

# Kansas (Kansas State University)

## Plan of Work for 2023-2027

Status: Final (Approved 9/8/2022)

### Executive Summary Overview

K-State Research and Extension (KSRE) is a statewide network of educators sharing unbiased, research-based information and expertise on issues important to Kansans. The KSRE network includes offices in all 105 counties, along with four regional extension offices, five agricultural research centers distributed throughout the state to encompass variability in climate and soils, four satellite units, four agronomy experiment fields and four horticulture centers and experiment fields. In addition, KSRE funds research projects in 20 departments across five colleges.

A unique feature within the K-State Research and Extension organization is the close alignment of research and extension. In 1996, K-State Research and Extension was formed by aligning the Kansas Agricultural Experiment Station (KAES) and the Kansas Cooperative Extension Service. The strategic intent of this alignment was to achieve greater efficiency and synergy between discovery and outreach efforts. One ancillary benefit of this alignment is that basic and applied research lead to rapid Extension programming and application in the field. This alignment also allows more fluid compliance with multi-state and integrated components of AREERA.

K-State Research and Extension is focusing its efforts on five grand challenges (critical issues) that directly or indirectly affect all Kansans: Global Food Systems, Water and Natural Resources, Health, Developing Tomorrow's Leaders, and Community Vitality. These grand challenges were determined through a series of meetings with stakeholders and define areas of emphasis for agents, specialists, and researchers.

Extension professionals at the local, regional and state level work to develop regional and statewide signature programs along with professional development opportunities for its members through 11 Program Focus Teams – Adult Development and Aging; Community Vitality; Crop Production; Family and Child Development; Family Resource Management; Farm Management; Horticulture; Livestock Production; Natural Resources; Nutrition, Food Safety and Health; and Youth Development. In addition, two transdisciplinary teams were created to address complex issues to Kansans - Local Food Systems and Stress and Resiliency. The work of these teams falls within the overall umbrella of the five grand challenges.

K-State Research and Extension cannot solve these challenges alone. KSRE's statewide presence lends itself to collaborative efforts with organizations, private business and industry, local groups, state and federal organizations, and colleagues in other states. Quality faculty draw businesses and funding to K-State and to Kansas including:

- K-State is the only university in the world with access to a full continuum of biosecurity laboratories located on or adjacent to campus. The College of Agriculture will provide plant disease diagnostics,

research, surveillance, and training in disease vector biology. The laboratories will offer emergency rapid testing and manufacturing to protect the nation's animal health and food supply during a crisis.

- Kansas PRIDE is dedicated to serving communities across the state to encourage and assist local government and volunteers in making their community a better place to live and work. The Kansas PRIDE Program is a partnership of K-State Research and Extension, the Kansas Department of Commerce, Kansas Masons and Kansas PRIDE, Inc. Through this program, local communities identify what they would like to preserve, create, or improve for their future. Then, working with the resources of K-State Research & Extension and the Kansas Department of Commerce, community volunteers pull together to create their ideal community future.

- Extension's research centers, experiment fields and highly skilled scientists and staff, combined with the climate and soil variability across the state, provide unique opportunities for agricultural research and corporate and private partnerships.

- Family and Consumer Sciences is a partner of the Kansas Department for Aging and Disability Services to provide health insurance education to Medicare eligible Kansans. Approximately 1/3 of the contacts of those served are vulnerable beneficiaries with incomes below 150% of the poverty level.

- Kansas 4-H Youth Development was awarded a contract by the Kansas Department of Education for \$4.2 million over the next three summers to provide hands-on, project-based 4-H summer programming opportunities to address COVID-19-related learning loss in counties across the state. Building upon the long record of successful partnership with local school districts and leveraging the state's largest youth development network reaching all 105 counties, Kansas 4-H Youth Development will use summer enrichment programs to address the academic, social, emotional and mental health needs of youth as a part of the American Rescue Plan — Elementary and Secondary School Emergency Relief Plan.

- K-State - in partnership with four other universities and several industry partners have joined efforts to create the Irrigation Innovation Consortium, a collaborative research effort to accelerate the development and adoption of efficient irrigation technologies and practices.

- K-State Research and Extension will address the health of Kansans through the implementation of the national Cooperative Extension's Framework for Health Equity and Well-Being which includes a focus on health equity, social determinants of health and coalitions and community health assets.

The demographics of Kansas continue to change. KSRE is reaching out to both underserved and traditional audiences through new venues. To increase multicultural competency and sensitivity among our workforce, K-State Research and Extension and the College of Agriculture/KSRE Diversity Programs Office provides regular Navigating Difference training for new extension professionals. The goal of this program is to bring systemic change and diversity to the KSRE team and provide cultural competency awareness and skills that they can practically apply in their day-to-day work. Other efforts include:

- The Multicultural Undergraduate and Graduate Summer Research Fellowship program targets under-represented populations of students with the goal to establish networking relationships back to their respective home institutions, as well as K-State faculty. This program has a specific goal of growing the minority populations of students within graduate programs in the College of Agriculture and across other partner Colleges represented within K-State Research and Extension.

- Local unit extension council members review parity statistics annually and spend time determining strategic efforts necessary to reach underserved and at-risk audiences.
- K-State Research and Extension is in the process of developing a language access plan and securing services through Language Line Services to bring greater access to limited English proficient audiences.
- This fall, a new community liaison will be on staff to help link KSRE's resources to the tribal communities in Northeast Kansas.

## Merit and Scientific Peer Review Processes

At the local level, extension agents work with Program Development Committee (PDC) members - local volunteers - who provide input in determining the local and statewide efforts needed to address social, economic, and environmental concerns. Information is then shared with the appropriate statewide Program Focus Team (PFT) - a team of agents and specialists that work together to develop a series of educational program activities that agents can implement in their communities. Educational action plans are submitted to the local extension council and KSRE Program Leader Coordinators for approval.

Research that is proposed by scientists supported by the KAES is reviewed by KAES for scientific merit and for their relevance to the priorities of Kansas and USDA/NIFA. Priorities for the state are verified by the relationship of areas of investigation for their relevance to the Kansas agricultural and rural economy, or the potential for the area of investigation to become a relevant factor in the state's food and agricultural economy or to improve the lives of citizens of Kansas. Part of the review process includes confirming consistency of the knowledge areas defined by NIFA with the priorities of the state.

For multi-state projects with contributions from KAES scientists, project objectives and approaches are identified by the membership of the committee. Renewing and new projects are first reviewed by the administrative advisor to the multi-state research committee and then by the regional multi-state review committee. The chair of the regional committee provides feedback to the project writing team. The writing team, in turn, considers the input and makes changes to the proposal as appropriate for improvement and clarity.

## Stakeholder input: Action Taken to Seek Stakeholder Input

Engage board and advisory committee members at the local level to provide input into program priorities. The Kansas Cooperative Extension Service law dictates election/appointment of local advisory councils and an executive board in each of our counties and districts. This amounts to more than 2,500 individuals across the state to help determine program priorities.

Encourage local board members to participate in the State Extension Advisory Council -- a consultative group to the Director of Extension on relevant issues and opportunities facing Extension.

Utilize regional advisory committees for research and extension composed of stakeholder groups and clientele from the local area to discuss collaborative efforts, sharing of resources, prioritization processes, progress reports and development of complementary educational efforts. Feedback examples include commodity commissions (e.g., deliberations that help prioritize the awarding of producer-funded extramural grants involving check-off dollars) and helping citizens to understand

options associated with regulatory decisions made by the EPA, Kansas Department of Health and Environment, Kansas Department of Agriculture, and other groups.

Meet regularly with the state advisory group for the Director of K-State Research and Extension and Dean of the College of Agriculture. Members are carefully nominated based upon the target audience represented, gender, race, ethnicity and leadership. Members are invited to provide advice to on key initiatives to strengthen the programs in research, extension and teaching.

## Stakeholder input: Methods to Identify Individuals and Groups

Encourage diverse representation on advisory boards taking into consideration target audience, gender, race, ethnicity and leadership

Follow Kansas County Extension Law for electing board and advisory committee members.

Encourage local units to consider identifying and recruiting members that reflect the community's make-up.

Engage representatives from stakeholder groups

## Stakeholder input: Methods for Collecting Stakeholder Input

Conduct needs assessment

Organize listening sessions

Utilize advisory committees

Meet with traditional stakeholder groups

Meet with the general public

## Stakeholder input: A Statement of How the Input Will Be Considered

Identify emerging issues

Redirect extension programs

Redirect research programs

Development of statewide action plans

Determine program priorities

## Critical Issues

### **Community Vitality**

Initiated on: Nov 26, 2019

State: Kansas

Term Length: Long-term (>5 years)

Rural, suburban and urban communities throughout Kansas face many challenges. When citizens are encouraged to combine their experiences and skills to work together, everyone in the community benefits. Projects and programs would include:

- Helping communities of all sizes maintain necessary services, such as grocery stores, that hire locally and generate local sales tax.
- Working directly with farmers, ranchers and families to develop better financial management practices.
- Engaging community groups and local businesses by providing leadership, research-based expertise and technical assistance to make communities better places to live and work.
- Advancing the health and welfare of companion animals
- Assisting communities, along with new and existing business, by coordinating support and training efforts, creating support networks and increasing access to university resources.

#### Science Emphasis Area

Family & Consumer Sciences, Sustainable Agricultural Production Systems, Youth Development

### **Developing Tomorrow's Leaders**

Initiated on: Nov 26, 2019

State: Kansas

Term Length: Long-term (>5 years)

The complex global society of the future will require leaders with effective teamwork and communication skills. We need to prepare leaders of all ages, so they may contribute to a vibrant Kansas economy for years to come. Projects and programs would include:

- Building outstanding leaders with marketable skills to succeed in today's global society and workplace. 4-H members are twice as likely to attend college and pursue careers in science, engineering and computer technology.
- Meeting the needs of military youth and their families at Kansas military installations and families of deployed members of the National Guard and Army Reserve
- Training Kansans of all ages to be better citizens and leaders.

#### Science Emphasis Area

Family & Consumer Sciences, Youth Development

### **Global Food Systems**

Initiated on: Nov 26, 2019

State: Kansas

Term Length: Long-term (>5 years)

As the state's largest employer, agriculture drives the Kansas economy. In 2020, the agricultural industry contributed \$70.3 billion to the Kansas economy. Agriculture is the largest employer in the state, with 250,058 people accounting for 13 percent of the entire workforce. We are improving food and agricultural systems to feed the world's growing population, which will economically benefit Kansas.

To feed and sustain a growing population, K-State Research and Extension is focused on developing innovative practices to help farmers, ranchers, and agribusinesses improve profitability, efficiency and sustainability for Kansas, our nation and the world through cutting-edge research in areas such as genetics, disease prevention, food security and farm bill education.

Projects and programs would include:

- Developing and testing new crop, vegetable, and tree varieties suited to the Kansas climate.
- Improving the efficiency of feed and water use, reproduction and animal health.
- Reducing food waste caused by insects, poor storage, and processing techniques.
- Creating sustainable agricultural systems that intensify productivity.
- Identifying ways to maintain cattle rangeland threatened by variations in climate.
- Leading national and international teams to solve global food issues.
- Helping families stretch their food dollars.

Science Emphasis Area

Environmental Systems, Family & Consumer Sciences, Food Safety, Sustainable Agricultural Production Systems

## Health

Initiated on: Nov 26, 2019

State: Kansas

Term Length: Long-term (>5 years)

Thirty-five percent of Kansas adults are obese, and 16.7 percent of Kansas children live in poverty. Targeting the diversity of Kansans, our programs address quality of life, healthy development and healthy behaviors across life stages for all socioeconomic groups. Projects and programs would include:

- Identifying and implementing practices to help prevent adult and childhood obesity
- Providing options to help families and practitioners understand health-care choices for elderly Kansans.
- Educating consumers on safe food handling with food preparation, food preservation, food service and more.

Science Emphasis Area

Family & Consumer Sciences, Food Safety, Human Nutrition, Youth Development

## Water and Natural Resources

Initiated on: Nov 26, 2019

State: Kansas

Term Length: Long-term (>5 years)

Water quality in central and eastern Kansas and water quantity in western Kansas are important issues. Current irrigation trends could deplete 69 percent of the groundwater in the Ogallala Aquifer within 50 years, drastically affecting the Kansas economy. Sediment and silt are washing into large reservoirs that supply drinking water and recreation to many Kansans.

To ensure future generations have a reliable source of clean water, our focus will be to develop and implement programs to help Kansans maintain and improve water quality and quantity. These include pioneering new practices and techniques; researching high-priority water issues; facilitating meetings among local, state and federal officials and effectively communicating research results.

Projects and programs would include:

- Breeding new drought-tolerant crop varieties that can be used for human and pet food, livestock feed, and fuel.
- Identifying best-adapted turf species and cultivars for Kansas.
- Developing more efficient irrigation and water monitoring systems for home and farm use.
- Reducing runoff and sedimentation into reservoirs.
- Improving livestock genetics to increase feeding efficiency, which reduces feed and water needs.
- Working with the State of Kansas and partnering with stakeholders to implement strategies identified in the 50-year Vision for The Future Water Plan.
- Balancing the use and protection of the state's natural and recreational resources that lead to significant ecological, medical, economic and cultural benefits.

Science Emphasis Area

Agroclimate Science, Environmental Systems, Family & Consumer Sciences, Sustainable Agricultural Production Systems