ANOTHER 50 YEARS OF PROGRESS (1957-2007):
HISTORICAL REVIEW OF THE SECOND 50 YEARS OF THE KANSAS STATE UNIVERSITY SOUTHWEST RESEARCH-EXTENSION CENTER AT GARDEN CITY, KANSAS

Kansas State University Agricultural Experiment Station and Cooperative Extension Service
ANOTHER 50 YEARS OF PROGRESS (1957-2007):
HISTORICAL REVIEW OF THE SECOND 50 YEARS OF THE KANSAS STATE UNIVERSITY SOUTHWEST RESEARCH-EXTENSION CENTER AT GARDEN CITY, KANSAS

Current center head, Bob Gillen (right), and current center coordinator, Randy Currie, standing in front of the Southwest Research-Extension Center office building at 4500 East Mary Street, which was completed in 2000.
Material for “Another 50 Years of Progress” was compiled and edited by Lawrent (Larry) Buschman, Department of Entomology and Southwest Research-Extension Center, Garden City, Kansas.

PHOTO CREDITS

Alam: Back cover #4 & 5, page 50, page 52, page 53 #1, page 54, page 76 #1; Buschman: Front cover #8, #9, page 1, page 7 #6, page 16 #1, page 20, page 22 #2, page 28 #1 & 2, page 30 #1 & 2, page 31 #2, page 42 #1 & 2, page 42 #1 & 2, page 43 #1 & 2, page 44 #1, page 46 #2, page 48, page 49 #1, page 51 #1; Coyne: page 7 #5; Elliot: Back cover #1 & 8, page 6 #1, page 11 #1, page 29, page 34, page 35 #1, page 40, page 45 #2, page 58, page 65 #1, page 67 #3, page 68 #2 & 3, page 70 #2, page 71 #1, page 72 #1 & 2, page 74 #2 & 3, page 75, page 76 #3; Holman: page 22 #1, page 25 #1; Klocke: page 36 #1; Morishita: page 38; All other photos are from the SWREC archives.

FRONT COVER CAPTIONS (clockwise from upper left)
1) Youth baking bread as part of a 4-H program. 2) Sample analysis 1935. 3) Sample analysis 1970s. 4) Combine 1937. 5) Four mules pulling a riding lister. 6) Cattle feed processing facility 1970. 7) Stacking hay 1946. 8) A modern hay swather. 9) Current center coordinator, Randy Currie, and center head, Bob Gillen, standing in front of the center office building, which was completed in 2000.

BACK COVER CAPTIONS (top left to lower right)
1) Cattle feed bunks at the station. 2) Arial view of the station in 1963. 3) Two mules used for field work 1938. 4) Kent Shaw in front of the Mobile Irrigation Laboratory educating young people about water resources and conservation. 5) Mahbub Alam explaining irrigation sprinkler characteristics. 6) Arial view of the station 1990. 7) Workers standing in front of a shock of sorghum. 8) Normon Klocke explaining the new linear move sprinkler system installed in 2002. 9) The first water-drive sprinkler in operation on the station during the 1960s and 1970s.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, Another 50 Years of Progress (1957-2007): Historical Review of the Second 50 Years of the Kansas State University Southwest Research-Extension Center at Garden City, Kansas, Kansas State University, August 2007.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service


Designed, edited, and printed by the Department of Communications, Kansas State University, 2007. This is contribution number 08-14-S.
# TABLE OF CONTENTS

## RESEARCH PROGRAM
- LIVESTOCK RESEARCH 12
- AGRONOMIC RESEARCH 15
- HORTICULTURE RESEARCH 21
- SOILS RESEARCH 21
- DRYLAND CROPPING SYSTEMS RESEARCH 22
- ENTOMOLOGY RESEARCH 27
- IRRIGATION RESEARCH 32
- WEED SCIENCE RESEARCH 37

## EXTENSION PROGRAM
- EXTENSION PROJECTS 44
- DISCONTINUED EXTENSION PROJECTS 54

## WEATHER OBSERVATIONS
- 55

## EMPLOYEE ROSTERS
- RESEARCH EMPLOYEES 65
- EXTENSION EMPLOYEES 75
RESEARCH PROGRAM

Larry Buschman and Robert Gillen

The Garden City Branch Experiment Station was established in 1907 with a lease of 320 acres located about 5 miles northeast of Garden City. The early inventory included one building (office, tool storage, and stable), seven tillage implements, a farm wagon, and two horses. The station has since grown to encompass almost 1,100 acres; modern offices, shops, and laboratories; up-to-date machinery; and computer technology that the early scientists could not have dreamed of.

Change has been constant over the years at the station, a reflection of changes in the agricultural industry of southwest Kansas. At one time or another, research projects have addressed dryland and irrigated crop production; crop breeding and genetics; production of lambs, hogs, turkeys, dairy cattle, and beef cattle; horticulture; and crop and livestock entomology. As farms in the region became less diversified, research at the station came to focus primarily on dryland and irrigated crop production.

Although research topics have changed over time, the basic mission of the station has not changed since 1907. That mission is to serve the people of western Kansas by developing new knowledge and technology to sustain long-term, profitable production of crops and livestock while conserving natural resources and assuring food safety.

Andrew B. Erhart, former superintendent at the Garden City Branch Experiment Station, compiled a history of the first 50 years of the experiment station. Erhart’s publication, “50 Years of Progress” is out of print but is available on the web at: http://www.osnet.ksu.edu/swao/50yrspg.pdf. The current review will focus mainly on the second 50 years of the station’s history.

LAND HOLDINGS

The Garden City Branch Experiment Station was established in 1907 with the Finney County Commission leasing 320 acres of land to the Kansas State Board of Regents. This initial 99-year lease later was extended through 2087 to assure the long-term presence of the station and allow construction of a new office building. Later land additions included the purchases of 99.5 acres to the west in 1937 and 136 acres to the south in 1949. These three tracts, 555 acres, are the core land area for the experiment station.
Over the years, several other tracts have been included in the station. From 1948 to 2002, the Garden City Company granted a no-cost lease on 80 acres northwest of Holcomb to be used for irrigation and agronomic research. Research on this tract first used ditch water for irrigation and later switched to well water. That site also included a sub-surface drip irrigation system. The station leased a tract of land with a center pivot sprinkler one mile east of the main station from 1977 to 1987. This land was used to produce forage for the cattle feeding project and for dryland cropping research. In 1980, the station added another lease of 30 acres one mile east of the main station for dryland and irrigated crops research on sandy soil. Since 1981, the Finnup Foundation has granted a lease on 160 acres two miles north of the main experiment station for dryland and irrigated agronomic research. Land resources for the experiment station currently total 1,078 acres, including 471 dryland acres and 366 irrigated acres. In 1986, the Tribune Branch Station was combined with the Garden City Branch Station as a satellite unit. This added 268 acres of cropland, 333 total acres.

FACILITIES
Erhart described the facilities as meager in the early years of the station, which now consists of 27 buildings. Several changes in the second 50 years are particularly noteworthy.

An intense tornado and hail storm struck Garden City and the experiment station on June 23, 1967. Of the 40 buildings on the station at that time, 20 were destroyed and the remainder suffered major damage (see pages 8-9). The destruction was so severe that the state legislature made a special appropriation of $331,500 for reconstruction. Most of the steel buildings currently on the station are a result of this reconstruction. Erhart accomplished this huge task under budget and proudly returned $19,360 to the state treasury.

In 1963, the station’s research advisory committee developed a proposal to build a “research center” that included a soil testing laboratory, offices, a library, a meeting room, and greenhouses. Half of the funding for the building came from private donations raised by the committee; this was matched by a state appropriation. The building was completed in 1967 at a cost of $70,000 and is still in use.
A major change occurred in 2000 with the completion of a new office building. The old office building had been in use since the 1940s and was very small and inadequate. The area extension office had moved away from the experiment station in 1969 to lease more suitable space in Garden City. Several efforts were mounted over the following years to replace the office building but adequate funds could not be raised. Finally, during the 1990s, funding rules for state buildings were modified and the station was allowed to take a loan from the KSU Foundation to build a new office building. This project was significant for two reasons. First, it improved the functionality and appearance of the research station. Second, it allowed the southwest area extension staff to move back to the station. Having research and extension personnel in the same facility increases coordination of research and extension efforts and allows K-State to deliver better services to the public.

Housing for the superintendent, scientists, and support staff was once common on experiment stations throughout the Great Plains, and the Garden City Branch Experiment Station was no exception. Homes “on station” gave it the feel of a small rural community. However, maintenance costs increased as the homes aged and transportation improvements reduced the need for on-station housing. Closing the beef cattle feeding operations also reduced the need for housing on the station. Four of six residences on the station were eventually removed. One remaining residence is occupied by the farm manager and the other is used to house graduate students who come from Manhattan to do summer research projects.

LEADERSHIP
Erhart listed the first eight superintendents of the Garden City Branch Experiment Station. Andrew Erhart served as superintendent for 28 years (1948-1976), by far the longest tenure of any superintendent at Garden City. Erhart was followed by Gerald Greene (1976-1981), George Herron (1981-1990), and James Schaffer (1990-1995). In 1995, the Garden City, Colby, Hays, and Tribune experiment stations were consolidated into the Western Kansas Agricultural Research Centers (WKARC). Patrick Coyne, who had been head of the center in Hays since 1985, became the first head of the combined WKARC. Coyne was followed by Robert Gillen in 2006. The WKARC head is stationed at Hays, so a local research coordinator is designated at each center. Charles Norwood served as the first local coordinator at Garden City (1995-2000) and was followed by Randall Currie (2000-present).
1963 PHOTO

BUILDINGS DESTROYED IN 1967 TORNADO
1990 Photo

North

X

X

1 2 X X X

3 X

1-5 STRUCTURES ADDED SINCE 1980

X STRUCTURES REMOVED SINCE 1980
ADVISORY COMMITTEE
Public support has long been important to the station’s success. This is confirmed by the original land lease from the Finney County Commissioners in 1907 and a cash gift from the Garden City Industrial Club in 1911 to drill the first irrigation well at the station.

A long and fruitful tradition was started June 15, 1961, when the Garden City Experiment Station Research Advisory Committee was organized by a group of farmers and county agents representing 26 southwestern Kansas counties. The purpose of the committee was to give farmers an opportunity to advise and aid the station in development of its research program. The first officers were Clifford Mayo, president; Clarence Lynch, vice president; and Marvin Odgers, secretary. One of the committee’s first efforts was raising half of the cost to build the research center building in 1963. The committee still meets with station faculty annually and continues to be an important partner in developing research priorities and direction.

During the late 1970s, the committee helped the station lease the “Russell Land” east of the station so the station could do more work with sprinkler irrigation and work on “sandier land.” It was also instrumental in raising more than $60,000 for irrigation equipment at the site.

Producers had pointed out for many years that the station was not doing research on true “sandy land.” During the 1990s the committee worked with the Ogallala Task Force to develop the Western Kansas Irrigation Research Project. The Kansas legislature appropriated funds for this proposal starting in 1995, with the understanding that private donations would help build the necessary infrastructure. Water rights for 1,500 gallons-per-minute diversion and a 30-year no-cost lease of 260 acres south of Holcomb were negotiated with Sunflower Electric Company in 2000. Plans were developed and faculty hired for the “Sandhills Irrigation Research Unit,” but the fund drive to raise $2.1 million in private funds was ultimately unsuccessful and the project was terminated. However, the legislature has continued to appropriate a smaller amount of funds to enhance irrigation research at Garden City and Colby.

EDUCATIONAL PROGRAMS
Although research has always been the primary purpose of the experiment station, efforts were made from the beginning to show the results to those who could use them. Thousands of visitors have been welcomed to the station and the experimental plots over the years. In addition, field days have been conducted several times each year to showcase the newest research and make results directly available to the public. In recent years, the station has sponsored a wheat tour in May for winter crops and a fall field day in August for summer crops. Annual cattle feeder’s days were held when the beef project was active.
Results of research projects have been published in various pamphlets, field day reports, the popular press, and scientific journals. Many of the more recent publications are available on the K-State web site, while older publications are shelved in the station and campus libraries. Station faculty repeatedly have been called on by newspaper, radio, and television reporters to explain research results or interpret the impact of current events, such as extreme weather or plant disease outbreaks, on southwestern Kansas agriculture. Erhart had a weekly radio program for many years and the scripts for these programs were deposited in the K-State library by Larry Kepley, a longtime member of the research advisory committee.

TRAGEDY
On May 19, 1980, George Homer and John Walters, employees at the experiment station, were killed in a tragic accident. Apparently, Homer entered a grain bin to clear a problem with grain feeding to the auger and was overcome by the lack of oxygen. Walters tried to rescue him, but was also overcome by the lack of oxygen. The men were wearing gas masks and thought they were safe, but the masks were not the correct type. The incident drew considerable press and emotions were high for quite some time.

This accident serves as a reminder that farming is one of the ten most dangerous occupations and university personnel are not immune. Safety is a very high priority at the station.

SOUTHWEST RESEARCH-EXTENSION CENTER
In 1986, the Tribune Branch Experiment Station was combined with the Garden City Branch Experiment Station. The new unit was called the Southwest Research-Extension Center. In 1990, James (Jim) Schaffer was asked to supervise both the southwest area extension specialists and Garden City station project leaders at the Southwest Research-Extension Center (SWREC). However, when Schaffer left in 1995, Patrick (Pat) Coyne was asked to supervise the three western Kansas experiment stations (Hays, Colby, and Garden City), but not the extension specialists. The head of the Western Kansas Agricultural Research Center (WKARC) has been stationed at Hays, with a research coordinator stationed at each center. In 2006, Robert (Bob) Gillen became the WKARC head.

In 2000, the Southwest Area Extension Office moved into the new office building at the center, bringing the two administrative units into the same physical location once more. The SWREC and the area extension office operate as independent organizations. However, there is extensive collaboration among research and extension faculty at the SWREC. New faculty carry both research and extension responsibilities to help blur the boundaries between the two organizations.