

Approved: January 16, 2001
Date

MINUTES OF THE SENATE AGRICULTURE COMMITTEE.

The meeting was called to order by Chairperson Derek Schmidt at 8:30 a.m. on January 10, 2001 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
 Betty Bomar, Secretary

Conferees appearing before the committee:

Marc Johnson, Dean, College of Agriculture, Kansas State University
Elizabeth Boyle, Ph.D., Associate Professor and Extension Specialist,
 Kansas State University
Mitch Tuinstra, Department of Agronomy, Kansas State University
William L. Hargrove, Director, Kansas Center for Sustainable Agriculture
 & Alternative Crops (KCSAAC), Kansas State University
Jana Beckman, KCSAAC Coordinator, Kansas State University
Dan Nagengast, Kansas Rural Center

Others attending: See attached list

Upon motion by Senator Huelskamp, seconded by Senator Umbarger, the Minutes of the January 9, 2001 Meeting were unanimously approved.

Mark Johnson, Dean, College of Agriculture, Kansas State University, introduced Elizabeth Boyle, Ph.D., Associate Professor and Extension Specialist.

Doctor Boyle testified regarding the assistance the Extension office has provided small and very small state and federally inspected meat and poultry processing businesses in Kansas. (Attachment 1)

Doctor Boyle testified that as a result of the USDA final rule on Pathogen Reduction published on July 25, 1996, the Extension Office at KSU has phased in four new programs to meet the Federal requirements: 1) the establishment, development and implementation of written sanitation standard operating procedures, 2) the regular microbial testing of slaughter establishments to verify the adequacy of a plants' process controls for the prevention and removal of fecal contamination and associated bacteria, 3) the assurance that all slaughter plants and plants producing raw ground products must meet pathogen reduction performance standards for Salmonella, and 4) the assurance that all meat and poultry plants developed and implemented Hazard Analysis and Critical Control Point (HACCP) programs. All four programs have been implemented in all large, small and very small federally and state inspected meat and poultry establishments.

Doctor Boyle testified that KSU has entered into a cooperative project with the University of Nebraska, University of Missouri and South Dakota State University to develop and provide audit and recall training and assistance to facilitate the success of maintaining HACCP programs in small and very small meat and poultry processing establishments. The KSU Extension program in the Department of Animal Sciences and Industry has assisted Kansas meat processors and entrepreneurs in developing value-added meat products and in improving the quality and safety of existing products. The Extension program is also working with the Kansas Department of Commerce and Housing, Agricultural Products Development Division in support of value-added activities. These services, programs and assistance include product development and reformulation; quality and safety evaluation and testing; shelf-life studies; nutritional labeling assistance; development of documentation programs to meet government requirements; HACCP and other food safety training; labeling assistance; plant design review; assistance in selecting and locating ingredients; packaging and equipment suppliers; and produce compliance evaluation.

CONTINUATION SHEET

Mitch Tuinstra, Department of Agronomy, KSU, testified that grain sorghum is a major feed grain crop in the United States and other areas of the world where environmental conditions, particularly low and erratic rainfall and high temperature, limit the production of other summer crops. Kansas generally ranks first in sorghum production in the U.S. and accounts for about 30% of the total U.S. production. Mr. Tuinstra stated the objectives of the breeding program is to increase the yield potential and the market value of sorghum and requires the development of high-yielding sorghum hybrids with superior stress tolerance. (Attachment 2)

Kansas grain sorghum is utilized primarily for cattle and swine feed and for industrial purposes. Most commercial hybrids grown in the U.S. produce purple plant pigments which has limited use in food markets and the U.S. poultry industry, wherein, tan-plant sorghum hybrids can be utilized in the food industry and in all phases of U.S. poultry and animal production. The development of food-grade sorghum hybrids with improved lodging resistance, high yield potential and excellent grain weathering resistance promises improved marketing opportunities and a greater profit potential for the producer.

William L. Hargrove, Director, Kansas Center for Sustainable Agriculture & Alternative Crops (KCSAAC), testified relating to the activities and accomplishments of KCSAAC. KCSAAC was established at KSU in response to SB 534 enacted by the 2000 Legislature. A full-time Coordinator for the Center commenced employment January 2, 2001. A Stakeholder Listening Session has been held to get input into the programs of the center, a website has been created and an informational brochure has been designed and will soon be available for distribution. (Attachment 3)

Jana Beckman, KSCAAC Coordinator, testified that the mission statement for the Center is to: "support small family-owned farms in Kansas through research, education and outreach focused on production, storage, processing, and marketing technologies that will boost small farm profitability, protect natural resources, and enhance rural communities." Ms. Beckman reviewed the KSCAAC role and its current projects.

Dan Nagengast, Kansas Rural Center, testified that the Center's objective is to find additional resources for small ranchers and farmers. The Center coordinates activities with KCSAAC, such as the feasibility of "green labeling" and an annual conference on sustainable agriculture.

Dean Johnson testified Sericea Lespedeza was first declared a county option noxious weed in 1988 and a statewide noxious weed July 1, 2000. Research commenced in the mid 1980's. (Attachment 4)

Dean Johnson stated currently the education efforts consist of a combination of ongoing and special Extension program. Approximately half the Kansas counties have initiated or are developing programs. Demonstrations, tours, and meetings are conducted to draw attention to the problem and to help producers identify sericea lespedeza and to understand the impact on grazing lands. Plans for 2001 consist of continuing the development and support of county and multi-county sericea lespedeza management and control programs with presentations at meetings and tours, publications and providing other materials as needed, and to continue the coordinated programming with surrounding states.

Dean Johnson concluded his testimony regarding the Sustainable Agriculture Center by stating the involvement KSU and the Extension programs have in the various facets of Kansans lives - food safety, youth programs (4-H), juvenile justice, SRS, community development (PRIDE program), and economic development. Agriculture is a large player in the betterment of Kansas.

The meeting adjourned at 9:30 a.m.

The next meeting is scheduled for January 16, 2001.

SENATE AGRICULTURE COMMITTEE GUEST LIST

DATE: January 10, 2001

NAME	REPRESENTING
Trent Liday	Sen. Maj. Ldr.
GREG FOLEY	Sen. Maj. Ldr. KDA.
Bill Hargrove	KCARE / K-State
Liz Boyle	KSU, Dept. Animal Sciences & Industry
Jana Beckman	Kansas Center for Sustainable Ag
David Miller	DOB
David Nagengast	Kansas Rural Cluster
Paul Johnson	KCC / PACK
Lachlan K. Cole	Sen. Tyson = Staff
Judd Johnson	KLA
Keri Elbert	Kansas Dairy Association
Mitch Tuinstra	K-State Agronomy
Steven Graham	K-STATE AG DEANS OFFICE
Mike Jensen	PORK PRODUCERS
SUE PETERSON	K-STATE
Bill Fuller	Kansas Farm Bureau
Chris Wilson	KS Seed Industry Assn
Chris Neal	Sen. Huelkamp

**Testimony before the Senate Agriculture Committee and
the House Agriculture Committee
on
Assistance to Small Kansas Meat Processing Plants**

**Prepared by
Elizabeth Boyle, Ph.D.
Associate Professor and Extension Specialist, Meats
Kansas State University**

January 10, 2001

Senate Agriculture Committee
Date 01-16-01

Attachment # 1-1 thru 1-10

Members of the committee, I am Liz Boyle, Associate Professor and Extension Specialist in Meats at Kansas State University. In my position at K-State I work closely with small and very small state and federally inspected meat and poultry processing businesses. I am here today to provide a summary describing HACCP, food safety and value-added support programs and assistance that K-State, in cooperation with the Kansas Department of Agriculture, Kansas Department of Commerce and Housing, and USDA, have provided to the Kansas meat and poultry industry so they may adapt and comply with required changes in government regulations.

First, I will begin with a brief summary of the events that led to the pathogen reduction rule. In January 1993, more than 500 persons were sickened and four children died from an outbreak of *E. coli* 0157:H7 in the Pacific Northwest. It was determined that this outbreak was caused by undercooked ground beef that had been fully inspected and approved by USDA's Food Safety and Inspection Service. In Congressional Testimony following the outbreak, then Secretary of Agriculture, Mike Espy, pledged to reform the federal meat inspection system, changing its focus from animal disease detection to one that address the risks posed by foodborne pathogens, thereby better protecting public health.

This led USDA to propose the implementation of new food safety programs in all federally inspected establishments. Following the comment period to the proposed rule, the USDA FSIS published its Final rule on Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems on July 25, 1996. The rule mandated requirements in efforts to reduce the occurrence and numbers of pathogens on meat and poultry products, reduce the incidence of foodborne illness associated with consuming these products, and provide a framework for modernization of the meat and poultry inspection system.

The new regulations required establishment of four new programs. The first program required that each establishment develop and implement written sanitation standard operating procedures (SSOP's). Secondly, regular microbial testing was required for slaughter establishments to verify the adequacy of a plants' process controls for the prevention and removal of fecal contamination and associated bacteria. All slaughter plants and plants producing raw ground products must meet pathogen reduction performance standards for *Salmonella* for the third program. Lastly, all meat and poultry plants had to develop and implement Hazard Analysis and Critical Control Point (HACCP) programs. These programs were phased in over several years. They have now been implemented in all large, small and very small federally and state inspected meat and poultry establishments.

HACCP and Food Safety Programs and Assistance:

◆ Getting a Jump Start on HACCP workshops

Offered in Wichita, Manhattan, Hays, Salina, Overland Park, February/March 1996
31 meat and poultry processors representing 11 plants from 11 counties

- ◆ Sanitation Standard Operating Procedures workshops
 - Offered in Manhattan, October 1996
 - 59 meat and poultry processors representing 35 plants from 29 counties
 - 2 KDA inspectors and 1 USDA/FSIS personnel
 - Offered in Manhattan, January 1997
 - 15 meat and poultry processors representing 10 plants from 9 counties

- ◆ *E. coli* Carcass Sampling Training workshops
 - Offered in Manhattan, July 1997
 - 43 meat and poultry processors representing 35 plants from 31 counties
 - 50 KDA inspectors and 1 other

- ◆ Sanitation Training Seminar: The "Why" Behind Sanitation
 - Offered in Manhattan, February 1998
 - 46 meat and poultry processors representing 31 plants from 25 counties
 - 51 KDA inspectors

- ◆ K-State sponsored a USDA FSIS HACCP Demonstration workshop
 - Offered in Manhattan, April 1998
 - 30 meat and poultry processors representing 24 plants from 20 counties
 - 1 KDA inspector

- ◆ One-Day HACCP Update Workshop
 - Offered in Manhattan, November 1998
 - 10 meat and poultry processors representing 6 plants from 6 counties

- ◆ International HACCP Alliance accredited three-day HACCP workshops. In cooperation with the Kansas Department of Agriculture, and the Kansas Department of Commerce and Housing, funding was obtained to support one-half the registration fee for Kansas processors to attend HACCP training workshops in an effort to offset expenses incurred by processors.
 - Offered in Manhattan, May 1997
 - 20 meat and poultry processors representing 12 plants from 11 counties
 - Offered in Manhattan, January 1998
 - 17 meat and poultry processors representing 15 plants from 13 counties
 - 9 KDA inspectors
 - Offered in Dodge City, March 1998
 - 19 meat and poultry processors representing 15 plants from 15 counties
 - 1 KDA inspector and 1 KDA vet
 - Offered in Manhattan, August 1998
 - 39 meat and poultry processors representing 24 plants from 20 counties

Offered in Parsons, September 1998

17 meat and poultry processors representing 10 plants from 9 counties

Offered in Manhattan, January 1999

24 meat and poultry processors representing 19 plants from 16 counties

1 KDA inspector

Offered in Manhattan, May 1999

39 meat and poultry processors representing 24 plants

Offered in Manhattan, August 1999

24 meat and poultry processors representing 17 plants

◆Funding from the Kansas Department of Agriculture and Kansas Department of Commerce and Housing provided support for an Extension Associate who was available for on-site assistance with HACCP plan development and implementation, and served as a liaison between meat and poultry processors and inspectors. Highlights include:

Assisted 80 plants, many more than once, including on-site assistance

Reviewed 63 HACCP plans for 17 plants

Participated in HACCP and food safety training workshops

Conducted 7-4½ day HACCP compliance training workshops for KDA meat and poultry inspection personnel

Conducted a 1½day HACCP training program for KDA meat and poultry inspection supervisors and veterinarians

Participated in meat and poultry inspection supervisors meetings, annual meetings

◆An Extension Assistant was hired with funding from a USDA Fund for Rural America project to work on HACCP related projects. One of these projects involves developing a distance learning HACCP course. The purpose of this course will be to provide HACCP education and training to meat plant employees after the “rush” of HACCP training is completed to comply with implementation by January 2000. Other highlights:

Fact sheet and video on developing lotting and coding systems for meat and poultry facilities. This type of system is essential in the event of a recall. To expand the educational value of this information, the Kansas Department of Commerce and Housing provided \$6,000 in funding which allowed for the development of the video on lotting and coding.

Fact sheet on thermometer calibration and an accompanying laminated guide in English and Spanish to assist processors with setting up a standard operating procedure for calibration which is essential to a functioning HACCP program.

◆A newsletter entitled Meat Processing News is distributed, on a quarterly basis, to Kansas meat and poultry processors. Provides information about processing meat products, current changes in government regulations, meat safety, especially HACCP, and other topics.

◆K-State has entered into a cooperative project with the University of Nebraska, University of Missouri and South Dakota State University to develop and provide audit and recall training and assistance to facilitate the success of maintaining HACCP programs in small and very small meat and poultry processing establishments. A brochure describing this program is attached.

Value-Added Assistance:

This K-State Research and Extension program in the Department of Animal Sciences and Industry assists Kansas meat processors and entrepreneurs in developing value-added meat products and improving the quality and safety of existing products. Funds have been provided by the Kansas Department of Commerce and Housing, Agricultural Products Development Division to support value-added activities. Services, programs, and assistance include product development and reformulation; quality and safety evaluation and testing; shelf-life studies; nutritional labeling assistance; development of documentation programs to meet government requirement; HACCP and other food safety training; labeling assistance; plant design review; assistance in selecting and locating ingredients; packaging and equipment suppliers; and product compliance evaluation. Recipients of this program are primarily small businesses, often with fewer than 10 employees, and most likely not able to afford such services through commercial sources. Highlights of the past two years include:

Processors and entrepreneurs realized a savings of \$150,000 while enhancing the quality and safety of meat and meat products for Kansas consumers through assistance with shelf life studies, chemical, microbial and physical analyses, and technical and on-site assistance

Nearly 900 phone contacts were made responding to questions posed by Kansas meat and poultry processors and entrepreneurs

Nearly 140 nutrition facts labels were developed and provided to Kansas meat and poultry processors

Resources for More HACCP Information

- Code of Federal Regulations
www.access.gpo.gov/nara/cfr
- FDA Food Code
www.vm.cfsan.fda.gov
- FSIS web site
www.fsis.usda.gov
- FSIS Technical Service Center Hotline:
(800) 233-3935 ext. 2 or (402) 221-7400
Fax: (402) 221-7438
E-mail: haccp.hotline@usda.gov
- USDA Meat and Poultry Hotline:
(800) 535-4555
- National Agricultural Library/USDA
(301) 504-6365 Fax: (301) 504-6490
www.nal.usda.gov/fnic/foodborne/foodborn.htm
- USDA/FDA HACCP Training Programs and Resources Database
www.nal.usda.gov/fnic/foodborne/haccp/index.shtml

Toll-Free Contact Numbers

Kansas/Missouri
(877) 205-8345

Nebraska/South Dakota
(888) 688-4346

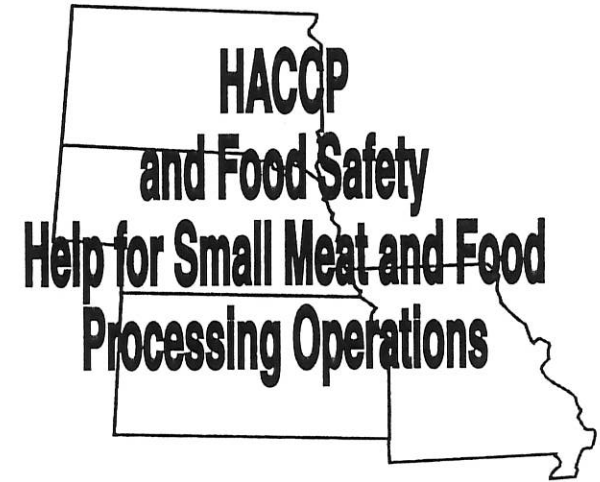
Internet Bulletin Board
www.HACCP.unl.edu



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

It is the policy of Kansas State University Agricultural Experiment Station and Cooperative Extension Service, University of Nebraska Institute of Agriculture and Natural Resources, County Extension Councils, that all persons shall have equal opportunity and access to its educational programs, services, activities, and materials without regard to race, color, religion, national origin, sex, age or disability. Kansas State University is an equal opportunity organization. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Marc A. Johnson, Director.

This material is based upon work supported by the Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, under Agreement No. 99-41560-0770. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture.



Providing assistance and training for processors in
Kansas, Missouri,
Nebraska,
and South Dakota

HACCP Assistance and Services Available

A joint university Extension and USDA project has been created to assist food processors with HACCP and food safety problems in Kansas, Missouri, Nebraska, and South Dakota.

Contact us for help with:

- Food safety and HACCP education
- Accredited HACCP training
- Food safety training
- HACCP development/implementation
- Development of verification and recall procedures to support HACCP plans

Assistance Provided

Workshops

- International HACCP Alliance accredited HACCP workshops
- Introductory HACCP, sanitation, and good manufacturing practices workshops
- HACCP verification, validation, recall, and auditing workshops

Materials

- Reference book library
- Video library
- Fact sheets

Free consultation

- Toll-free phone service
- One-on-one meetings
- Group meetings
- Onsite visits

Internet bulletin board

Post your questions and comments on timely issues

For Scheduling and Information

Kansas and Missouri Processors Contact

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Manhattan, KS 66506-0201

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Lincoln, NE 68583-0908

Toll-free (888) 688-4346

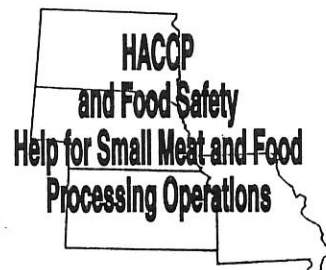
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Internet Bulletin Board

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South Dakota State University

PROJECT SUMMARY

Title: HACCP IMPLEMENTATION AND EVALUATION IN
SMALL AND VERY SMALL MEAT/POULTRY PLANTS

Primary Project Directors:

Elizabeth A.E. Boyle
Sandra A. Flores
Daniel Y.C. Fung
Melvin C. Hunt

Linda J. Henderson
Curtis L. Kastner
Sue C. Maes

James L. Marsden
Richard D. Oberst
Randall K. Phebus

Applicant Organization: Kansas State University

Goals

Our goals are to assess HACCP-related educational needs of small and very small processing plants and develop educational materials and delivery systems that will meet those needs. Additionally, we will implement and evaluate existing processing technologies to enhance meat safety in cooperating processors' plants. Specifically, we will initiate testing of the validated steam pasteurization technology in small and mid-sized plants. Concurrently, we will adapt and evaluate microbiological monitoring technologies for use by personnel of small plants.

Relevance

This one project addresses all requested activities/areas for small and very small meat processing plants.

Kansas State University Expertise

Kansas State University is well positioned to address the goals of this study because:

- A recently completed survey at Kansas State University evaluated HACCP-related educational needs for Kansas' small and very small processors.
- Existing Kansas State University courses for HACCP training will be adapted for distance education using innovative delivery methods as needed for processors from small and very small facilities.
- For the past 20 years researchers at Kansas State University have evaluated intervention technologies, processing strategies, and microbiological testing procedures focused on meat safety.
- Exclusive Kansas State University research has demonstrated the antimicrobial effectiveness and commercial practicality of steam pasteurization in plant settings.

This expertise will be used to significantly supplement the survey and educational efforts, and the in-plant validation and monitoring strategies.

Industry Support

Significant industry partners include the Kansas Meat Processors Association, the North American Meat Processors Association, American Association of Meat Processors and Frigoscandia Food Process Systems.

Revised Objectives

Objective 1: To develop training materials targeted for small and very small meat and poultry processing operations on monitoring protocols and record keeping to trace product back to its source.

Objective 2: To create a series of independent training modules to assist the educational needs of small and very small plants to achieve HACCP implementation.

Objective 3: To create an innovative distance learning Principles of HACCP course that will meet the requirements for training as specified by the United States Department of Agriculture, Food Safety and Inspection Service.

Objective 4: To create a food science course offered via distance learning, which will further train meat plant employees to analyze, critique, and to evaluate policies and programs to enable them to make sound decisions regarding their plants and food safety.

Objective 5: To identify three small and three very small beef slaughter companies to participate in a pilot beef safety enhancement program.

Objective 6: To determine the current microbiological baselines of each category and identify present operational programs and technologies relating to beef safety.

Objective 7: To re-establish microbiological baselines for the participating companies following implementation of programs and technologies to quantitatively demonstrate their effectiveness and efficacy, and use this comparison as a documented blueprint for improving the operations of small and very small beef processing facilities nationwide.

Objective 8: To work with each company to implement workable HACCP and sanitation programs, and train company employees to administer these programs.

Objective 9: To work with Frigoscandia Food Process Systems to develop, install, and verify the antibacterial effectiveness and commercial efficacy of a steam pasteurization systems (SPS 30) for small processing facilities.

Non-Technical Summary

To facilitate the implementation of the recently mandated approach to meat inspection by USDA, Kansas State University will work closely with small and very small plants to meet their educational and training needs. The new approach to inspection, which is known as the Hazard Analysis Critical Control Point (HACCP) System requires that small and very small plants implement HACCP by January 1999 and 2000, respectively. Therefore, the timeline for preparation and training is short and demands immediate action. This grant will allow Kansas State University to help insure that plants are prepared to meet the deadline.

Specifically, Kansas State University education and training specialists, in conjunction with food safety research and extension faculty, will develop and deliver training materials for small meat and poultry processing plants. Training modules that demonstrate, for example, microbiological sampling techniques, in the meat industry will be created as stand-alone units and will also be incorporated into full courses offered through distance learning.

HACCP implementation mandates that microbiological regulatory requirements be met by meat and poultry processors. The impact of HACCP training and implementation will be assessed based on the impact on microbiological samples taken before and after HACCP is implemented. The steam pasteurization process developed by Kansas State University and industry partners has been shown to insure that large processors meet the mandated microbiological standards. To help insure the competitiveness of small plants the steam pasteurization process will be adapted and evaluated for their operations.

Review of the Kansas State University Sorghum Breeding Program

*Provided to the Senate Agriculture Committee and the House Agriculture Committee
January 10, 2001*

Mitch Tuinstra
Kansas State University
Department of Agronomy

Introduction

Grain sorghum is a major feed grain crop in the United States and other areas of the world where environmental conditions, particularly low and erratic rainfall and high temperature, limit the production of other summer crops. Kansas generally ranks first in sorghum production in the U.S. and accounts for about thirty percent of the total U.S. production.

The K-State sorghum breeding program is primarily supported by state and federal funding and through funds made available from the Kansas Grain Sorghum Commission. The objectives of the breeding program are driven by the needs of the sorghum producers in Kansas. The general objective of the breeding program is to increase yield potential and market value of sorghum. This research requires development of high-yielding sorghum hybrids with superior stress tolerance. Several specific program objectives are highlighted below.

Development of Food-Grade Sorghum Hybrids

The Kansas grain sorghum crop is utilized primarily for cattle and swine feed and for industrial purposes. Most of the commercial hybrids grown in the U.S. produce purple plant pigments. The grain from these hybrids has limited use in food markets and the U.S. poultry industry. Sorghum researchers have known that adopting tan-plant sorghum hybrids will improve overall sorghum grain quality. Grain from tan plant hybrids can be utilized in the food industry and in all phases of U.S. poultry and animal production industries. Depending on market conditions, producers may receive a premium for grain from tan-plant hybrids. The development of food-grade sorghum hybrids with improved lodging resistance, high yield potential and excellent grain weathering resistance promises improved marketing opportunities and greater profit potential.



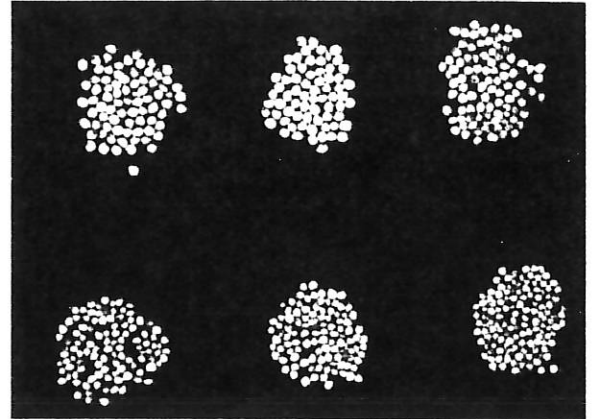
Senate Agriculture Committee

Date 01-10-01

Attachment # 2-1 thru 2-2

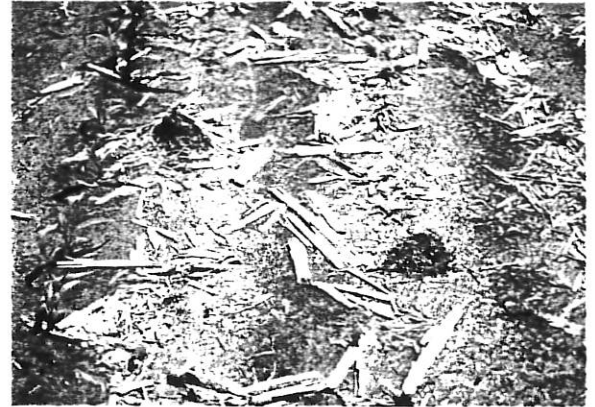
Breeding for Increased Yield Potential and Feed Quality

Sorghum parent lines and hybrids with longer grain filling periods are being developed to enhance yield potential and grain quality of sorghum produced in Kansas. Genetically diverse sorghum lines from East Africa have been identified that fill grain for more than 45 days, one third longer than standard U.S. hybrids. Hybrids that express long grain fill duration produce much larger seeds than commercial U.S. hybrids. The grain samples shown at the top of the picture are produced on long grain fill duration hybrids. These hybrids are higher yielding and have greater crude protein content. Breeding efforts are focused on incorporating these traits into elite U.S. parent lines and hybrids, particularly food-grade sorghum hybrids.



Enhanced Seedling Vigor and Cold Tolerance

In recent years, farmers and agronomists have emphasized earlier planting dates for grain sorghum. Early planting should contribute to a longer growing season, more effective utilization of late spring and early summer rainfall, and enhanced yield potential. Sorghum originated in the semi-arid tropics and expresses excellent heat and drought stress tolerance but generally is susceptible to cold stress. Germplasm sources for cold tolerance have been identified and are being incorporated into elite U.S. sorghum parent lines and hybrids. The cold-tolerant hybrid shown on the left side of this picture develops much more quickly under early planting conditions than the conventional sorghum hybrid at the right.



Improved Stalk Quality and Disease Resistance

Stalk lodging results in loss of yield potential and is a major constraint to dryland sorghum production in Kansas. Lodging problems in Kansas are usually associated with fusarium stalk rot infections. Genetic sources of fusarium stalk rot resistance are being identified in landrace accessions from Africa and India as shown in the sorghum stalk on the left. These genes for resistance are being incorporated into elite hybrids adapted for production in Kansas. The development of sorghum hybrids with high levels of resistance should provide farmers with a means for controlling this chronic problem.





Kansas Center for Sustainable Agriculture & Alternative Crops

"Farming for Profit, Stewardship and Community"

Testimony before the Kansas Senate and House Agriculture Committees - January 10, 2001

Activities and Accomplishments in Addressing the Needs of Small Family Farms in Kansas

Implementation of the Kansas Center for Sustainable Agriculture and Alternative Crops

In response to SB534 of the 2000 Legislature, the Kansas Center for Sustainable Agriculture and Alternative Crops (KCSAAC) was established at Kansas State University.

- A full-time Coordinator for the center, Ms. Jana Beckman, was hired last fall and started work on January 2, 2001.
- A Stakeholder Listening Session was held in August to get stakeholder input into the programs of the Center. Another Stakeholder Listening Session is planned during the Sustainable Ag Roundup in February 2001.
- A website has been created with information about the center, its programs, and technical information on sustainable farming practices and alternative crops; the address is: www.oznet.ksu.edu/kcsaac.
- An informational brochure has been designed and will be available for distribution in February (draft attached).

Sustainable Agriculture Heartland Roundup

An annual conference on sustainable agriculture is hosted each year at K-State and co-sponsored with the Kansas Rural Center. The target audience for the conference is farmers, professionals working with farmers, and university and agency personnel. Attendance varies from 100-200. The conference this year will be held February 16-17, 2001.

River Friendly Farms Training

We received a grant from the USDA-Sustainable Agriculture Research and Education Professional Development Program to conduct training for extension agents, NRCS field staff, and state agency personnel in a whole farm assessment and planning method called the "River Friendly Farm Plan". This on-farm assessment and planning tool was developed collaboratively by K-State and the Kansas Rural Center with cooperation and support from several other farm groups and agencies for the purpose of providing an easy-to-use, comprehensive, farmer-led and directed, self assessment. The trainings were held on five family farms in eastern and central Kansas. This self assessment tool is a key step in a voluntary compliance process, such as we are using in Kansas.

Senate Agriculture Committee

Date 01-10-01

Attachment # 3-1 thru 3-4

Green Labeling

K-State in collaboration with the Kansas Rural Center has been investigating the feasibility of "green labeling" for small groups of environmentally responsible farmers like the Cheney Reservoir Watershed group and others. We hosted a visit by an extension specialist from Pennsylvania who had experience with green labeling and met with officials from the City of Wichita, a small group of Amish dairymen, and several individuals from the Cheney Citizens' Management Committee to discuss options. With the help of the City of Wichita, we hope to pilot test a green label.

Alternative Crops

KCSAAC personnel are in the process of developing several Fact Sheets on alternative crops for Kansas. Four are under development: sweet corn, canola, cotton, and cover crops. A list of twenty other crops offer possibilities for future Fact Sheets.

Initial Assistance Grants

The Kansas Cooperative Development Center manages a small grants program for financial, legal, and technical assistance to producer groups and associations who have business venture ideas aimed at value-added marketing of agricultural products. Last year, several of their grants went to groups who represent small farms:

- The Nicodemus Flour Cooperative is examining an ethnic-based wheat product.
- The Kansas Organic Producers are looking into organic dairy production.
- The Great Plains Herb Growers Association has contracted with a consultant to do a business plan for marketing herbs.
- Valley Vegetables Cooperative is building a processing plant for frozen sweet corn.
- The Kansas National Farmers Organization plans to establish a marketing and bargaining cooperative.

In 2001, a total of \$50,000 in grant funds are available.

*"Knowledge
for Life"*

3-3

COOPERATORS

- National Farmers Organization
- Kansas Rural Center
- Kansas Farm Bureau
- Kansas Farmers Union
- Kansas Catholic Conference
- Kansas Department of Agriculture
- Kansas Department of Commerce and Housing's Agricultural Products Development Division
- Kansas Department of Health and Environment
- Kansas Ecumenical Ministries
- Kansas Organic Producers



KCSAAC

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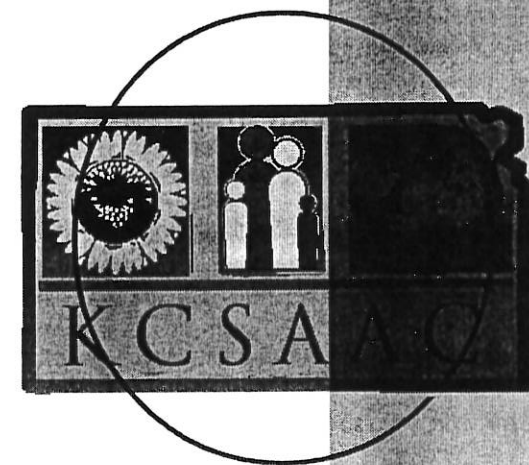
“Knowledge for Life”

If you'd like to become actively involved please contact:

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It is the policy of Kansas State University Agricultural Experiment Station and Cooperative Extension Service that all persons shall have equal opportunity and access to its educational programs, services, activities, and materials without regard to race, color, religion, national origin, sex, age or disability. Kansas State University is an equal opportunity organization. Issued in furtherance of Cooperative Extension Work Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Marc A. Johnson, Director

Kansas State University Agricultural Experiment Station and Cooperative Extension Service



KANSAS CENTER FOR SUSTAINABLE AGRICULTURE & ALTERNATIVE CROPS

“Farming for Profit, Stewardship and Community”

K-State Research and Extension

GETTING INVOLVED





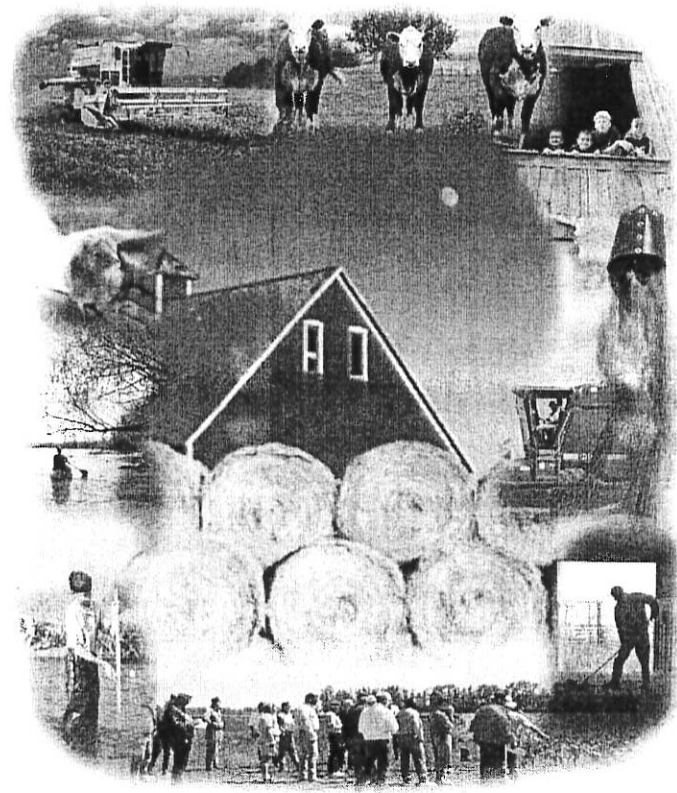
MISSION

Support small family-owned farms in Kansas through research, education and outreach focused on production, storage, processing, and marketing technologies that will boost small farm profitability, protect natural resources, and enhance rural communities.

KCSAAC ROLES

- Promote research, education, outreach, and marketing for sustainable agriculture and alternative food, fiber, and medicinal crops.
- Assist farmers to increase the farmers share of the food system dollar
- Collect and analyze basic information on the Kansas food system and opportunities for production and direct marketing
- Focus research on value-added processing and new crops that offer low-volume, high margin niche opportunities.
- Assist small farmers to lower input costs through a delivery system with expanded access to sustainable agricultural practices.

- Facilitate marketing assistance to promote products produced and processed in Kansas.
- Expand small farm research to include organic products, less capital intensive investments, energy-saving technology, and agricultural practices that reduce soil erosion & restore soil health.
- Develop and distribute a guide of state services for small farms and value-added agriculture.
- Assist small farmers in development & implementation of water quality protection production systems.

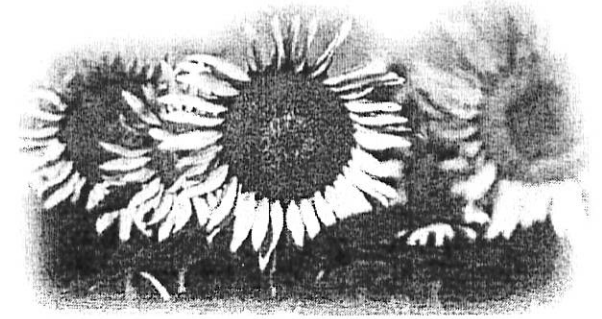


KCSAAC was established by Senate Bill 534, passed by the 2000 State Legislature, out of concern for the survival of small farms in Kansas.

CURRENT PROJECTS

3-4

- K-State Research and Extension specialists are studying more than 20 plants for their medicinal crop and profit potential, including echinacea, an herbal supplement also known as purple coneflower.
- The Kansas Cooperative Development Center at K-State helps provide education and assistance with value-added processing and marketing as well as support for Kansans interested in establishing cooperatives.
- A dozen cotton varieties are in performance tests at several K-State research sites. Date-of-planting studies are being conducted to determine the length of cotton's growing season and potential yield levels in Kansas.
- K-State recently released two canola varieties from their breeding program. Herbicide resistant canola germplasm is being tested in greenhouse and field trials.
- River Friendly Farm training provides educational and technical specialists with on-farm examples of best management practices and an opportunity to see the whole-farm planning process in action.



Testimony before the Senate and House Agriculture Committee
January 10, 2001
Sericea Lespedeza Management and Control Project
Kansas State University

Sericea lespedeza was first recognized as a problem in the mid 1980's. It was declared a county option noxious weed in 1988 and a statewide noxious weed July 1, 2000. Research began with internal funding in the mid 1980's. State funding began in 1998 and funding through the Kansas Department of Agriculture began in FY 2000.

Research Program

Sericea lespedeza is susceptible to Remedy (triclopyr) applied at 1 to 1.5 pints/acre during the vegetative or early bloom stages. Ally/Escort (metsulfuron) applied at ≥ 0.4 oz/acre during full bloom also provides control. A single mowing or late-spring burn generally increases stem density of sericea lespedeza. Application of Remedy at 0.5 pints/acre or Ally/Escort at 0.2 oz/acre 4-6 weeks after burning or mowing provides control of sericea lespedeza equivalent to higher rates of the herbicides used alone. Application of these herbicides needs to be repeated 2-4 years after initial treatment as sericea lespedeza stands recover, primarily from a seed bank in the soil. Dry weather as experienced in 1999 and 2000 greatly reduces the effectiveness of herbicides applied for sericea lespedeza control.

A total of 45 interviews have been conducted with landowners in eastern Kansas regarding the history and management of sericea lespedeza. The interviewing process is nearly complete with more detailed follow-up on selected operations scheduled to occur. Ongoing research includes:

- absorption and translocation of picloram, triclopyr, and metsulfuron
- effect of late-season herbicide application on seed viability
- effect of herbicide spray volume on control
- effect of repeated mowing on control
- integrated control using fire, mowing, and herbicides
- monitoring of sericea lespedeza seed banks following different management strategies
- herbicide screening at different stages of growth

Future research plans under current funding level include:

- ecological consequences of sericea lespedeza invasion on the tallgrass prairie
- viability of sericea lespedeza seed fed to quail

Education Program

Current status: The education effort, a combination of ongoing and special Extension programs, has grown during 2000. Statewide, the education effort has increased with many counties recognizing the potential impact and initiating local programs. Approximately half the Kansas counties have initiated or are developing programs. Coordination of the program is being done by Paul Ohlenbusch. Counties are being encouraged to develop a program to define the problem and develop an education program to fit their situation. Multi-county programs are being encouraged whenever possible.

Two symposia, *Sericea Lespedeza and the Future of Invasive Species: A Symposium With a Look to the Future*, were held February 26 (Eureka) and March 11 (Wamego) with a total attendance of 305 people. A proceedings was developed and distributed through Extension and other outlets.

A concentrated effort is under way in Southeast Kansas headed by Gary Kilgore, Southeast Area Extension Crops and Soils Specialist, and Jeff Davidson, County Extension Agent, Agriculture, in Greenwood County. Demonstrations, tours, and meetings are conducted to draw attention to the problem and to help producers identify sericea lespedeza and to understand the impacts on grazing lands.

Senate Agriculture Committee

Date 01-10-01

Attachment # 4-1 thru 4-3

Plans for 2001 under current funding level: The main thrust will be to continue developing and supporting county and multi-county sericea lespedeza management and control programs with presentations at meetings and tours, publications, and other materials as needed. Coordinated programing with the surrounding states will continue.

Significant Publications/Presentations:

- Fick, W.H. 2000. Alternative herbicides and mowing for sericea lespedeza control. Abstracts, Soc. Range Mange. Annual Meeting, Boise, ID, Feb. 13-18, Vol. 53:65.
- Fick, W.H. 2000. Integrated control of sericea lespedeza in Kansas. p. 15-16, In: 2000 Cattlemen's Day. Rep. of Prog. No. 850. Kansas State Univ. Agr. Exp. Sta. and Coop. Ext. Serv., Manhattan.
- Fick, W.H., R.A. Kunard, and K. Al-Khatib. Absorption and translocation of triclopyr and picloram in sericea lespedeza. Poster presented at North Central Weed Sci. Soc. Annual Meeting, Dec. 11-14, 2000, Kansas City, MO.
- Kunard, R.A., W.H. Fick, and P.D. Ohlenbusch. Survey of land managers with sericea lespedeza invading grasslands. Poster presented at North Central Weed Sci. Soc. Annual Meeting, Dec. 11-14, 2000, Kansas City, MO.
- Miller, B., W. Fick, and G. Kilgore. 2000. Herbicidal activity of triclopyr and fluxoxypyr on sericea lespedeza. Abstracts, Soc. Range Mange. Annual Meeting, Boise, ID, Feb. 13-18, Vol. 53:106.
- Ohlenbusch, P.D., and J.M. Mayo (eds.). 2000. Sericea Lespedeza and the Future of Invasive Species: A Symposium With a Look to the Future. Feb. 26, Eureka, KS and Mar. 11, Wamego, KS. K-State Research and Extension Pub. No. MF-2453.
- Scott, B., T. Bidwell, S. Clubine, M. Coffin, and P. Ohlenbusch. Multi-state sericea lespedeza work group: a team approach. Poster presented at North Central Weed Sci. Soc. Annual Meeting, Dec. 11-14, 2000, Kansas City, MO.

Cooperative Efforts

Kansas State University, in cooperation with the Kansas Department of Agriculture, other state and federal agencies, and producer and environmental groups, organized the Multi-State Sericea Lespedeza Work Group in July, 2000. The Work Group includes similar groups in Missouri, Nebraska, and Oklahoma to coordinate research and educational efforts. Currently, the Work Group is seeking funding for a Director to coordinate the research and Extension efforts and assist each state in developing an integrated management and control program.

Current Work Group efforts:

Research Coordination: Protocols have been developed and will be refined to allow all research data to be compiled and analyzed to determine the best chemical control measures throughout the region. The data set can also be used to determine if sericea lespedeza is responding differently as growing season, precipitation, and other factors change.

Education Efforts: The current major effort is to produce printed materials that are usable in all the cooperating states. Delivery of education programs within each state will be coordinated to deliver a unified and consistent message. The current publications being developed are:

Sericea Lespedeza: History, Characteristics, and Identification A cooperatively developed publication is being edited by Paul Ohlenbusch (Kansas) and Terry Bidwell (Oklahoma). The publication is a combination of the Kansas and Oklahoma publications expanded to cover all four states. Expected publication date is April, 2001.

Sericea Lespedeza: A Forage Crop and a Noxious Weed: A cooperatively developed brochure for use with general audiences. It is being designed to acquaint people with the potential that sericea lespedeza has to change the Tallgrass Prairie, reduce wildlife habitat quality, and reduce the production and profitability of grazing operations. Expected publication date is April, 2001.

Sericea Lespedeza & Herbicides: Cost effective controls: A cooperatively developed publication explaining the control methods available, their proper use including herbicide rates, timing, and requirements. Aerial, ground and spot herbicide treatments are included. Expected publication date is late March, 2001.

Posters: Two posters have been developed for use in the region.

Multi-state sericea lespedeza work group: a team approach: Designed to acquaint groups with the goals and activities of the Work Group.

Sericea Lespedeza (*Lespedeza cuneata*): A Noxious Weed: Displays the history, characteristics, and identification of sericea lespedeza.

Future Work Group Needs: The long term goal of the Work Group is to obtain funding for expanded research and education programs across the region.

Other Research and Education Needs: Future research needs includes moving research to a field scale level and incorporating grazing strategies. These efforts would be with individual producers who are willing to cooperate. Funding would be needed to conduct the research including compensating the producer for increased operating costs and lost production.

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