throughout the state. Volunteer training also supports leadership development for farm, family, community and commodity groups.

Cooperative Extension's mission is to provide practical and useful information to the people in every Kansas county through informal, out-of-school, non-credit educational programs. These programs are based on scientific knowledge, applied principles and recommended practices.

In fulfilling its mission the Kansas Cooperative Extension Service proposes to continue its programs based on principles which have led to its remarkable success in Kansas and nationwide. Those principles include:

- Linking the research and knowledge base of Kansas State University and other land-grant universities through an effective state, area and county delivery system to the resolution of problems facing the citizens, families and communities of Kansas.
- Continuing the unique federal, state and county funding partnership which distributes and effectively utilizes resources in solving state and local problems.
- Delivering relevant and timely educational programs jointly planned by extension educators and by elected executive boards and county extension councils.
- Utilizing the enormous number of volunteers and cooperating with the many farm, family and community organizations that are effective partners in implementing a vast variety of educational programs.
- Recognizing and responding to the important agricultural, economic, social and environmental changes impacting Kansans. That recognition implies an effective program for establishing priorities and allocating resources.
- Continuing cooperation with the array of state, federal and privately funded programs which have grown to assist with the current economic, resource and social problems. Most of those programs were organized subsequent to Cooperative Extension and, without exception, do not have access to a comprehensive educational delivery system which reaches into every state and county. This presents an opportunity for collaboration and cost-effective information delivery.



## Issue-Based Program Planning

The Kansas Cooperative Extension Service, utilizing its county extension councils, marketing strategies committee, program, staff and advisory committees, has just completed its regular four-year plan of work. While program planning is a continuous process, a major reorganization of program planning and coordinating efforts began in 1985. As a result, an interdisciplinary, issue-driven orientation has developed which focuses on four priority program issues:

**Agricultural Profitability and Competitiveness**

**Economic Revitalization**

**Human Health and Well-Being**

**Developing Human Resources**

### Program Support Teams

Agents and specialists also respond to requests for educational assistance from individual citizens, county program development committees and from farm, commodity, community and industry groups. As a result, numerous program support teams have been organized such as:

- **Food Production and Processing:** Because agriculture is a \$16.5 billion industry in Kansas, Cooperative Extension has made major commitments (56 percent of its specialists and 44 percent of the county staff) to economic development in producing, protecting, processing and marketing agricultural products. In most farming communities the relative success of the farmers has a direct effect on the fortunes of main street merchants, support of governmental services, schools and service businesses.
- **Target on Profit Workshops:** Thirteen crop, soil and livestock program coordinating teams were organized to present a problem-solving "total production system" approach. "Target on Profit" workshops were then conducted as part of the problem-solving approach to aid agents and specialists in helping farmers target profit more effectively. The thrust of the workshops became profitability, management decisions critical to economic success and the economics of decision-making in the production-management cycle.
- **Economic Development:** Many economic development programs result from cooperation with other government agencies, such as the PRIDE program conducted with the cooperation of the Kansas Department of Commerce or home-based-business workshops co-sponsored by extension home economists and the Small Business Development Center. Cooperative Extension is in a unique position to assess the economic development needs of Kansas communities and has the program delivery capability to solve local problems.
- **Water Quality:** Water quality is an important environmental issue because of widespread chemical use and the potential for ground and surface water contamination. In addition, over 95 percent of rural residents and over 50 percent of urban residents utilize groundwater for drinking water. The



interdisciplinary team addressing this problem includes specialists in home economics, 4-H and youth, community development and agriculture.

- **Healthy Lifestyles:** Food, nutrition and health issues which affect heart disease, cancer, hypertension and obesity have been identified as significant family concerns. Faculty in the healthy lifestyles task force include specialists in nutrition, food science, human development and health and safety.
- **Human Development:** Numerous individuals and families in today's complex technological society lack the knowledge, skill and self-reliance to cope with rapid-paced family, financial and technological change. The human development task force is targeting programs for youth, adults and the elderly which focus on financial stress, family dislocation, support networks and programs to foster self-reliance, enhance job skills and develop community and individual leadership.

### **Future Priorities and Conclusions**

The future priorities and recommendations contained in the report were formulated after considering the deliberations of the Agriculture 2000 committee, the marketing strategies committee, the state survey of critical family concerns, the Kansas State University strategic planning process and the program planning process of the Cooperative Extension Service.

1. Citizens have high expectations for Cooperative Extension because it is a vital statewide force in making the technical expertise of the University available for economic and technological development in agriculture, business and industry, and in rural communities.

Because agriculture and rural communities face trying times, this is a propitious time to provide the technological and educational expertise needed to keep Kansans competitive, protect the resource base and assure environmental quality.

2. Within the limits of resource availability, the Cooperative Extension Service has appropriately targeted its educational resources to agriculture, home economics, 4-H and youth and economic development initiatives in order to meet the expanding needs of agriculture and industry as well as Kansas families, communities and youth.

Renewed emphasis is being placed on economic development, profitability, environmental quality and resource conservation in all extension program segments.



Recommendations in the report include:

1. Providing adequate funds so Cooperative Extension can continue to make the technical expertise of the University available to business, industry and community groups throughout the state.
2. Strengthening Cooperative Extension's unique federal, state, and county partnership by providing sufficient funds to maintain a balanced educational delivery system of local contacts (extension agents) and scientific and technological support personnel (extension specialists).
3. Increasing funding for county programs and the maximum allowable county mill levy in K.S.A. 79-1947.
4. Providing funds to staff, equip, maintain and operate the satellite Regents Educational Communications Center.
5. Increasing support for retirement and fringe benefits mandated by law should federal allocations prove inadequate.

### **Summary**

The balanced educational offerings of the Cooperative Extension Service are essential to the well-being and economic health of all citizens of Kansas. We feel that the duly elected County Extension Councils are in the best position to determine how to balance program resources on the local level. The role of extension administration should be to assure the best quality programs that can be produced within the limited resources available. The role of the Legislature, we feel, should be to oversee the quality of these programs and provide the financial support to sustain programs which best meet the needs of the citizens of Kansas.







# Land-Grant University Developments

## The Land-Grant Concept

When Kansas became a state in 1861, it was a time of bold action: There were vast acreages of public land but the nation was short of funds and settlers. In 1862 President Lincoln signed bills to use the nation's vast reservoir of public land to create universities in every state, build a transcontinental railway and provide homesteads for farmers. The bill creating the United States Department of Agriculture was also signed in 1862.

Even before Lincoln became president, Senator Justin S. Morrill of Vermont championed the idea of education for working people. Morrill proposed to provide grants of federal land to each state which would establish "at least one college where the leading object shall be . . . to teach such branches of learning as are related to agriculture and the mechanic arts . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

The Morrill Act became law in 1862 and "land-grant universities" were subsequently established in every state. In 1863 Kansas became the first state to adopt the provisions of the Morrill Act and Kansas State University was designated as the land-grant institution for the state.

At that time the United States was essentially an agricultural nation and agriculture became a significant emphasis in every land-grant university. Senator Morrill's dream, to provide liberal and practical education for working people, is one of the great and enduring ideas in American education. That idea was reinforced with the passage of the Hatch Act in 1887 which provided for federal support of an Agricultural Experiment Station in each state and by passage of the Smith-Lever Act of 1914, which established the Cooperative Extension Service.

The Smith-Lever Act provided federal aid for extension agents and college specialists through whom agricultural extension work with farmers and ranchers would be conducted cooperatively with the U.S. Department of Agriculture. The Smith-Lever Act also provided for "instruction and practical demonstrations in agriculture and home economics and subjects relating thereto" for persons not attending the land-grant colleges.

## Kansas Responds

The Kansas Board of Regents became an early proponent for university outreach. On June 23, 1868, nearly half a century before passage of the Smith-Lever Act, the regents passed resolutions directing the president and professors of Kansas State University to visit the more populous settlements, make known the character and aims of the College and disseminate correct agricultural principles throughout the state.

In response, local agricultural societies (later called farm bureaus) joined Kansas State University in sponsoring "farmer institutes" across the state. Farmer institutes were supported with state-appropriated funds as authorized by the Board of Regents. County commissioners were authorized to appropriate funds for farmer institutes in 1903.



The educational accomplishments of farmer institutes, forerunner of modern day extension, spanned more than half a century. Programs during the peak winter of 1914 drew crowds of 93,712. Self-help principles were utilized—local groups provided a suitable meeting place, made all necessary arrangements, met local expenses and furnished at least half of the speakers.

### **Early Growth**

In 1912, the Board of Regents adopted resolutions designed to place an agricultural advisor in each county. Agents were employed using a cooperative, three-way agreement with college, USDA and local funds. This was the beginning of tripartite funding which still operates today with slight modification. The first agricultural agent was appointed in 1912.

In 1915 the Kansas Legislature passed the Farm Bureau Law. Each eligible county farm bureau was entitled to county appropriations and state funds for use in implementing the county extension program. County extension programs operated under the Farm Bureau Law until the County Extension Council Law was passed in 1951. County extension programs then became the cooperative responsibility of the County Extension Council and Kansas State University.

The role that extension home economics played in helping families manage the difficulties of a farm household was recognized early. Instruction in domestic science was advocated in an 1870 farmer institute and was first taught in 1873. Homemakers participated in the programs of early farmer institutes and an extension home economist was appointed to the college staff in 1909. When the division of extension was created in 1912, home economics, with six staff members, was one of the departments. Farmer institutes adopted the more popular “farm and home” format in 1915. The first county home demonstration agent was appointed in 1917.

Over time, home economics programs were organized in all Kansas counties to serve both rural and urban constituencies.

Extension homemaker units organized to help families improve their homemaking, leadership and community improvement skills. Early programs focused on food conservation and preservation, nutrition, menu planning and health, clothing and child development. School lunch programs grew out of those activities.

Programs changed through the years to include family life; health, food and nutrition; citizenship and community outreach; family resource management; housing, energy and environment; cultural arts, textiles and clothing; and safety and emergency preparedness. There is increased emphasis on public policy and leadership, human development and international relationships.

Extending the University’s knowledge and research base throughout the state was a highly successful idea that soon expanded to other areas. Youth work began in 1901. Farm boys were offered a small package of select seed provided they would plant the seed and make an exhibit at the next farmer’s institute.



The success of "corn clubs" quickly led to other projects for youth. This phenomenon of farm youth conducting "demonstrations" spread rapidly. A state-wide meeting of farm youth was hosted by Kansas State University in 1907. By 1910, home economics clubs for girls were active and 5,000 boys were enrolled in corn clubs. A state club leader was appointed in 1914. By 1915, 206 home economics clubs with 3,004 members were organized.

## Changes in Kansas

Since 1863, change has been the very essence of Kansas agriculture and its associated farms, families and communities. Just a few decades ago, farms and rural communities were largely self-contained, self-sufficient units with little dependence on outside sources for either production or consumer needs. Today, most farms are intensely managed, specialized businesses, highly dependent on outside suppliers for most production and consumer needs. To maintain their market share, Kansans must compete aggressively in both domestic and foreign markets. The energy crisis of 1973, the grain embargo and the decline in export sales illustrate our dependence on a global economy.

Since extension began, we have moved from draft horses to four-wheel, articulated, 200-horsepower tractors, from open-pollinated crop varieties to improved hybrids and bioengineering, and from modest living to sophisticated electronic homes. Although many intermediate steps remain, similar advances have been made in virtually every facet of agriculture and community life, from communications and transportation to crop and livestock breeding and food processing. An increased dependence on international markets has made domestic markets more volatile. Keeping abreast of rapid technological and market changes will be essential if farms and businesses are to remain competitive and profitable.

### Agriculture's Economic Base

The state's economic base is built on those resources and industries—particularly wheat, feed grains, beef and hogs; flour milling and food and meat processing; and oil, gas and aviation—in which we have a comparative advantage and around which suppliers, institutions, skills, knowledge and infrastructure have been built. Annual sales in agriculture and related businesses are estimated to exceed \$16.5 billion annually. Agricultural businesses and enterprises will remain important factors in community stability into the foreseeable future.

Kansas ranks first in the nation in the production of wheat and sorghum and tonnage of flour milled, and sixth in export sales of agricultural products. It is the nation's leading beef processor and producer of red meat. Total cash receipts from farm marketing exceed \$6 billion annually.

Livestock and livestock products	about \$3.3 billion
Crops	about \$2.5 billion
Horticultural products	about \$85 million



## Changes in Agriculture

Agriculture is subject to seasonal changes in weather, attack from insects and pests, and fluctuations in monetary and fiscal policy and in domestic and global markets. The ability to adapt to change and still maintain a stable, profitable farm or business base is greatly facilitated by forward-looking research and educational programs.

Following are a few examples of how quickly Kansas agriculture can change in response to technological advances. In 1956 the introduction of hybrid grain sorghum created the milo belt in Kansas and increased sorghum production by 1,000 percent in 25 counties and by 500 percent in an additional 33 counties. The production of feed grain and fed cattle increased dramatically. Kansas became the nation's leading producer of grain sorghum and by 1985 had emerged as the nation's uncontested leader in beef packing. Red meat production increased from half a billion pounds in 1957 to 4.8 billion pounds in 1986. During that same time irrigation expanded from 600,000 to 3.5 million acres of farmland.

This grand period of growth was not without problems. Irrigators use 82 percent of the state's water withdrawals—6.3 million acre feet—and groundwater decline is now of serious concern in some western locations. Concurrently, fertilizer use increased to 1.5 million tons annually. Nationally, pesticide use increased to over a billion pounds annually, with Kansans using their proportional share.

The strong expansionist trends of the 1970s were followed by farm recession in the 1980s. Changes in monetary and fiscal policy affected interest rates and domestic and international markets. Steadily decreasing land values and a fourfold increase in real interest rates eroded the collateral base, increased interest payments and made debt and risk management more difficult. Although net farm income has recovered somewhat in the last two years, net farm income decreased more than 50 percent between 1981 and 1983. Since 1980, farm exports have generally declined, grain stocks have risen to record levels, production costs have risen faster than farm prices and net farm income remains depressed.

In addition, the marketing of food has become highly mechanized and transportation-dependent. Retailers, in supermarkets and smaller stores, market thousands of food products which must be consistent in quality and appearance. Consumer preference greatly influences the market for almost every food item. Farmers, food processors and retailers must adapt to those demands.

The application of research and modern technology has resulted in major improvements in labor and production efficiency on Kansas farms and elsewhere. The larger, more capital-intensive farms will continue to be an important part of the state's economy. However, if Kansas agriculture is to increase market share and fuel economic development, it must position itself to compete with other states and nations, develop value-added products and locate new markets to effectively utilize its vast production capability. The development and adoption of new technologies will be critical ingredients in keeping Kansas farmers and businesses competitive in both domestic and global markets.



## Economic and Social Change

Along with the changes that have altered agriculture in Kansas and the United States have come major economic, social and environmental changes. Modern transportation and telecommunications have diminished the social distance between urban and rural America. Over two-thirds of the nation's rural employment is non-farm employment. Because of the compelling need to preserve land and water resources, the prevailing national mood is one of conservation and concern for environmental quality and the safety of the food supply. Groundwater quality is of concern—over 95 percent of our rural residents and 50 percent of our urban residents use groundwater for drinking water.

Today's families are challenged by far-reaching demographic, economic and social changes. Changing technology, which has given us an ever-higher standard of living, continually alters the job market and results in painful periods of adjustment in employment and family well-being. A state and national focus on food and health has changed consumer attitudes about nutrition and food. There is an increasing number of elderly in the general population. There is also concern about divorce, teenage pregnancy and unemployment. The number of individuals living in single parent, single individual and multigenerational homes is increasing as the numbers of women in the work force increase. There is also concern about child abuse and substance abuse—drugs, alcohol and tobacco. Economic revitalization, particularly in rural areas and communities, is of vital concern to all Kansans.

This listing of societal problems facing the citizens of Kansas and the nation is not intended to express discouragement, but to demonstrate the need for university-based research and educational programs which will help individuals, families and communities cope with change in an ever-moving society. Indeed, those in Cooperative Extension take pride in helping adults and youth recognize and anticipate problems, identify solutions, obtain accurate and relevant information and meet changing needs.



## Cooperative Extension Service Developments

The *National Scope Report* in 1958, reorganizational efforts in Cooperative Extension in 1961, a policy statement by the director of extension in 1969, establishment of area extension offices in 1969–73, a national study, *A People and a Spirit* in 1966, the 1983 *Extension in the '80s* report of a joint study committee appointed by the Secretary of Agriculture and the president of the National Association of State Universities and Land-Grant Colleges, a marketing committee report in 1986, organization of model research–extension centers in 1987 and the 1987 *Agriculture 2000*, *The Kansas Plan* report have all played a role in adjusting programs in the Kansas Cooperative Extension Service to meet changing needs.

A number of important program and organizational changes have been implemented to improve effectiveness and efficiency over a period of years. A selected chronology of those events is listed below:

**County Extension Council:** The County Extension Council has a legal mandate to organize and conduct instructional programs in agriculture, marketing, home economics, 4-H and youth work, community and resource development and economic initiatives for county residents. Operating funds are provided by county tax, using mill levy limits specified in K.S.A. 79–1947. The budget procedure is outlined in the County Extension Law.

**Forestry:** The Legislature established a commissioner of forestry in 1887 and a state forester in 1910. In 1951 the assignments of state and extension forester were combined. Extension programs enhance the state's forest resources, including rural fire protection and tree improvement, community forestry, forest management and forest utilization and marketing. Extension forestry is funded by state and federal funds.

**Kansas Extension Homemakers Council:** The Kansas Extension Homemakers Council, representing homemaker councils in each county, was organized in 1938 to develop and promote educational programs in citizenship; family life; safety; cultural arts, textiles, and clothing; housing, energy and environment; family resource management and international understanding. The first extension homemaker units were organized in 1921.

**Extension Farm Management:** The Kansas extension farm management network covers every county in Kansas. Established between 1930 and 1949, the six farm management associations are jointly financed by extension and cooperating farmers. Farm management fieldmen advise members on record-keeping, record analysis and other business and management skills. Records kept by over 3,400 association members provide a comprehensive data base.

**Community Development:** Programs in community development were started in 1955 to assist communities and community leaders in obtaining research-based information, factual data and leadership skill to enhance the social and economic well-being of communities. Early emphasis was on developing leadership skill, organizing problem-solving community organizations and providing program development and management assistance. Extension works with the State Department of Commerce in sponsoring PRIDE, a two-pronged



educational and community action program. Thousands of citizens and hundreds of communities (360 since 1970) have participated in this statewide community action program.

**Organizational Development:** To improve information delivery, the Cooperative Extension Service was reorganized in 1961-62 to produce a more efficient, responsive and cost-effective organization. Nine broad program areas were established and area operations across the state were realigned. All programs were placed under the supervision of assistant directors for agriculture, home economics, 4-H and youth and community development.

**Nutrition Education for Low-Income Families:** The Expanded Food and Nutrition Education Program (EFNEP) was established in 1969 with federal funding. The EFNEP program is targeted to low-income families and annually helps over 2,100 families and 10,446 youth improve their diet, health and resource management skills through nutrition education. Available funds now limit this program to four counties although it was once available in 22 counties.

**Area Extension Offices:** Area extension offices, each with a core of extension specialists, were organized in Garden City, Colby, Hutchinson, Chanute and Manhattan between 1969 and 1973 to provide more rapid, in-depth response to extension agents and to farm, family and community needs. Where possible, specialists in crops, livestock, agricultural economics, home economics, 4-H and youth, community development and forestry are assigned to area offices. Those changes were effected after consultation with legislators and county extension leaders.

**Program Thrusts for the '70s:** Major program thrusts for the '70s were outlined by the director of extension in a policy statement in 1969. Major thrusts included: animal production and utilization; food, feed and forage production; service to agribusiness; management on commercial farms; and resource use and conservation.

**Pesticide Applicator Training:** Producers are trained through the Pesticide Applicator Training Program to protect the environment, apply restricted-use pesticides safely and become certified private or commercial pesticide applicators. The program, conducted cooperatively with the State Board of Agriculture, serves over 3,500 commercial applicators and 30,000 private applicators and helps producers satisfy the requirements of state and federal law.

**Pesticide Impact Assessment:** Cooperative Extension responds to state and federal requests for information concerning any pesticide in any phase of regulatory action including cancellation, special review or suspension.

**Public Policy Education:** The Extension Public Policy Education series was instituted in 1971 to address crucial questions on fiscal, monetary and natural resource policy. The objective of public policy education is to inform rather than to advocate, i.e to present factual data, identify alternative solutions, suggest probable consequences and facilitate decision-making. Topics treated in the public policy series have included: financing state and local government; tax alternatives; water policy; reappraisal/classification; use-value appraisal; options for the '85 farm bill; and family and consumer issues.



**Quality of Living Programs:** In the mid 1970s, home economics adopted a problem-solving approach to program planning and delivery. Programs centered on six broad areas: human nutrition, consumer concerns, children and families, family housing, family health and safety, and community development, including leadership development.

**State Advisory Council:** The 20-member State Extension Advisory Council serves as a consultative group to the director of extension. Each member is a chairman of an executive board of a county extension council and a member of the area extension advisory council at the time of election. Council members are experienced in planning, staffing and funding county programs and provide insight concerning state program needs.

**Energy Extension:** The Kansas Energy Extension Service has served energy consumers since 1980. The Cooperative Extension Service operates the U.S. Department of Energy program jointly with the College of Engineering under contract with the Kansas Corporation Commission. Educational programs assist home owners, tenants, businesses, industries and institutions in managing and conserving energy.

**Computerization:** The Computer Systems Office was established in 1983 to support system-wide computerization efforts in Cooperative Extension. Support functions for user services, software development and software documentation were established. A comprehensive computer policy and master product set were also adopted. Since 1983, microcomputers have been placed in all state and area extension offices and in 75 counties. In a remarkably short time Kansas became a leader in software development. Because of that leadership, 18 states have entered into software-sharing agreements with the Kansas Cooperative Extension Service.

**Renewable Resources:** Kansas' renewable resources include 16.9 million acres of grazing lands, 2.24 million acres of tame pasture, about 3 million acres of annual forages and 1.5 million acres of forest. Congress passed the Renewable Resources Extension Act (RREA) in 1978 to improve the management and productivity of renewable resources. RREA funds first came to Kansas in 1985, making possible expanded extension management programs for grazing lands, forest lands and wildlife.

**FACTS:** Since July 1, 1985 the Farmers' Assistance, Counseling and Training (FACTS) program has responded to 22,000 calls for assistance from about 4,500 financially distressed farmers, families and agribusinesses. Each caller is individually counseled or referred to a qualified agency or professional for assistance. The FACTS program, located on the campus of Kansas State University, is conducted cooperatively by the State Board of Agriculture and Cooperative Extension.

**Planning for the Future:** Extension commenced a two-year, in-depth analysis and assessment of its mission and future role in 1985. A marketing strategies committee was charged with analyzing demographic changes to determine whom extension would serve in the future and their most probable problems, concerns and interests. The committee analyzed data, interviewed key leaders and extension personnel, conducted general opinion surveys and met with



influential leaders. The committee also presented comprehensive training sessions for all extension professionals at the 1986 Annual Extension Conference and at the 1987 Spring Planning Conference.

**Survey of Critical Family Concerns:** In 1986, 3,795 Kansans in 93 counties responded to a survey to determine the critical concerns and program needs of Kansas families. The survey was developed by specialists in extension home economics and administered by county extension program development committees. Priorities identified include: managing on a reduced income, overcoming personal and family crises, stress reduction, recreation, developing a healthy lifestyle and understanding public issues.

**DIRECT:** A single telephone call to DIRECT (Development Information: Referral, Coordination and Training) will provide immediate help to individuals or communities with specific economic and business development questions. The need for a single-point-of contact program was expressed by individuals, government agencies and farm and community organizations. The extension program was established in 1987.

**Agriculture 2000, The Kansas Plan:** Early in 1987, a select group of citizens, The Agriculture 2000 committee, was asked to prepare a blueprint of citizen expectation for the Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service through the next decade. The committee prepared recommendations which it felt would best serve the state, strengthen economic performance, assure environmental quality and preserve the resource base. To provide an even broader opinion base, 325 citizens responded to a public invitation to review the draft recommendations and make suggestions at public response meetings held at Manhattan, Iola, Garden City, Hoxie and Hutchinson.

Numerous other changes have been effected in the Kansas Cooperative Extension Service in recent years. Those changes demonstrate Cooperative Extension's mission orientation and its willingness and capability to respond to new needs and provide new programs.

The Kansas Cooperative Extension Service—with its headquarters at Kansas State University, its five area offices and 105 county offices—has always been a citizen-directed organization. Working closely with citizen groups is built into its mission of taking practical education from the University to the people; into its funding partnership of federal, state and county government; into its close working relationships with 105 elected county extension councils; and into its many citizen advisory boards, both elected and volunteer.

The Cooperative Extension Service provides a comprehensive, statewide educational network with agents in every county and specialists located in five area offices and at Kansas State University. Extension has an excellent reputation for cooperating with other agencies and organizations and has worked closely with the State Board of Agriculture, State Department of Transportation, Agricultural Stabilization and Conservation Service, Soil Conservation Service, U.S. Forest Service, Farmers Home Administration and many other farm and community organizations and government agencies.



## Program Planning and Delivery

A. F. Lever, one of the founders of Extension, said, "The extension agent is to assume leadership in every movement—the aim of which is better farming, better living, more happiness, more education, and better citizenship." Extension agents and specialists are to help people help themselves in an informal, out-of-school setting; provide practical and useful information to help people learn; understand and solve their problems; and meet the educational needs of people with quality information, effectively and efficiently taught.

First and foremost, extension agents and specialists are:

**Educators**—who provide sound, research-based educational programs and assist in translating research findings into workable strategies.

However, agents and specialists are also:

**Advocates**—not advocates for any particular farm, industry or government recommendation; rather, they are advocates for education, factual data and for farm, family and community improvement.

**Mediators**—who provide an educational setting where facts, opinions and alternatives can be explored in a problem-solving format.

**Organizers**—who help people identify problems and organize to meet their needs.

**Development specialists**—who explore opportunities for economic or social progress in the community, county or state.

**In-service training:** Extensive training opportunities are essential for extension professionals because they must respond accurately and promptly to a variety of environmental, financial, production, marketing, economic development and family issues. The clientele they serve expect agents and specialists to have rapid access to pertinent research and factual materials through the land-grant university and federal extension system. Effective in-service training is, therefore, an important component of an effective extension delivery system.

New extension agents receive a combination of orientation, communication, on-the-job, and in-service training during their first year of employment. The first four weeks of employment are spent with an experienced "trainer agent" in becoming familiar with county procedures, clientele questions and information sources. New workers also receive a one-week orientation period and a one-week communication training period at Manhattan during their first year. Orientation training for specialists is planned according to individual need by each department or extension unit.

It is essential that agents regularly attend in-service training in various subject matter areas. In-service training is organized by departmental or interdisciplinary teams of extension specialists and University research faculty to keep



agents current with research or industry developments and to meet emergency needs. Specialists keep abreast of the latest technology by participating in scientific meetings and workshops.

**Program planning:** Extension educational programs are planned, implemented and evaluated by the citizens of Kansas through their elected organizational or individual representatives and by extension educators. The basic objective is (1) to identify the priority educational needs of citizens or groups of citizens and (2) to meet those needs with research-based educational programs.

The duty of the elected 24-member county extension council is to plan educational programs for the county. Each county elects four groups to represent the educational needs of their citizens in agricultural pursuits, home economics work, 4-H and youth work and economic development initiatives. Each of the four groups becomes a program development committee for their respective areas of responsibility. County plans of work are implemented after approval by each county executive board.

The director of extension is charged with providing well-trained specialists, leaders in their respective disciplines, to plan and deliver effective educational programs that will keep citizens informed, up-to-date and, where appropriate, competitive and able to make a profit.

Extension agents work directly with elected program development committees to review the county situation, identify major problems and set county educational goals. Simultaneously, Kansas State University extension specialists study trends in technology, gather and analyze pertinent data and assist in identifying educational needs that may not be recognized at the county level. These two planning efforts come together as (1) agents communicate county program needs identified by county representatives and (2) extension specialists provide proposals for possible programs.

County, area and statewide programming priorities are finalized in a series of personal or group conferences among specialists, state program leaders and agents. Extension agents are a vital communication link between the county program development committee and other extension educators. Written plans of work are prepared by all extension professionals.

**Program delivery:** The genius of program delivery in the Cooperative Extension Service is in utilizing the expertise of land-grant universities through an effective state, area, and county delivery system to help the citizens, families and communities of Kansas solve practical, day-to-day problems. Information delivery (technology transfer) is the heart of the Cooperative Extension system. Extension agents and specialists, acting individually or as issue-focused teams, organize priority educational programs for local delivery. Because they are jointly planned by extension educators and by citizens specially elected for that purpose, extension educational programs focus on important needs for people in each county.



Many innovative delivery methods have been used to make programs forceful, informative and pertinent for local decision-makers. Farmer institutes, where professors taught the science of agriculture in local communities, started an enduring educational trend. Farmer institutes and college days for women were soon supplemented with "moveable schools" or short courses, conferences, camps, workshops and seminars and expanded to reach audiences interested in the many phases of agriculture, family resource management, youth and community development. Those programs now enroll one of every four Kansans from 7-17 years of age in 4-H and youth programs, engage 80 Kansas cities each year in comprehensive community improvement programs and provide information to virtually all farmers and a majority of the families in the state.

Demonstrations, tours, field days, and discussion groups are used to help interested individuals compare and analyze actual research results and production and management practices in a working environment. Agents and specialists often participate in statewide conferences, county fairs and workshops to keep interested citizens informed.

Extension professionals and experiment station faculty have spearheaded efforts to help people organize and to provide information, expertise and services not otherwise available. Farm management; family financial management; live animal, sire and carcass evaluation; crop performance and certification; soil testing; insect and disease diagnosis; and plant identification services have been organized in response to expressed need. Numerous farm, family and community action groups have also been organized to serve families and communities.

Almost 38,000 volunteer teachers and leaders provide a multiplier effect and greatly extend the educational impact of most extension programs, particularly for 4-H and youth and home economics. Their help provides educational programs for audiences that could not otherwise be reached. Participating volunteers benefit directly by improving their own management, leadership and communication skills and by achieving new educational goals.

Bulletins, flyers, posters and other printed materials are essential in extending and delivering information. Publications are used to inform Kansans about scientific and human resource developments, government programs and environmental regulations, economic and community management developments, new crop advances and improved management practices. "Desktop" publishing techniques (microcomputers and laser printers) have been installed to minimize printing costs.

The Kansas Cooperative Extension Service is a leader in the use of radio, computer and other electronic media for rapidly disseminating information to large audiences. Radio Station KKSU, the first educational radio station established west of the Mississippi, is operated by Cooperative Extension. TELENET, the Regents Continuing Education Network, a teleconferencing system with 37 outlets, can be expanded to 59 locations using a conference bridge. Microcomputers are already in place in 75 counties. A Cooperative Extension micro-computer network, the "Sunflower Dispatch," will link computers in state, area and county offices, provide for microcomputer transmission of data and text and facilitate use of computer-based decision-making aids and educational programs.



Kansas State University, through a federal grant, will establish the first Regents Satellite Educational Communications Center. The center, with capability to produce and transmit educational television via satellite, will greatly expand Cooperative Extension's ability to reach large audiences with timely, cost-effective education. The Cooperative Extension Service is the state's educational leader in the production and distribution of education via satellite. Several pilot programs including "Heartache in the Heartland," an extension home economics program to help children through the rural crisis, and "Reappraisal and Classification of Property Taxes" were produced last year. Additional programs are planned for this coming year.

All county offices are equipped with video cassette recorders and it is anticipated that satellite receiver dishes will be added to these learning centers. The use of educational television, production of videotapes and electronic transmission of educational materials is expected to increase significantly.

In the future, greater emphasis will be placed on rapid communication using radio, microcomputer, satellite and electronic transmission. Concurrently, the science and technology associated with agriculture, community and economic development and social change will be more demanding. Tomorrow's specialists will need better training and greater knowledge about biotechnology and biology, finance, community action, human development and family resource management. That depth of expertise will be essential in maintaining the competitive position of Kansas families, farmers, businesses and communities.



## **Issue-Based Planning**

The Kansas Cooperative Extension Service, utilizing its county extension councils, marketing strategies committee, program staff and advisory committees, has just completed its regular four-year plan of work. While program planning is a continuous process, a major reorganization of program planning and coordinating efforts began in 1985. As a result, an interdisciplinary, issue-driven orientation has developed which focuses on four priority programs:

### **Agricultural Profitability and Competitiveness**

### **Economic Revitalization**

### **Human Health and Well-Being**

### **Developing Human Resources**

The proposed educational programs for each of the four areas are described below. In addition, agents and specialists also respond to requests for educational assistance originating from individual citizens, county program development committees, and from farm, commodity, community and industry groups. Many of those requests complement on-going programs but others must be specially planned and implemented.

## **Agricultural Profitability and Competitiveness**

Agriculture—including soil and water conservation and the production, protection, processing and marketing of crops and livestock and crop and livestock products—is a traditional target of research and extension programs in land-grant universities. Program goals at various times have been to enhance efficiency; develop and improve market opportunities; assure environmental quality; improve leadership and resource management and, with renewed emphasis, improve the competitiveness and profitability of agriculture.

Competitiveness and profitability again became critical issues during the 1980s. In the 1970s, domestic markets for food and fiber were strong and U.S. exports of agricultural commodities expanded to record levels. The production from 4 out of every 10 acres of America's farmland was sold to foreign buyers. Agriculture was profitable as net farm income rose sharply in 1973 and finished the decade at more than twice the levels of the late 1960s.

The 1980s, however, brought a reversal of U.S. monetary and fiscal policies. These policy changes triggered a domestic economic recession followed by a world-wide recession and an abrupt change in the profitability and competitiveness of U.S. agriculture. During the 1970s, farm debt tripled as farmers borrowed heavily to expand production capacity and supply growing export demands. Farm assets, primarily land, tripled in value, allowing many producers to use inflated land value as collateral for loans to meet cash flow requirements. Overall debt-to-asset ratios for agriculture remained at a conservative 16 to 17 percent during the decade of the 1970s. However, net farm income dropped from \$27 billion in 1979 to \$16 billion in 1980 and \$13 billion in 1983. Rising debts and falling assets pushed debt-to-asset ratios up from 16 to 17 percent to an average of 25 percent.



Surveys indicate that roughly one-half of all U.S. farmers have no significant long-term debt. On the other hand, roughly one-half of all farm debt is concentrated in 10 to 15 percent of all farming operations. Thus, about half of all U.S. farmers face no immediate financial threat while 10 to 15 percent are on the verge of forced liquidation. The other 35 to 40 percent are facing varying degrees of financial stress. Net farm income has returned to \$30 billion-plus levels since 1984, but government programs account for more than half of current net farm income.

A good producer could prosper in farming in the economic environment of the 1970s, but greatly increased business skill is required to farm successfully in the 1980s.

Most rural communities in Kansas are dependent on the economic activity of surrounding farms. Rural communities supply farm equipment, financial and other services and market and process farm commodities. When the farm sector is profitable, rural communities prosper and grow. When the farm economy is depressed, rural families and communities suffer severely.

### **Farm and Resource Management**

The Cooperative Extension Service is moving to improve the competitiveness of Kansas agriculture. Many farm management programs now focus on farm financial analysis using workshops and microcomputer software so farmers can use their own farm data to improve farm financial analysis, whole farm planning and marketing strategies. Using those techniques and FINPACK microcomputer software, over 2,500 participating farmers found that potential cash flow could be increased an average of \$8,000 per farm by making appropriate changes in farm management procedures.

While significant, those financial improvements are dependent on timely, well executed crop and livestock production procedures. Key management practices are receiving renewed emphasis in educational programs organized by each of the 13 program coordinating teams in agriculture.

While there is great statewide concern about the farm financial situation, there is also deep concern in both rural and urban areas about assuring environmental quality, minimizing or optimizing the use of agricultural chemicals and preserving the resource base. Consumers want every assurance of being supplied with high quality, safe and nutritious food and water.

The United States and Kansas are part of a global economy and Kansas farmers must compete with the technology, climate, soils and labor costs available to farmers in other states and other nations. If our farm and rural economy is to prosper, Kansas farmers must be in position to adopt the latest technological and management advances available in the state or world-wide. The Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service will play a significant role in discovering, validating and informing farmers and businesses about needed technological innovations and advances.

### **The Role of Cooperative Extension in Agriculture**

1. Analyze applicability and profitability of new and existing technology consistent with an integrated production, financial and marketing system.



2. Teach agricultural producers management skills which are essential in integrating production, financial and marketing decisions for maximum profit in a continual, organized, educational effort.
3. Assist agribusiness to improve management skills to respond to changing markets and producer needs.
4. Assist producers in understanding the various government and institutional constraints that relate to farm business so they can make profitable decisions on long- and short-run adjustments.
5. Help producers develop their planning, accounting, credit use and financial management skills.
6. Work with farm, commodity and media organizations to extend land-grant research and extension information.
7. Assist farm families in managing personal, financial and community resources.

### **Restoring Agricultural Competitiveness and Profitability**

Kansas extension has begun a series of programs to meet the challenge of restoring competitiveness and profitability to Kansas agriculture.

- Four-day interdisciplinary Target on Profit workshops for county and area staff were instigated in 1986. This training, designed to help agents in their efforts to help farmers track the economic consequences of production and management decisions, will be intensified and expanded.
- Farm financial planning and analysis workshops, utilizing microcomputers, will continue to be made available to individual producers in every county. Producers can participate in the workshops, obtain one-on-one assistance, and test the effectiveness of their farm and financial management procedures utilizing their own farm data.
- Marketing and financial analysis procedures are being integrated into each crop and livestock program.
- The 13 commodity-based task forces will assume leadership in integrating production, financial and marketing procedures into teachable and extendable programs concerning the major Kansas enterprises. The emphasis is on making farmers and ranchers competitive and profitable.
- Agent and specialist teams have intensified efforts to ensure that cost-effectiveness is an integral part of the educational effort associated with every recommended technology and production practice.
- The use of new and cost-effective communication efforts—computer programs, TELENET and satellite information delivery—is being expanded.
- Extension organizations have been restructured to facilitate budgeting, program structure and interdisciplinary delivery of information and educational efforts.
- Grant procurement to supplement limited funds and expand important programs has been intensified.



- Extension assistants will be utilized to economically extend program impact, increase the number of people served and train future leaders.
- A Balanced Farming and Family Living pilot program will be developed to assist financially stressed and dislocated farm families.

## **Economic Revitalization**

Economic revitalization is a primary concern for state and local officials and citizens. That concern is heightened by an economic downturn in the agriculture and petroleum sector including the closing of 37 Kansas banks since 1984. Both the public and private sectors are working to solve problems of lack of quality jobs, farm and agribusiness stress, out-migration and population declines, loss of main street businesses, development and financing of new businesses and processing of agricultural products.

Rural communities have faced a declining population, economic base and infrastructure for many years. However, in a depressed agricultural economy, the survival of many rural families depends on the economic vitality of rural communities, particularly the off-farm income generated by jobs in other sectors.

Communities provide four basic functions. They meet economic, service, social and living needs of their people. Large cities provide all these functions but some small communities are hard-pressed to provide any of them. Extension programs in economic revitalization are designed to help families and communities assess their resources and develop an appropriate development strategy.

To remain viable, communities must diversify their economic base, add value to the products they sell and provide for adequate quality of life with needed facilities and services. For example, a four-person household normally spends \$24,520 annually on food and clothing, housing, health care, insurance and other services.

Cooperative Extension will continue to play a significant educational role in economic revitalization as agents and specialists help to provide economic and social perspectives, increase the knowledge base for individual and community decisions, develop skills to achieve individual and community goals, and shape the decision-making environment.

### **Community and Economic Development Goals**

Extension has identified six important community and economic development goals which will be directly supported with educational programs in economic revitalization.

- Maintain and enhance the profitability of rural businesses, including agriculture and natural resource-based enterprises.
- Improve cost-effectiveness, maintain community facilities and services and strengthen the decision-making process in local government.
- Find alternative uses for rural resources; diversify the rural economic base; support local value-added enterprises; and develop new sources of employment and income.



- Expand the pool of quality leadership and utilize volunteer community leaders to provide for local needs.
- Facilitate beneficial change by rural communities, families and individuals; strengthen family support networks; help consumers adopt needed institutional arrangements; and assist families to assess their human and economics resources and achieve their personal goals.
- Foster an understanding of the impact of natural resources on the quality of both urban and rural life and facilitate the assessment and development of economic development and public policy.

### **Educational Programs**

Individual and community action programs are designed to:

- Help decision-makers analyze trends and resources, identify problems and opportunities, set goals, develop a strategic plan and find state and regional agencies that can offer technical assistance.
- Assist in mobilizing volunteers and expanding the pool of quality leadership. The Kansas PRIDE program is a community self-help program with a strong economic development element. The PRIDE program, operated jointly by extension and the Kansas Department of Commerce for 17 years, is designed to maximize volunteer action and develop community leadership. More than 360 of the state's 627 cities have participated in the PRIDE program. Downtown revitalization and job creation will continue as a major emphasis in future PRIDE programs.
- Link individuals and communities with sources of economic and business development information through the DIRECT network.
- Develop, with counterparts in other states, economic analysis techniques that help measure economic vitality and suggest economic development options.
- Organize, cooperatively with the Kellogg Foundation, leadership programs including family-community workshops on public policy and decision-making.

Business management and development programs are designed to:

- Expand or retain existing businesses by helping owners and managers utilize basic principles of management, marketing, personnel and finance to remain competitive and profitable. Extension cooperates with representatives from Small Business Development Centers and other agencies that can offer technical assistance.
- Help organize and conduct community-wide business retention and expansion programs based on business, resource and community surveys and specially developed educational programs.
- Support business development using analytical procedures to determine trade area, consumer buying patterns and trade potential analyses.
- Improve the educational, technical and business skills of owner/managers of home-based businesses.



Consumer and lifestyle decision-making educational programs are designed to help youth and adults:

- Improve their decision-making skills in the selection, use and maintenance of goods and services required for family and economic well-being.
- Adopt improved risk management, consumer credit, retirement and estate planning and financial management strategies.
- Set goals and balance the use of time, energy, money and resources to maximize family and individual satisfaction.

Career and income decision-making educational programs are designed to help youth and adults:

- Adapt their skills, resources and needs to the job market and income earning options. It is projected that at least 1,000 individuals will participate in the program with 75 percent establishing new jobs or careers.
- Participate in job search seminars. At least 70 extension agents will be trained to conduct educational programs in career and job seeking.

## **Human Health and Well-Being**

Kansas families are currently experiencing rapid and, in some cases, severe societal and economic change. New attitudes and economic pressures have put over 50 percent of the female population in the work force. More than two-thirds of mothers with children 6–17 years of age work outside the home. Higher divorce rates, higher average age at marriage and increased lifespan (13 percent of the Kansas population is now elderly) has dramatically changed family size and composition.

An increasing number of American children grow up in families unable to provide the care and guidance essential for emotional and social development. In addition, family stress levels often rise when adults must simultaneously care for children and elderly parents and fulfill competing family and work responsibilities. For children, the result is often stress, immaturity, deprivation and dislocation. Health, safety and affordable housing continue to be of concern to Kansans.

There is increasing concern about food safety and the role nutrition plays in low birth weight and infant mortality, obesity, heart disease and cancer. More individuals die in the first year of life than during any year until age 65 but adequate nutrition, before and after pregnancy, greatly reduces the risk of low birth weight and infant mortality. About 24 percent of women and 18 percent of men are more than 20 percent overweight and subject to increased morbidity and mortality. Abuse of drugs, alcohol and tobacco is also a pervasive concern.

Many of society's problems associated with health, nutrition and wellness are best solved by education. Kansas State University is particularly well equipped to provide educational programs in these areas.

### **Human Health and Well-Being Issues**

The Kansas Cooperative Extension Service will address the following issues in its next four-year planning cycle:



## 1. Health, diet and lifestyle

In cooperation with other public and private organizations, food, nutrition, health and exercise education is being provided to facilitate adoption of recommended dietary practices and improve the nutrition and health status of youth and adults. Educational objectives include:

- Decreased health care costs and improved quality of life.
- Decreased incidence of nutritional disorders, disease and stress from low birth-weight infants, hypertension, heart disease, cancer and diabetes.
- An improved diet for low-income families and commodity food recipients. The Expanded Food and Nutrition Education Program (EFNEP), directed at low-income families and youth, will be continued.

## 2. Safety, composition and quality of the food supply

Assuring the safety of the food supply is increasingly complex because of the use of interrelated technologies and public concern for food safety and wholesomeness. Consumers, producers, processors and handlers will be the audience for this two-pronged educational program designed to:

- Help consumers to more effectively assess the safety and inherent risk of prepared and processed food.
- Decrease the incidence of foodborne diseases and organisms.
- Alert consumers and producers/processors/handlers to food safety issues related to potentially harmful chemicals, residues and production techniques.

## 3. Health care and housing arrangements

Many families (elderly, single parent and multigenerational households) are faced with rising costs for housing and medical care. Educational programs help impacted families minimize costs through:

- Adopting healthy lifestyles.
- Selecting and using health and disability insurance.
- Planning for in-home or long-term health care.
- Evaluating alternative ways of meeting shelter needs and maintaining environmental quality.

## 4. Substance abuse

Extension educational programs provide useful methods which help parents and youth open communication, build self-esteem and provide a positive setting for decision-making. The educational program will:

- Improve interpersonal communication skills and increase feelings of self-esteem.
- Help youth identify positive lifestyles.
- Reduce substance abuse.



## Developing Human Resources

Today's families are challenged by rapid-paced demographic, economic and social changes. Those changes include: (1) increasing numbers of elderly citizens; (2) increased numbers of single parent, single person and multigenerational households. (3) more women in the labor force; and (4) increases in school drop-out rates and teenage pregnancies. By the year 2020 it is predicted that 75 percent of women with children 6-17 years old will work outside the home, and one in every two families will be headed by a single parent.

In Kansas, 256,000 children live in multiple-earner families. More than 85,000 Kansas children live in one-parent homes where economics, time overloads and a shortage of caregivers make it difficult to provide after-school care. Extension will address this need in developing educational programs for 4-H and youth and home economics.

Our state's economic productivity, democratic character and quality of life depend, ultimately, on the capabilities of our people. Human resources include time, energy, skills, knowledge and self-esteem, as well as community support and interpersonal strength.

### Human Development Issues

The Cooperative Extension Service will address the following issues in its next four-year programming cycle:

#### 1. Community leadership and policy decisions

Educational programs will continue to be organized so community leaders and citizens can develop a broad understanding of public issues, leadership styles and skills for influencing and developing policy decisions. Educational objectives include:

- Development of the Family Community Leadership program. Participants will develop leadership skills, participate in community activities and strengthen local organizations.
- PRIDE program participants are being helped to improve community participation, problem identification, problem-solving and program evaluation.
- 4-H and youth programs, utilizing trained volunteers, will instruct youth in decision-making and self-concept principles.

#### 2. Financial stress and family dislocation

Many families are faced with stress and dislocation resulting from the loss of a job or farm, divorce or death. Families and individuals will be helped to recognize and manage economic or social stress and improve their job search and self-assessment skills.

- Strengthen and develop local support and counseling systems such as "Friends InDeed: Strengthening Helping Skills" program.
- Establish a community-based system which supports job search educational programs for family members moving into the labor force.



- Implement, with the National Association of Counties, a pilot program on rural mental health.
- Develop educational programs in money management, consumer purchasing and consumer economics for youth.

### 3. Care for the elderly

Volunteers are being trained to become more skilled at providing information to the caregivers of elderly citizens. The program will provide instruction in:

- Stages of adult development and aging, informal caregiving for the elderly and involving the elderly in family and community activities.
- Decreasing stress, maintaining independence and utilizing the talents and abilities of older persons.
- Volunteer information referral programs to provide appropriate and accurate information to caregivers of the elderly.

### 4. Care for children

This program assists parents with the care, guidance and discipline of children (ages 8–12). Parents, neighbors, volunteers and professional caregivers will be assisted in becoming more knowledgeable and skilled at providing care and support for children when they are home alone. Program goals include:

- Improving decision-making and communication skills and reducing stress, particularly in young families, which are most at risk.
- Increasing children's competence and feelings of capability in caring for themselves when home alone.
- Improved parental understanding of the support needs of children when they are home alone.
- Making community leaders aware of policy issues related to parental care and child guidance.

### 5. Concerns for youth

Teenagers, ages 13–19, are being assisted in becoming skilled and knowledgeable leaders. The educational program envisions instruction in:

- Leadership programs to aid adults in developing young people's unique skills and abilities.
- Improved communication between young people and their parents.
- Increased understanding of human sexuality. This program represents a joint effort between professionals in extension home economics and 4-H and youth programs and the public school system.



## Future Direction

*Agriculture 2000, The Kansas Plan*, is a report of citizen expectation for the Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service through the next decade. Based on those suggestions and the planning efforts of extension specialists, the following long-range priorities are proposed:

### Agricultural Profitability

One strategy to ensure agricultural profitability and competitiveness is to encourage quick adaptation to scientific and technological advances as well as changes in domestic and international markets. It is a harsh reality that industries which adapt most quickly will have the competitive edge. For Kansas that means support for innovation and the application of science and technology for agricultural industries in which we have a comparative advantage—wheat, feed grains, beef and food and meat processing.

Crop and livestock production, which returns over \$6 billion in cash receipts and over \$16.5 billion in sales and services, provides the foundation of the state's agricultural economy. Those industries will be the building blocks from which new markets, new products and new industry will likely emerge in the agricultural sector.

Long-range priorities in agricultural profitability and competitiveness include:

1. Continued emphasis on competitiveness and profitability

Competitiveness is the ability to increase market share in domestic and international markets. Profitability is the ability to generate reasonable returns to investments in land, labor, capital and management. Educational programs directed at helping producers and businesses identify critical economic decisions and integrate cost-effective, technically sound practices into their production, processing and marketing procedures should be expanded.

2. Help assure an adequate supply of high quality, safe and nutritious food

In the short run, to maintain a comparative advantage for Kansas agriculture, consumers must be supplied high-quality, safe and nutritious food at a competitive price. However, if Kansas is to increase its market share, it must decrease production costs and compete aggressively in a world market. Simultaneously, new processing and new market opportunities must be developed to effectively utilize our vast production capability.

3. Cost-effective and rapid technology transfer

Extension should use rapid and cost-effective information delivery methods—radio, television, satellite, computer, video and printed and mass media outlets—to inform producers, processors, and the market system about technological advances and market and financial developments.



#### 4. Environmental quality

Although the effectiveness of fertilizers, pesticides and medicines in producing adequate supplies of low-cost food is well documented, there is increasing concern about the safety of our food supply and the quality of our natural resources—soil, water and air. Cooperative Extension must play a leadership role in developing, testing and promoting environmentally sound agricultural systems—systems that foster profitable agricultural production while preventing environmental contamination and non-point pollution.

#### 5. Product and market development

Kansas, ranking sixth in the U.S. in agricultural exports and seventh in cash receipts from farm marketing, dominates the nation's agricultural economy far out of proportion to its population. However, the state's ability to fuel economic development will depend on its ability to increase market share, develop new products and find expanded markets. Educational efforts directed at marketing, processing and utilizing Kansas meat, grain, horticulture and other agricultural products should be intensified.

#### 6. Resource preservation

Because soil, water and fuel resources are crucial to agricultural production and rural revitalization, Kansas must protect and maintain its natural resource base. The development and adoption of crop, livestock and soil management systems that optimize the use of soil, water and natural resources in both rural and urban settings while preventing erosion and environmental contamination should be emphasized.

#### 7. Improved farm, financial and management analysis procedures

Kansas has emerged from a production into an economic management era. Financial management skills are key ingredients in making a farm or business competitive and profitable. Cooperative Extension should develop and disseminate computer- and budget-based strategies to help farmers and businesses track the economic consequences of management and marketing decisions.

#### 8. Maintain a science and technological base

Profitability and competitiveness for agriculture and rural communities will, increasingly, depend on rapid adoption of the latest developments in science and technology. The Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service should provide the research and discovery capability and the information delivery and extension outreach required to maintain a competitive edge for Kansas farmers, agribusinesses and the families they support.

### **Economic Revitalization**

Of the 627 cities in Kansas, 532 have populations under 2,500. They total only 13.5 percent of the Kansas population and include 49 of the 105 county seat cities. The role of farming in the rural community is changing because there are fewer farming-dependent counties. Likewise, the change to regional or discount merchandising has left many small cities behind. However, with the downturn



in the rural economy, there is a greater need for job opportunities in rural areas. Most communities need to assess their community resources and implement an appropriate development strategy and an effective development structure.

Long-range priorities in economic revitalization include:

1. Strengthening community and economic development strategies

The five basic strategies for economic development include: (1) retain existing firms, (2) create new firms, (3) bring in outside firms, (4) improve linkages (multiplier effect) between local firms, and (5) capture outside dollars. Extension programs should help communities use those strategies more effectively. Particular emphasis should be directed toward expanding or retaining existing firms, mobilizing community volunteers and supporting business and value-added development. The link between the University and the private sector should be improved by providing rapid access to economic and business development information. The DIRECT program is an example.

2. Expand extension agent capability in economic development

The 1987 Legislature mandated the election of six members of each county extension council to represent educational programs in economic development initiatives. To build on that organizational foundation, extension agents are being trained to more effectively assist communities and county extension councils in developing educational programs in economic development.

3. Community resource assessment

Each community provides unique economic, service, social and living resources for its residents. Extension specialists, working with agents, should help local development groups analyze trends, community attitudes, economic potential and consumer buying patterns. Small business workshops should focus on starting home-based businesses, developing customer relations, tourism and marketable skills.

4. Local government

Demands for county and city government services and facilities are increasing more rapidly than available resources. Cooperative Extension should develop educational programs that will improve local officials' access to decision-making aids, technology, data and information systems and management alternatives.

5. Families and consumers

Families and consumers influence economic development by the places they choose to shop, family and community goals they set and the leadership and community service they render. Interdisciplinary educational programs should be designed to help consumers analyze their purchase and time use options and the economic consequences of each choice on the family and the community.



## Human Health and Well-Being

The relationship between the economic success of the food industry and the nutritional quality and safety of the food supply is becoming increasingly intertwined. New knowledge suggesting diet as a risk factor in health problems has had two consequences: demand for agricultural products has changed, and demand for reliable and authoritative advice about dietary practice has increased.

Deteriorating financial conditions in the agricultural economy are causing economic hardship in many rural areas. Those changes have been accompanied by loss of jobs, divorce, changes in family structure and living arrangements and increased child and parent abuse. Medical and health professionals point to stress as the number one family concern.

Long-range goals in human health and well-being include:

1. Health problems related to diet and lifestyle

Because of changing family lifestyles, conflicting nutrition information and the impact of diet on health, extension should intensify nutritional education programs for those most at risk—pregnant women, children, the elderly and low-income families. Educational programs should also address the incidence and control of heart disease, cancer, hypertension and obesity.

2. Food quality, safety and composition concerns

Consumer concerns about the safety, composition, and quality of the food supply is changing overall demand, distribution and packaging requirements. Educational programs for both consumers and producers should clarify those concerns and promote orderly changes in the food supply.

3. Escalating health care and housing costs

Because health care, housing and energy costs have steadily increased, educational programs should be directed at helping families control the costs of housing and medical care.

4. Substance abuse

Substance abuse—drugs, alcohol, and tobacco—is one of the most pervasive problems facing families and society today. Extension programs should focus on building self-esteem and self-confidence and adopting positive lifestyles, particularly for children and young adults.

## Developing Human Resources

Individuals and families are, increasingly, assuming a wide variety of traditional and non-traditional roles. Today's youth are facing new choices. Rural and farm families must deal with stress associated with farm and debt management difficulties. Scientific and technological literacy is increasingly important for people to function in the home, community and workplace. Additionally, the quality of life is significantly enhanced by a wide range of volunteer services.

Long-range goals in developing human resources include:

1. Community and adult leadership



Cities and towns depend on volunteer leadership to provide education and community services that would otherwise be unavailable. Educational programs should be directed at the technical, financial and social skills of volunteers who support economic development and community institutions and provide youth and adult leadership.

2. Youth leadership

Because today's youth are faced with new choices and a variety of community and peer pressures, 4-H and youth programs should focus on life skills. Leadership, communication, management, reasoning and decision-making are examples.

3. Job and self-assessment skills

Many economically stressed youth and adults on farms and in rural communities need to find jobs or upgrade their status in the workplace. Extension agents should provide educational assistance in job search and skill assessment so family members can successfully find employment and extend the family budget.

4. Family disruption and dislocation

Loss of the farm or job, divorce and death all cause family disruptions. Extension should provide research-based educational programs to teach family members how to manage the stressful event, identify resources and generate realistic alternatives for action. Effective job search and assessment of personal skills should be a component.



# Organization and Funding

## Funding

The original land-grant university concept—providing liberal and practical education for the working classes—requires that extension work closely with citizen groups to provide timely, factual information to help solve problems. State and Federal law provides for instruction in agriculture, marketing, home economics, 4-H and youth work, economic revitalization and community and resource development in each county.

Historically, the funding from county, state and federal sources was about equal, but counties are now the primary funding source. Although state and federal funds expended in support of county programs are substantial, counties pay an average of two-thirds of each extension agent's salary. Counties, then, are strong partners in making programming, personnel selection and duty assignments for extension agents.

The executive board of the county extension council and the director of extension appoint extension agents, determine their salaries and supervise their work. The knowledge and research base of the University is made available through 105 county offices, five area offices and offices at Kansas State University.

The sources of extension funds and extension agent salaries are listed below.

### Sources of Extension Funds, 1985–86

County	37.1 percent
State	31.4
Federal	21.2
Forestry	3.7
Other	6.6
Total	100.0 percent

### Sources of Extension Agent Salaries, 1986–87

County	66 percent
State	17
Federal	17
Total	100 percent

## Organizational Structure

Walter R. Woods is dean of the College of Agriculture and director of the Cooperative Extension Service and the Agricultural Experiment Station. Robert G. Helgesen is the associate director of extension (acting). Administrative support is also provided by deans and department heads in three colleges and thirteen departments, six assistant directors and five area directors. Coordinators administer two support units, staff and program development and the computer systems office.



Each county extension office is administered by a 9-member county executive board chosen from an elected 24-member council which is responsible for planning educational programs for the county. Five area offices are maintained to provide specialist assistance, program guidance and administrative support for counties. Six farm management associations cooperate with the Extension Service to jointly employ 23 fieldmen who provide management, marketing and financial management counseling to approximately 3,400 farm families.

Educational programs are delivered by local staff (extension agents) supported by state and area specialists. The "teaching" force is composed of 284 agents and 187 state and area specialists.

### **Staffing**

Because agriculture is a \$16.5 billion industry in Kansas, Cooperative Extension has made major commitments (56 percent of its specialists and 44 percent of the county staff) to economic development in producing, protecting, processing and marketing agricultural products. In addition, USDA and the agricultural industries have traditionally depended on the land-grant universities for research developments and extension outreach. Cooperative Extension is also the educational arm of USDA and provides programs which support the work of the Soil Conservation Service, Agricultural Stabilization and Conservation Service, U.S. Forest Service and other USDA agencies. Regulations issued by the Environmental Protection Agency, the Food and Drug Administration and other government agencies also have implications for agriculture and extension education.

Extension assigns 7 percent of its specialists, 13 percent of its county staff and intermittently utilizes agents in two-agent counties to support 4-H and youth work. Extension 4-H professionals not only work directly with youth but also organize and train 29,300 volunteers to assist the 92,000 youth enrolled in 4-H and youth. The focus of that training is leadership and life skills for youth and leadership for adults. County extension councils and thousands of volunteers manifest consistent support for youth work, and extension has responded efficiently and effectively to that need.

Forty-one percent of the county staff and 7 percent of the specialist staff are assigned to work in home economics. Over 23,000 individuals are participating in extension homemaker units and participate actively as volunteers in educational programs that support families, foster improved family decision-making and community improvement. The work volunteers contribute to educational programs in home economics is valued at approximately \$2 million annually. Programs are targeted to communities and to young, elderly and limited-resource families. The acquisition of grant funds has provided support for educational programs in balanced farming and family living, safety belt use, family-community leadership, job search training and training for caregivers of the elderly.

Four percent of the state specialist staff work in support of community development programs. That responsibility is shared among agents at the county level. With the election of program development committees in economic initiatives in each county, counties will, no doubt, redirect programs and personnel to meet commitments in economic revitalization. The availability of temporary



federal funds has allowed the development of programs to provide job search and economic and business development information and peer business and rural family counseling support.

The state's forestry program is supported by grant or fee funds (69 percent) and by state funds (31 percent). The Extension Energy Service and the Expanded Food and Nutrition Education program are totally supported by grant or fee funds. Extension utilizes 8 percent of its state specialists to support the information and communication needs of county, area and state staff.

County program development committees adjust the emphasis of educational programs to meet changing needs at least annually. These changes can be minor, but major changes are often required to cope with newly announced government programs, environmental regulations, adverse weather, insect or disease infestations and other changes which impact families, farms and communities. Thus, the educational planning and staffing process is not static; rather, it is changing and responsive. Timely shifts in educational emphasis backed by appropriate agent training result in a capable, responsive organization.

The 1986 staffing, financing and programming effort of Cooperative Extension in Kansas are summarized on the next page.

### **Extension Districts**

Under existing law, county extension executive boards and the director of extension may enter into an agreement to jointly employ extension agents. The agent is supervised by a multi-county governing board. The sharing of agents allows counties to maintain or to expand educational programs in response to local needs and conditions.

Also under existing law the county extension councils of two or more counties, subject to the approval of county commissioners, may agree to combine the extension programs into one program serving the district. The staffing plan for counties and extension districts will be based on the ability to meet the county, state and federal costs of the program and the need to maintain a balance of agents and state and area specialists. The emphasis will be on delivering quality educational programs.

Personnel will be equitably assigned to counties and extension districts based on number of farms, households, communities, youth and other pertinent factors. The program needs of high-population counties will be determined on an individual basis.



The Kansas  
Cooperative Extension Service  
At a Glance—1986

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**Professional Staff\***

State Specialists	131
Specialists in Areas	33
Farm Management Fieldmen	23
Extension Agents	284
<b>Total</b>	<b>471</b>

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**Financial Support**

County Funds	\$9.8 million
State Funds	8.3 million
Federal Funds	5.6 million
Forestry Projects	1.0 million
Other	1.7 million
<b>Total</b>	<b>\$26.4 million</b>

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**Program Effort (Percent of Staff Time)**

Agriculture	42.0 percent
Natural Resources	3.4 percent
Community Development	4.7 percent
Home Economics	24.0 percent
4-H and Youth	25.9 percent
<b>Total</b>	<b>100.0 percent</b>

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\* Full-time equivalent faculty



The commitments of state and county staff to various program areas in the Kansas State University budget are shown in the table below.

	State and Area Specialists		County Funds		
	State/Federal Appropriated Funds (percent)	Grant or Fee Funds (percent)	State/Federal Appropriated Funds (percent)	County Approp. Funds (percent)	Grant or Fee Funds (percent)
Agriculture	45	11	15	30	
Forestry	4	9			
Home Economics	7		15	27	
EFNEP*		1			1
4-H and Youth	5	2	3	9	
Community Development Extension	4				
Information Extension	8	1			
Energy		3			
Subtotals	73	27	33	66	1
<b>Totals</b>	<b>100 percent</b>		<b>100 percent</b>		

\* Expanded Food and Nutrition Education Program for low-income residents.

### Funding Issues

**Maintaining a balanced network of expertise:** Increasingly, the economic and social success of Kansas farms, families and communities depends on the adoption of the latest developments in science and technology. The rate of technology transfer is significantly enhanced by making the technical expertise of the University faculty available to citizen and industry groups through educational programs. Cooperative Extension's continued success in effective technology transfer—particularly in a business, industry and community setting—requires the technical expertise of an adequate number of agents and specialists. In addition, faculty must be provided the opportunity and the resources to update their training and remain on the cutting edge of research and technological developments in the physical and social sciences.

A network of agents facilitates the delivery of priority programs in each county. In addition, a supporting base of state and area specialists ensures that each educational program is built on a research and factual base. However, budgetary restraints and a hiring freeze have combined to reduce the number of agents and specialists and the opportunities for professional renewal to a dangerously low level.



The technological and educational expertise which agents and specialists provide for Kansas citizens is a sound investment in economic development.

Consequently, this is a propitious time not to decrease, but to substantially increase the availability of technological and educational expertise targeted to serve the state's farms, families, industries and communities through the Cooperative Extension Service.

**County funds:** Numerous counties are experiencing difficulty in adequately funding competitive salaries for extension agents and the operating support and equipment needs for an effective county extension program.

In FY 1986, 12 county extension council budgets exceeded the maximum amount that can be levied under state statute. In these counties, carryover funds from the previous year were used to balance the budget. In FY 1987, 22 counties were impacted by the mill levy limit.

**State and federal funds:** The number of state and area specialists and classified positions has been reduced due to the high inflation rates in the late 1970s and early 1980s, the rescission of state funds in 1982 with a permanent decrease in extension base funding in 1983, and reduced federal funding in 1986.

The 1983 Legislature approved the deletion of 10 specialist and 11.7 classified positions from the budget. The released funds were converted to other operating expenditures. The 1987 Legislature approved the deletion from the budget and the conversion to operating funds the salaries of 9.9 specialist and 2.8 classified positions. In total, 32.9 specialist and 14.5 classified positions have been lost since FY 1981 due to legislative adjustments, budget cuts and inflation.

Those reductions make it increasingly difficult to address the priority agricultural, economic and family issues in Kansas.

**Retirement benefits:** The Cooperative Extension Service is mandated by Congress to give agents and specialists in the Civil Service Retirement System who were hired prior to January 1, 1984 the opportunity to shift to the new Federal Employees Retirement System. The opportunity to change will occur between July 1, 1987 and December 31, 1987. The cost to the employer of the new retirement system is approximately three times the old cost. In order to meet the cost of the retirement system, the hiring of all new agents and specialists has been frozen since December 1986.

The hiring freeze was implemented because the U.S. Department of Agriculture estimated that the increased retirement cost to Kansas would total \$1,272,000. Without additional funds, the only way to meet the additional cost was by staff reduction. Even by suspending the hiring of all new agents and specialists, and without assistance from federal or other sources, extension anticipated a negative balance of over \$300,000 in 1989 if projections on costs, retirements, and vacancies were accurate. The federal government passed some supplemental appropriations for FY 1987, but to date no appropriation has been increased for FY 1988 or beyond.

**Economic development:** Economic development is, and will continue to be, a significant concern across the state. Kansas State University, in its three-year plan for achieving mission-related thrusts, proposes to support local economic development initiatives by strengthening the communication link between the



University and the private sector. The processing and marketing of meat, grain and vegetable products would be emphasized. Economic and business development information in those and other areas would be supplied to the public through the DIRECT (Development Information: Referral, Coordination and Training) program.

**Communications technology:** Although one-on-one and small group meetings are very effective, extension must deliver its educational programs in many other ways—publications, newsletters, teleconferencing, radio and other electronic communication systems—to reach large numbers of people quickly and effectively. Today's challenge is to capitalize on expanding technology transfer using videotapes, microcomputers and satellite communications technology.

Videotape playback units are available in every county through grants obtained by Extension Home Economics. Some improvements have been made in videotape production facilities on campus. Microcomputers are in place in 75 counties and in every area and state office. Those computers are improving the personal productivity of office personnel, the effectiveness of educational programs as software is developed, and will improve the rapid transmission of timely information. For example, seven Kansas extension specialists equipped with microcomputers and financial planning management software helped analyze the financial status of more farms in one year than five specialists and 50 assistants in another midwestern state.

The great need is to develop software financial decision aids so producers, processors and business managers can rapidly determine the profit/loss implications of many interrelated production and marketing decisions. Software is also needed so family resource managers can make cost-effective decisions concerning nutritional adequacy, consumer purchases and financial management.

**Satellite communications:** Congress has appropriated \$4 million and authorized an additional \$2 million for the capital costs of a satellite Regents Educational Communications Center at Kansas State University.

A request for support for the Educational Communications Center, including downlink satellite receiver dishes at county offices, has been approved by the Board of Regents for submission to the governor. Without state support to complete the equipment package and for staffing and operating expenses, the center will not be functional in meeting the state's educational needs.

This facility, located on the KSU campus, will greatly increase the efficiency of extension educational programs. Although satellite broadcasts will never replace other methods of education, they will reduce travel costs and travel time, especially for programs with a broad interest for the state or areas of the state.

Funding the staffing, equipment, maintenance and operational costs of the satellite center for quality operation will be necessary.

### **Alternatives for Funding**

A county extension office with a minimum of two agents per county is the preferred organizational structure at the county level. The structure is deemed



best since the county is both a governmental and a societal unit and direction of the county extension program is, by law, delegated to the county extension council. However, with 22 counties at or near the maximum mill levy established in K.S.A. 70-1947, with state funding limitations, and with county extension councils empowered to jointly employ agents or, subject to the approval of county commissioners, form extension districts, alternative solutions to the funding dilemma need to be considered.

**Funding alternatives to consider include:**

1. Increase appropriations from state general revenue funds to support local county extension councils and a balanced statewide extension network. Adopt a proactive stance toward economic and technological development for the state.
2. Allow counties the option of increasing local support for county extension council budgets by increasing the maximum allowable mill levy in K.S.A. 79-1947.
3. Alter the distribution of current state and federal funding to increase the amount going to county programs. We feel that this is not a viable alternative because:
  - a. It is essential to maintain an appropriate balance of state and area specialists to effectively transfer research-based information to the people of Kansas. Because 32.9 specialist positions have been lost since FY 1981, we feel that the ratio of specialists to agents is at a critical juncture and should not be decreased further.
  - b. The salaries of positions lost because of high inflation rates, reductions and transfers in base funding by the legislature and reductions in federal funding have been transferred to operating funds to adequately support state and area offices.
4. Reduce state and county extension staff when adequate funds are no longer available. This would result in reduced service to county residents, shifts in program emphasis and diminished support for economic, technological, community and social development.



## Recommendations

Early in 1987 a select group of citizens, the Agriculture 2000 Committee, was asked to prepare a blueprint of citizen expectation for the Kansas Agricultural Experiment Station and the Kansas Cooperative Extension Service through the next decade.

In response, the Agriculture 2000 Committee prepared recommendations which it felt would best serve the state, strengthen economic performance, assure environmental quality, preserve the resource base and provide for the well-being of Kansans.

To obtain an even broader opinion base, citizens across the state were invited to review the draft recommendations and make suggestions at public response meetings at Manhattan, Iola, Garden City, Hoxie and Hutchinson.

The committee made clear in its report, *Agriculture 2000, The Kansas Plan*, that it had high expectations of the Cooperative Extension Service and the Agricultural Experiment Station. The citizens of the state want science-based, technological help from the Cooperative Extension Service and the Agricultural Experiment Station in revitalizing the agricultural and rural economy and in enhancing the quality of family and community life.

Their recommendations focused on research and discovery capability and information and extension outreach in:

Crops	Grazing lands
Animal agriculture	Forest resources
Horticulture	Natural resources
Human capital and family needs	Business and financial management
Environmental quality	Marketing, processing and utilization
Rural and community revitalization	

The priorities and recommendations contained in the report were formulated after considering the deliberations of the Agriculture 2000 committee, the marketing strategies committee, the State Survey of Critical Family Concerns, the Kansas State University strategic planning process and the program planning process of the Cooperative Extension Service.

As a result of careful and extensive deliberations, we have concluded that, within the limits of resource availability, the Cooperative Extension Service is appropriately targeting its educational programs to meet the needs of agriculture and industry as well as Kansas families, communities and youth. We have also concluded that the Cooperative Extension Service is appropriately allocating its resources to agriculture, home economics, 4-H and youth, and economic development initiatives.

In addition, the following recommendations are respectfully submitted:

1. A robust Extension Service is essential to individual, family and community well-being; to the agricultural, processing and marketing economy; to soil and water conservation; and for enhancing environmental quality and the quality of life. Adequate funds should be appropriated by the Legislature so Cooperative Extension can make the technical expertise of the University



available to business, industry and community groups throughout the state. Because the numbers of agents and specialists are at dangerously low levels and because agriculture and rural communities are facing trying times, this is a propitious time to provide the technological and educational expertise needed to keep Kansans competitive, protect the resource base and assure environmental quality.

2. Cooperative Extension's unique federal, state, and county partnership should be strengthened by appropriating sufficient state funds to maintain a balanced educational delivery system of local contacts (extension agents) and scientific and technological support personnel (state and area specialists). Educational programs will focus on economic, agricultural, community and human resource development in several priority areas including:

- Crops and livestock: Crop and livestock production, processing and marketing programs have powerful multiplier effects for farms, communities and businesses. Traditional agricultural strengths will provide the foundation for growth in producing and marketing value-added products and other agribusiness developments.
- Alternative crops: Producers want information about the potential profitability and risk associated with alternative industrial and specialty crop and livestock products which can be grown and marketed in Kansas. Educational efforts in support of alternative crop and livestock enterprises should not diminish work with major crop and livestock enterprises.
- Environmental quality: Cooperative Extension must assume leadership in promoting the use of crop, soil and animal management systems that are environmentally safe but also profitable and practical. Environmental issues in the home related to air, water and food should also be addressed.
- Business and financial management: Educational programs will focus on improved financial analysis, planning and management and in developing practical business and marketing plans.
- Natural resources: Resource conservation, especially soil and water, is essential for future growth and prosperity and for maintaining a quality environment. Educational programs will focus on methods which use, but do not contaminate, soil and water resources.
- Marketing, processing and utilization: Educational programs in marketing, processing and utilizing Kansas agricultural products will be strengthened. The emphasis will be on cost of production, market share and market expansion.
- Human health: Health management programs will emphasize health support leadership programs; food and nutrition; clothing, housing and interior design; health, wellness and stress; financial management; and alleviating the effects of substance abuse.
- Human resource development: People are our greatest resource. Educational programs will focus on preparing concerned citizens to effectively



address emerging family and community problems and economic and social change.

- Community revitalization: Communities will be assisted in identifying and expanding economic opportunities and effectively organizing and utilizing available resources and services.
3. The Kansas Legislature should increase state funding for programs in counties and increase the maximum allowable mill levy in K.S.A. 79-1947.
  4. The Kansas Legislature should provide funds to staff, equip, maintain and operate the satellite Regents Educational Communications Center.
  5. Increased support for extension is justified should support at the federal level be inadequate to provide for retirement and fringe benefits mandated by law.

### **Summary**

The balanced educational offerings of the Cooperative Extension Service are essential to the well-being and economic health of all citizens of Kansas. We feel that the duly elected County Extension Councils are in the best position to determine how to balance program resources on the local level. The role of extension administration should be to assure the best quality programs that can be produced within the limited resources available. The role of the Legislature, we feel, should be to oversee the quality of these programs and provide the financial support to sustain programs which best meet the needs of the citizens of Kansas.