		Approved	Date	, 1989		
MINUTES OF THE _Se	enate COMMITTEE ON Agri	culture		•		
The meeting was called to	o order by <u>Senator Allen</u>	Chairperson		at		
10:08 a.m./pxx. on	February 9,	, 19_89	n room <u>423–S</u>	of the Capitol.		
All members were present excepts						
Committee staff present:	Raney Gilliland, Legislative Res Lynne Holt, Legislative Res Jill Wolters, Revisor of S	search Dep	partment			

Conferees appearing before the committee:

Orville W. Bidwell, Professor of Soils, Emeritus KSU, Manhattan George Ham, Head, Agronomy Department, KSU Orville Love, Area Conservationist (retired) Topeka Don Gier, Soil Scientist, SCS (retired), Marysville Vernon Hamilton, Soil Scientist, SCS (retired) Salina Roger Coleman, Jefferson County District Conservationist (retired) Oskaloosa Kenneth Sallee, Soil Scientist (retired) Soil Conservation Service, Troy

Kenneth Kern, Executive Director, Kansas Conservation Commission, Topeka George Jorgensen, Doniphan County District Conservationist (retired) Troy

Senator Allen called the committee to order and called on Senator Frahm to make a bill request.

Senator Frahm requested the committee request the introduction of a bill that on the regular permit required would allow for 14 foot wide implements to travel on the interstate highways. As it is now only 12 foot widths are allowed with the permit and a special permit for wider implements must be secured.

Senator Daniels moved the committee request introduction of a bill to allow 14 foot wide implements be allowed to travel on interstate highways with the permits that are now issued; seconded by Senator Frahm; motion carried.

The Chairman called on Senator Francisco to request introduction of a bill.

Senator Francisco requested the committee request legislation be written, as requested by the Kansas Agri-Women, for adoption of the Uniform Marital Property Act. Senator Francisco moved the committee request legislation be written for adoption of the Uniform Marital Property Act. Motion was seconded by Senator McClure. Motion carried.

The Chairman called on Senator Karr to comment about SB 96.

Senator Karr explained that SB 96 is a continuation of the work begun last session with the request to name a state soil for Kansas; then he introduced Orville Bedwell.

Orville Bidwell introduced the following to testify for SB 96.

George Ham gave copies of his testimony to the committee (attachment 1) and encouraged the committee to vote favorably for SB 96, a bill that would help create an appreciation for our soil.

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not

CONTINUATION SHEET

MINUTES OF THE Senate COMMITTEE ON Agriculture,

room 423-S, Statehouse, at 10:08 a.m./pxxx. on February 9

. 19_89

Orville Love provided copies of his testimony ($\underline{\text{attachment 2}}$) and requested the Legislature officially adopt a state soil.

Don Gier explained that there are 300 kinds of soil in Kansas. Mr. Gier explained that Harney soil was first found and identified in Ford County and that it is in 25 counties within the state. Mr. Gier stated that soil is of major importance to Kansas because we are an agricultural state and that Harvey soil is a good representative soil from among the types of soil there are in Kansas.

Vernon Hamilton explained that Harney soil represents the best of the soils in Kansas and that Harney soil is found only west of U.S. 81. Mr. Hamilton endorsed Harney soil to become the state soil and requested the committee recommend its adoption also.

Roger Coleman gave copies of his testimony to the committee ($\underline{\text{attachment 3}}$) and urged the committee to vote favorably for $\underline{\text{SB 96}}$.

Kenneth Sallee provided copies of his testimony (attachment 4) and also expressed the support of Harold Adkins, Director of the Agriculture Hall of Fame, for \underline{SB} 96. Mr. Salle expressed the need for information and displays for teaching and showing information about soils in Kansas. Mr. Sallee explained that displays are being organized for samples of soil from all of the states to be on exhibit at the Agriculture Hall of Fame; he expressed support for \underline{SB} 96 so that the Harney soil could be displayed as, also, the state soil of Kansas.

Kenneth Kern gave copies of his testimony to the committee ($\underline{\text{attachment 5}}$) and urged committee support for $\underline{\text{SB 96}}$.

Mr. Bidwell called attention to a letter in support of \underline{SB} 96 from John Hickman who could not be present to testify (attachment 6).

George Jorgensen gave copies of his testimony in support of \underline{SB} 96 to the committee (attachment 7). Mr. Jorgensen requested the committee seriously consider the passage of \underline{SB} 96, which has been worked on since 1985.

Mr. Bedwell explained that there is a national effort underway to name a national soil; he also stated there are 25,000 different soils within the 50 states. Mr. Bidwell encouraged the support of the committee to get Harney adopted as a state soil so that soil information would be included in the "Kansas Facts" publication. Mr. Bidwell explained that 6 states have adopted a state soil and others are considering naming a state soil. Mr. Bidwell gave information to the committee about why Kansas needs a state soil, information about soil and an issue of "Kansas Facts" where he would like to soil information printed (attachment 8).

During discussion comments included enthusiasm for Harney soil to be named the state soil; that Harney was the choice for state soil by all who testified, and that the state classification of our soils is completed and that now is the time for the naming of a state soil to be accepted.

The Chairman called for action on committee minutes.

Senator Lee moved the committee minutes of February 8 be approved; seconded by Senator Karr; motion carried.

The Chairman adjourned the committee at 10:58 a.m.

GUEST LIST

COMMITTEE: Senate Agriculture DATE: February 9, 1989

NAME	ADDRESS	ORGANIZATION
Joe Lieber	Topeka	As. Co-op Council
Ken Kern	TOPERAA	Conservation Commissi
Katha Hurt	Manhattan	Legislator
Paul Blades	Mandan Ha.	the Mury
George Ham	Manhattan	KSU-Agrenomy
Jak Luenting	Lein	Tana !!
Mennith H. Saller	Troy	KS Soil Clasifice
JACKIE COLFHAN	OSTALOOSA	SWCS-PONYEXACESSCH
Roge D Coleman	Oskaloosa	SWCG Pany Express C
Prville W. Love Return	Topeka Ks	Soil Conservation Ser
Dengu Inguram M	Frank Kameur	SEW-CS State Cour
Vernon LHamilton	818 West Jun 6740)	50 NCS Kondon Prof Son Clarifu
Donald a Figure	MARKSUILLE KS	KAPSC
Haven topen	Manfallan	Vansas Form Bereau
Theole Bilinel	Mankallan	KS Assa Prof-Soil C
Kay Oron Dean Oroin	Japelia	Citizens
" Shill Hochhausen	Pezislature	Manhattan
Lana Olcon	Henhalter	Senator
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SENATE BILL Number 96: AN ACT designating Harney silt loam as the state soil of Kansas.

> George E. Ham, Head Department of Agronomy Kansas State University February 9, 1989

I wish to speak in support of designating Harney silt loam as the state soil of Kansas.

Soils are one of the most valuable natural resources of Kansas and the U.S. Kansas agriculture and the Kansas economy are based on the high productivity of our soils; even Kansas rangelands are among the most productive in the U.S. Soils are an integral part of the ecological system which produces our food, feed, and fiber. For agricultural crops, soils serve as a medium which is capable of physically supporting plants as well as acting as a storehouse for nutrients and water essential for plant growth and Kansas soils are among the best in this regard. Soils furnish most of the feed necessary to produce high quality livestock in Kansas.

Although it is common to associate the importance of soils and agricultural production, soils are also very important for urban development, engineering and recreation. In urban areas soils act as the foundation materials for houses, streets, and buildings. They also work as purification systems for septic tank effluent, and again they are a medium for the growth of lawns, shrubs and gardens.

An important part of the teaching and research programs in the Department of Agronomy at Kansas State University focus on the factors and processes of soil formation, classification of the soils and the use of soil information. One of the main reasons for the existence of the eight agronomy experiment fields and the four branch experiment stations is to conduct crop and soil management research based on the soils in various areas of Kansas. That is why the specific soil used in research is one of the first items provided in the materials section of research reports.

In summary, soils play an important and integral part of our everyday life. They help supply our food, support homes and highways, act as building materials for construction, absorb our waste materials and give us many beautiful and scenic areas for relaxation and recreation. For these reasons, it is the responsibility for everyone to have an appreciation and understanding of our soils so that all people can conserve and enjoy this valuable natural resource.

Designating Harney silt loam as the state soil of Kansas would help provide a focal point for soils in our teaching and research programs and would help our citizens appreciate, understand and conserve this important natural resource that is taken for granted.

Senate agriculture 2-9-89 attachment 1

SOIL IMPORTANCE TO KANSAS ECONOMY

by Orville W. Love, Area Conservationist (Retired) U.S.D.A. Soil Conservation Service, Topeka, Kansas

Kansas is a plains state located nearly in the exact center of the contiguous 48 states of the United States. The soils of Kansas are among the most productive in the world.

The State's economy is dependent for the most part on agriculture and related businesses. It has ranked seventh or better amount all states in cash receipts from farm marketing of crops and livestock. Leading crops and livestock products are wheat, sorghum grain, sorghum silage, corn, soybeans, alfalfa hay, wild hay, cattle, sheep and hogs. Of these, Kansas ranked first among all states in the production of wheat, sorghum grain, sorghum silage and cattle slaughtered in 1987. For comparative purposes, the value of farm cash receipts reached almost six billion dollars in 1986, the latest year figures were available.

Related agribusinesses include, among others, the manufacture of farm and garden machinery, fertilizer production, processing of farm products and agricultural services.

Earlier I said, "the soils of Kansas are among the most productive in the world." This fact became more apparent to me last May when my daughter, Janet, and I spent 18 days in China. We visited more than ten cities by plane, bus and river boat all the way from Beijing to Hong Kong. Everywhere we went there was a shortage of everything, especially good soil. Much of the landscape outside the river valleys was severely eroded and had very little vegetation. Every tract of land in the valleys was farmed intensively.

This trip to China made me realize how fortunate we are in Kansas to have such an abundance of good soil. The soils of Kansas have made it possible for agriculture to be the State's leading industry. I recommend that the state legislature officially adopt the "Harvey Silt Loam" as the State Soil.

Senato agriculture 2-9-89 attachment 2

¹Kansas Farm Facts 1987, Kansas Agricultural Statistics - Kansas State Board of Agriculture, p. 3.

Statement in support of Senate Bill No. 96, naming Harney Silt Loam the state soil of Kansas.

Some of the speakers today have talked about the agricultural value of soil. I worked in the Kansas City region for twenty years, and we were concerned about other uses. In Olathe, where I lived, about half of the home owners had to rebuild their basement due to cracks, a soil-related problem. The cost of these repairs was between five and ten thousand dollars a home. A soil survey could have been used to predict shrink-swell of the soil, which causes foundations to crack. Design changes could have been made to overcome this problem.

In Jefferson County where I now live, soil surveys are used to predict septic tank feasibility. The survey is more accurate than an infiltration test that is required by most health departments, as the soil is seldom saturated when the test is made, and a greater than normal infiltration is shown.

Other information in the survey deals with the soil's effect on roads and highways and the location of utility lines. Many people use soil surveys including engineers, homeowners, realtors, sanitation specialists, farmers and ranchers. The use of soil surveys needs to be expanded so that people can make intelligent decisions about soil.

By picking a state soil, this will help in this educational process. As an eastern Kansas resident, I find no problem with Harney Silt Loam. The important thing is to learn that each soil has properties that affect its use, be it farming, the site for a factory or cover material for a sanitary landfill.

A number of newspapers have published articles supporting naming Harney Silt Loam the state soil of Kansas. They include The Kansas City Star, Grass and Grain, Kansas Farmer, The Manhattan Mercury and the Kansas State Collegian.

I urge you to vote in favor of Senate Bill 96.

By Roger D. Coleman
Box 41
Oskaloosa, Kans. 66066

Soil Survey
Physical and Chron properties of Soil Page 52
Building site Day.
Page 39

Senate agriculture 2-9-89 attachment 3 My name is Kenneth Sallee and I wish to thank the Senate Agricultural Committee for allowing me to speak briefly on the use of the State soil in education.

In my work over the past 32 years with the Soil Conservation Service as a Soil Scientist and as District Conservationist of Wyandotte County I have had the opportunity to discuss soils and conservation with students ranging from Kindergarten to Junior College. I have taught land judging and home site evaluation to many students in the eastern half of Kansas.

Many students go through school thinking of soil only as dirt. Some don't really put together the fact that nearly all their food comes from the soil. I had the opportunity to stand before 360 grade school students in a lunch room in the Kansas City area and discussed soils and water conservation. This is where I realized the need for literature that is factual about the most precious and valuable Resource in Kansas - the Soil.

In teaching land judging to Vocational Agricultural classes I have been asked to write a soils curriculum for high school level students. In designating the Harney silt loam soil as the state soil," the legislature would be furnishing a tool for teachers to increase the knowledge of students about the most valuable resource in Kansas.

The Harney Soil - a typical Kansas Frairie soil with all the ideal characteristics and properties for growing plants, food and for most other uses would be ideal to catch the attention of young people.

In teaching land judging other soils could be compared against it. The present literature discusses the importance of the owl, squirrel, plants and even the coyote, but the soil is a difficult subject to tell about.

When the legislature designates the Harney silt loam as the state soil of Kansas the door will be open for a greater knowledge of THE SOIL - KANSAS' MOST VALUABLE RESOURCE and agriculture the most important industry in Kansas.

Thank you again for your time and attention.

Senato agriculture 2-9-89 attachment 4

109 S.W 9TH STREET, ROOM 300

TELEPHONE (913) 296-3600

TOPEKA, KANSAS 66612-1299

SENATE AGRICULTURE COMMITTEE SENATE BILL NO. 96 February 9, 1989

TESTIMONY BY: KENNETH F. KERN EXECUTIVE DIRECTOR

The State Conservation Commission supports the designation of the HARNEY SILT LOAM as the state soil of Kansas.

The State Water Plan emphasizes soil and water conservation. The primary responsibilities of the State Conservation Commission, the 105 County Conservation Districts, 86 organized Watershed Districts and other related entities are to preserve our natural resources for future generations.

The designation of one soil, the HARNEY SILT LOAM, as the state soil of Kansas will call attention to all of the state's highly productive soils.

We urge your favorable consideration of the bill.

Senate agriculture 2-9-89 attachment 5



Cooperative Extension Service

Extension Agronomy Throckmorton Hall Manhattan, Kansas 66506 913-532-5776

February 06, 1989

TO: Senate Agricultural Committee

FROM: Dr. John S. Hickman Extension Specialist

Soil and Water Conservation

RE: Support of Senate Bill No. 96. An act designating Harney silt loam as the state soil of Kansas

Kansas is blessed with rich prairie soils such as the Harney silt loam of west central Kansas. Many times Kansans overlook their soil resources. Even I, a trained soil scientist, overlook this resource on occasion. Then I think of the once-forested soils of my hometown in central Indiana. Soils much younger than the prairie soils of Kansas, but yet they have not aged well. These soils are low in organic matter and natural fertility. These memories help me appreciate and respect the soils of Kansas even more.

As an extension specialist for the Cooperative Extension Service at Kansas State University, I see the naming of the Harney silt loam as an opportunity for education. We have a wealth of information collected on the Harney silt loam. Much of the research on conservation tillage in a wheat-grain sorghum-fallow rotation has been conducted at the Fort Hays Branch Experiment Station on a Harney silt loam. But this educational opportunity isn't limited to the Kansas agricultural producer. Rural and urban, young and old, we all need to understand our Kansas soils. One of my responsibilities is to teach a class in land judging and homesite evaluation for youth at 4-H Discovery Days in Manhattan. I'm always amazed that anyone would sign up for a class in soils when they could take a class in canoeing, swimming, arts and crafts, etc. This year, several of my students were from urban areas. Their interests were to learn more about the soil and how it relates to non-agricultural uses such as homesite development. Even the morning shower didn't damper their enthusiasm for learning more about soils.

I strongly feel that naming Harney silt loam as the state soil of Kansas would provide an increased awareness and educational opportunity for our citizens. I thank you for your interest in soils of Kansas.

lam

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.

Senato agreculture 2-9-89 attachment 6 I a steyen forgensom preciding at Rt 2, Ley Kansas. I ne served as sail scintitet for 15 years in lasteen Kansas, Eletrit lonservationst for 17 years for the clouphan locately conservation October, and are currently under conservation lompliance plane developing highly hadable land conservation compliance plane for the local land owners. I am currently a member of the Karras association A Professional Sail classifiers; a lifetime member of the Sail and water conservation Society; and I hold a certificate as a "certified professioned arosim control officialist", which is a program under the auspicies of the american Society of a fromong. I urge this committees serious consideration towards adopting a state sail in Ransas. Endorsements for this action began in January 1985 by the Karwas this action began in January 1985 by the Karwas association association of professional Sail classifiers. After organization that followed have included the Karwas association that followed have included the Karwas association. of Consuration districts (which has office in 105 Countins); the State Consuration Commission in the Statehouse; the the state inservation Commission in the Statehouse; the land Institute at Salina Karwas; the See Kan Red D land Institute at Salina Karwas; the Porm Express Commission in Southeast Karwas; the Porm Express chapter, Sail and water Conservation Society; buildered water Precident of the Karwas Compact of chapters, buildered water Ensuration Society conviced his support by phone to me on Ensuration Society conviced his support by phone to me of Subruary letter; the slowiphen County Conservation Statement and subruary for the adaption of Harray and on sub- 1 th and support the adaption of Harray southeast on society funding for the development and experiments providing funding for the development and experiments provided brought committee the State Council association of professional Sail classifiction and the State Council association of professional Sail classifiction and the State Council association of professional Sail classifiction and the State Council association. 1 Kansas chapters, Sail and Water Conservation Society. I thank each of you for allowing this time in your brusy schickle to review this quest to name a statisfical for Karsas. Story in Juginsmith Pt 2 Box 118

TROYINS 66087

> Senate agriculture 2-9-89 attachment 7

WHY DOES KANSAS NEED A STATE SOIL?

L To provide as a teaching tool an example of a typical Kansas prairie soil for which there is abundant physical and chemical data, and to which other soils of local or specific interest may be compared.

Students no more can learn all of the Kansas soils than they can all of its kinds of plants. To assure they use an acceptable model, the Harney silt loam is proposed.

II. To recognize the unique symbiotic relationships among prairie plants, animals including Man, and geologic mineral matter that has interacted according to Nature's laws to produce the prairie soil, the thickest of the extraordinarily thin films existing between the atmosphere and the lithosphere upon which all terrestrial life depends.

Except for the discovery of America, never in the history of Mankind has there been a greater revelation than the discovery of the North American prairie, the largest of three such natural areas in the world. Except for inextensive areas in the southeast and on the floodplains of eastern Kansas, most of Kansas's 52 million acres once was in prairie.

III. To acknowledge dependence of the State's economy on unusually productive soils.

Interaction of favorable soils and climate are responsible for Kansas's ranking first in the production of wheat and forage sorghum, and second in the production of grain sorghum, among the 50 states.

Previous remarkable soil properties once present in virgin prairie soils now also are expressed in other ways, in buildings, highways, cities and towns, and in countless other improvements that were financed, at least in part, by farm crops and livestock they nourished.

IV. To recognize and commemorate the properties of the Harney silt loam, a typical highly productive prairie soil.

The Harney's nearly level slopes and thick, dark-colored silt loam surface provide an ideal medium in which to grow crops with a minimum of erosion and other deterioration. Occupying the most acreage of any Kansas soil, it exists on 3,870,000 acres in 25 counties, stretching from Nebraska to Oklahoma in west central Kansas. More than 1.3 million acres occur on 0 to 1% slopes; nearly 2 million acres, on 1 to 3% slopes.

V. To commemorate completion in 1987 of the State's soil inventory.

Consisting of aerial photographic maps and interpretive text, county soil survey reports may be used to identify soils, ascertain land quality, and numerous suitabilities, including that for specific crops, farm ponds, conservation and/or reduced tillage systems, highways, buildings, solid-waste disposal, wildlife, and countless other uses.

Armed with basic knowledge of the soil, agronomists now can devise "what if" computer programs to determine effects of various management practices on crop yields and on soil degradation.

Senate agriculture 2-9-89

attachment 8



SOIL — KANSAS'S MOST VALUABLE RESOURCE

AN INCOMPARABLE LEGACY

Agriculture is Kansas's most important industry. It annually contributes nearly six billion dollars, divided about equally between crops and livestock, to the State's economy.

Responsible for this phenomenal production is a remarkable combination of climate, landscape, and soil that has caused 48% of the State's 52 million acres, or 25 million acres, to be classified as prime farm land, and twenty-nine million acres to be suitable for cultivated crops.

No State has more acres of prairie soils, and only Texas has more prime farmland. Abroad, the steppes of the Soviet Union, and the pampas of Argentina and Uruguay are the only comparable soils.

Kansas's buildings, highways, cities and countless other improvements are graphic illustrations of the long-enduring past productivity of these unique soils. Farm crops and the livestock they nourished financed a sizable portion of these impressive improvements.

PRAIRIE SOILS — A TREASURE TROVE

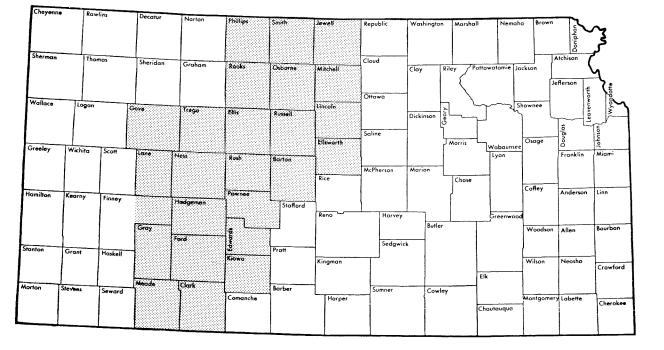
Once prairie grassland covered most of Kansas. Then, the land surface consisted of a mixture of weathered rock, enriched with plants and animals, living and dead. This combination of mineral and organic matter supported all prairie life, and came to be known as the fabulous North American prairie soils.

For eons prairie plants used photosynthesis to convert solar energy, carbon dioxide, and water to carbohydrates, proteins, and fats that nourished native herbivores. Animal waste and uneaten plants and plant roots contributed compounds of carbon, hydrogen and oxygen to the soil. Over time this carbon-rich mixture of

On the cover: Grain sorghum and newly sown wheat on nearly level Harney silt loam.

¹ From **Soils of the Great Plains**, by A. R. Aandahl, by permission of University of Nebraska Press. Copyright © 1982 by the University of Nebraska Press.

Fig. Counties that have Harney silt loam.



Harney Silt Loam

Harney silt loam formed under prairie vegetation in windblown silts called "loess." It occupies nearly 4 million acres, two to five counties wide, extending from Nebraska to Oklahoma, and from an area of 18-inch annual precipitation on the west to one of 28 inches on the east.



Fig. 2. Harney silt loam profile, 0 to 65 inches deep. Ten-inch surface layer of friable dark grayish-brown silt loam over 14 inches of grayish-brown silty clay over 20 inches of yellowish-brown silty clay loam. (F scale is in feet).¹

¹ From **Soils of the Great Plains**, by A. R. Aandahl, by permission of University of Nebraska Press. Copyright © 1982 by the University of Nebraska Press.

The Harney silt loam contains an 8- to surface layer of friable dark grayish-brown silt loam overlying grayish-brown silty clay loam or silty clay. In depth, the soil always exceeds 48 inches, and usually 60 inches. The Harney cross-sectional profile is shown as Figure 2.

As Kansas soils vary, the remaining 48 million acres of soil may be expected to differ from the Harney silt loam. Most of the silty soils east of the Harney zone have darker colored, more clayey surfaces, whereas the soils west of the Harney soils tend to be lighter in color and have less clayey subsoils.

Since Kansas soils comprise a complex and variable mosaic, it is unlikely that one individual can learn them all. However, one can learn the properties of a model soil, in this case, the Harney, the proposed State soil, and compare other soils to it.

FOR FURTHER READING

Persons interested in learning more about soils are advised to refer to their county soil-survey report, available at the Soil Conservation Service and Agricultural Extension Service offices.



Tarn Eddition to soil-fertility depletion, erosion sediment clogged streams, lakes, and harbors, and gullies destroyed roads and bridges, reducing wildlife populations, and imposing additional recreation and transportation costs.

Erosion losses that exceeded tolerable limits, such as corn lands on sloping loessial soils that lost three bushels of soil to produce one bushel of corn, generally made corn cultivation uneconomical after a few years.

USES OTHER THAN AGRICULTURAL

Soils have other important uses in addition to producing food, fiber, feed, and drug crops. They have value as open space, and for recreation; as an engineering medium for use in construction and support of highways and buildings; as Nature's only acceptable waste-disposal medium, and as a watershed or catchment for surface water and for storing underground water. Kansas soils admirably fulfill most of these criteria.

COMMEMORATION

To commemorate the State's unique soil legacy, and to observe the completion of the State's soil inventory by the Soil Conservation Service in 1987, the Kansas Association of Professional Soil Classifiers (KAPSC) proposes that the State of Kansas, in the 127th anniversary year of its entry into the Union, adopt a typical prairie soil as the official State soil to acknowledge the heritage that has made agriculture the State's number one industry, making it possible to place first in the nation in the production of wheat, grain sorghum, and forage sorghum.

THE MOST SUITABLE STATE SOIL

The Kansas Association of Professional Soil Classifiers recommends Harney silt loam as the State's soil because its three-dimensional profile contains all of the desirable properties of an ideal prairie soil and because its 3,870,000 acres in 25 west-central counties (Figure 1) make it the most extensive soil of the State.

Having approximately 1.3 million acres on 0 to 1% slopes (cover) and 1.9 million acres on 1 to 3% slopes, makes the Harney soil ideally suited to minimum-tillage practices designed to reduce wind and water erosion.

lignins, tanins, fats, and waxes, known as hume, accumulated to as much as $8 \ {\rm or} \ 10$ percent and darkened the soil's top foot.

Accumulating with the organic-rich plant and animal residue also were plant-nutrient elements, notably nitrogen, phosphorus, potassium, and calcium, that were to sustain for decades the cultivated cereal crops that caused many European nations to change from grain to dairy farming.

The high organic-matter content of the soils of the tall-, mid-, and short-grass prairie, made them especially suitable for growing the cultivated grasses, corn and wheat, and much more enduring than the low organic-matter soils formed under forest in eastern United States.

SOME TREATED THEIR SOILS LIKE DIRT

The vast sea of grassland gave way to the plow as the pioneers sought to produce cereals for themselves and their livestock. Many chose nearly level, deep, productive soils that tilled easily. Some chose more sloping lands near streams or that were shallow to building stone, and had erosive soils.

Cultivated crops were not so protective of the soil as the native grasses had been. Tilling to prepare a seed-bed and later to control weeds in row crops exposed bare soil to the devastating impact of the raindrop. The longer the land was farmed, the more the bare soil was exposed to the beating rains, the more intense the rains, and the less protection afforded by windbreaks or natural barriers, the more apt the soil to suffer grevious damages, first by sheet- and later, often by gully-erosion.

By drastically reducing the porosity and permeability of the surface, erosion reduced the moisture that entered the soil and became available for plants. Compared to the original spongey prairie soil, the eroded cultivated soil was much less hospitable to plants. Frequent puddling by raindrops dispersed the soil, producing a hard crust when dry, that resisted germinating seedlings.

Many plant nutrients rode piggy-back on detached particles to adjacent streams and their bottom lands. Replacing nitrogen losses with commercial nitrogen fertilizer became a common inexpensive practice until the 1970s when fertilizer prices increased dramatically.



Beauty amid the bounty, Kansas leads the nation in the production of wheat,

K-A-N-S-A-S F-A-C-T-S

A publication of the Office of Secretary of State Bill Graves

Its people are its pride

The soil and the sky furnish Kansas' two best known exports—wheat and airplanes. But the state's greatest contribution—a product of its rich pioneer heritage—is its people. They are vigorous, hard-working and outspoken. "The Kansas spirit," wrote Carl Becker in a 1910 essay, "is one that finds something exhilarating in the challenge of an extreme difficulty."

During the brawling, bustling era of the "cowtown," several Kansas lawmen achieved near mythic proportions. James Butler "Wild Bill" Hickok, who called Kansas home in the 1860s and 1870s, gained fame as city marshal of untamed Abilene. During the same era, Wyatt Earp was a lawman in Wichita and Dodge City and "Bat" Masterson was sheriff of Ford County, Even after leaving western Kansas. Masterson, who was extremely popular in Dodge City, was often called back to help settle disputes. He spent his last years as a sports writer for a New York City newspaper. William Frederick Cody earned his nickname "Buffalo Bill" while hunting buffalo to supply meat to laborers on the Kansas Pacific Railroad. Cody, a Pony Express rider and Indian scout, lived much of his life in Kansas.

Edmund G. Ross, a U.S. Senator from 1866 to 1871, is remembered for his part in the impeachment trial of President Andrew Johnson. Ross, voting against the wishes of most other Republicans, cast his vote for Johnson's acquittal. The popular story that Ross' vote alone saved Johnson is said by historians to be exaggerated, since other Republicans did vote for acquittal and still others might have done so if necessary. However, Ross' vote did occur at the right time in the roll call to provide the needed number of votes for acquittal, and it is acknowledged that Ross acted with great personal courage in voting for John-



Ron Evans



Jim Ryun



William A. White



Wild Bill Hickok



Gordon Parks



Dwight Eisenhower



After his first space flight, Astronaut Joe Engle was given a hero's welcome in his hometown of Chapman. Engle is one of three Kansas astronauts.

son. Ross was accused of being a traitor and the incident virtually ended his political career in Kansas. Ross is profiled in President John F. Kennedy's book, *Profiles in Courage*.

U.S. Senator John J. Ingalls gained nationwide acclaim in the 1870s and 1880s as an orator. While a state senator, Ingalls submitted the design for the Great Seal of Kansas. He also proposed the state motto, "Ad Astra per Aspera," Latin for "To the Stars Through Difficulties."

Kansas has produced a President of the United States, a Vice President and unsuccessful major party nominees for both positions. Dwight D. Eisenhower, who was raised in Abilene, gained national fame as Commander-in-Chief of the Allied

Armies in Europe during World War II. Later, "Ike" rode that popularity into the White House. He was U.S. President from 1953 to 1961. He is buried in Abilene. Topekan Charles Curtis, who was part Kaw Indian, served as Vice President of the United States under Herbert Hoover. Curtis served in the U.S. House of Representatives from 1893 to 1907 and served in the U.S. Senate from 1907 until he was elected vice president in 1929. As Senate Majority Leader under President Woodrow Wilson in 1919, Curtis led the floor fight for women's suffrage. Alf Landon, Kansas governor from 1933 to 1937, was the Republican Presidential nominee in 1936. Landon lost the election to Franklin D. Roosevelt by one of the greatest margins in American political history. Senator Bob Dole, of Russell, was the Republican candidate for Vice President in 1976. In 1984, Dole was elected majority leader of the U.S. Senate.

Between 1854 and 1936 more newspapers were published in Kansas than any other state. Kansas journalists have always been highly opinionated; early day Kansas newspaper editors were dubbed "Pistol-Packin' Pencil Pushers." No man more typified Kansas journalism than William Allen White, editor and publisher of the *Emporia Gazette*. White's audience and influence spread far beyond Kansas borders and in 1923 he was awarded a Pulitzer Prize for his editorial, "To An Anxious Friend."

The Hutchinson News received a Pulitzer Prize in 1965 for its role in getting reapportionment of state legislative districts in Kansas. Ben Hibbs, who was born in Fontana and grew up in Pretty Prairie, was editor of the Saturday Evening Post from 1942 to 1961, during which time he modernized the magazine's style and broadened its scope. He was senior editor of Reader's Digest from 1962 to 1972. William "Bill" Kurtis, formerly co-anchor for the CBS "Morning News," attended the University of Kansas and Washburn University, where he received a law degree. Kurtis was also an anchorman for WIBW-TV in Topeka. He later covered such historical news events as the trial of the Chicago Seven and the fall of Saigon. Radio and television news commentator John Cameron Swayze was born in Wichita. Swayze, who attended the University of Kansas, worked for both NBC and ABC and is also an author.

Kansan Mary Elizabeth
 Lease coined the phrase,
 "Farmers should raise less corn and more hell."

Lansans reach for the stars

Well-known Kansas artists include Henry Worrall, Topeka, who did portraits and Kansas landscapes during the 1860s. He was known for his contributions to popular magazines of the day. The works of John Steuart Curry, who was born on a farm in Jefferson County, include the stunning murals in the east and west wings of the Kansas Capitol. Best known among those murals is the towering figure of John Brown. Artist Sven Birger Sandzen came to the United States from Sweden in 1894 to teach at Bethany College in Lindsborg. Museums there honor him. Artist Rudolph Wendelin is known as the "caretaker" of the Smokey Bear image. As a U.S. Forest Service artist, Wendelin has drawn





Alf Landon

Charles Curtis

Smokey numerous times and approved commercial versions of Smokey. Now retired, Wendelin's recent work includes a historical mural for Rawlins County, where he spent his childhood.

Kansans excel in other fine arts as well. William Inge, a native of Independence, was a Pulitzer Prize-winning playwright. He wrote Picnic, Bus Stop, and Come Back, Little Sheba. Vivian Vance, of television's "I Love Lucy," was another Independence native. Gordon Parks, born in Fort Scott, is a world-renowned photographer, writer and motion picture producer. He won a Pulitzer Prize for photography in 1973. Parks wrote the books The Learning Tree and A Choice of Weapons, and he directed the movie Shaft. Brian Lanker, a photographer for the Topeka Capital-Journal, also won a Pulitzer Prize for photography in 1973. Actor Edward Asner, who played popular television character "Lou Grant," is from the Kansas City, Kansas area and Milburn Stone, who played "Doc" on the long-running series "Gunsmoke," grew up in Kansas. Stone's characterization of "Doc" was patterned after his own country-doctor grandfather. Don Johnson, star of the award-winning "Miami Vice," is a Wichita native. He attended the University of Kansas.

George Washington Carver, once called the "foremost agricultural scientist of the age,' lived in various parts of Kansas during his youth. He was graduated from Minneapolis High School and briefly homesteaded in Ness County. Burlingame was the birthplace of Earl Sutherland, who won the Nobel Prize for physiology and medicine in 1971. The Menninger family of Topeka founded and operates the worldfamous Menninger Foundation mental health facility. Industrialist Walter P. Chrysler, who established the Chrysler Corporation in 1925, was born at Wamego and grew up in Ellis.

Behind the grease paint worn by the clown"Weary Willie" was Emmett Kelly, a native of Sedan. A museum has been established in Kelly's honor in his hometown.

Kansas' motto, "To the Stars Through Difficulties," has taken on even greater significance in view of the accomplishments of four native sons. Clyde Tombaugh discovered the planet Pluto on February 18, 1930. Tombaugh, who grew up in Burdette, began his amateur observations with a telescope purchased from Sears and Roebuck. A generation later, Ron Evans was commander of the pilot ship during the flight of Apollo 17 to the moon. Evans was born in St. Francis and is a graduate of Topeka public schools and the University of Kansas. Evans was the first of three Kansas astronauts.



Senate Majority Leader Robert Dole is the most recent in a long line of Kansas statesmen. In the background is a statue of President Dwight D. Eisenhower

Joe Engle, a Chapman native, was commander of the Space Shuttle Columbia's second mission. Engle was the number two Air Force pilot for NASA-AFB X-15 program. He made nine flights in the X-15. Steve Hawley, who was born in Ottawa and raised in Salina, was a mission specialist aboard the maiden flight of the Space Shuttle Discovery. Like Evans, both Engle and Hawley attended the University of Kansas. Hawley is married to Sally Ride, the United State's first female astronaut.

State produced military leaders

General Frederick Funston became a national hero in 1906 as he oversaw rescue and clean-up efforts following the San Francisco earthquake. Funston Street in San Francisco was named in his honor. Funston, who was reared on a farm near Iola, also received the Congressional Medal of Honor. General Bernard W. Rogers, Fairview, has been commander of the NATO forces in Europe since 1979. Another military leader from Kansas was General Lewis Walt, former assistant commandant of the U.S. Marine Corps. General Walt is from Wabaunsee County. Frank E. Petersen, Jr., the first black brigadier general in the history of the U.S. Marine Corps, is from Topeka. He was named NAACP Man of the Year in 1979. In July, 1985, General Larry D. Welch, a graduate of Liberal High School, became commander-in-chief of the Strategic Air Command. Prior to that assignment, Welch had been vice chief of staff for the U.S. Air Force. Welch began his military career in Liberal after enlisting in the Kansas National Guard in 1951.

Brinkley, Karpis among notorious natives

Along with the famous were the infamous

Boston Corbett, the man who shot John Wilkes Booth, lived in Kansas for a time. Corbett was part of a 25-man cavalry troop sent to capture Booth, who had assassinated President Abraham Lincoln, and return him alive. Corbett disobeyed orders and shot and killed Booth. He became somewhat of a hero for his actions, even collecting a reward. Corbett eventually moved to Kansas where he became an Assistant Doorkeeper in the Kansas House of Representatives. On February 15, 1887, he attained additional notoriety by firing shots at the House members from the west balcony of the House chamber. He was judged insane and committed to the Topeka Insane Asylum. He escaped in 1888 and disappeared without a trace.

During the 1870s the Bender family of Parsons took in unsuspecting travelers and murdered them. Led by daughter Kate, the family murdered at least 11 people.

John Richard Romulus Brinkley became famous for his goat gland transplants—surgical procedures which were supposed to restore sexual potency to human males. Between 1918 and 1930, Brinkley performed as many as 16 transplants a day at his clinic in Milford. He also operated the first radio station in Kansas, giving medical advice and prescriptions over the air. Despite criticism of his methods and revocation of his medical license, Brinkley ran for governor as a write-in candidate in 1930 and apparently received the most votes. However, 50,000 incorrectly marked votes were voided and thrown out by election officials, and the Democratic candidate was declared the winner. Brinkley ran again in 1932, but with little enthusiasm. He was defeated, and soon after that he moved to Texas, where he died of a heart attack in 1942.

Bank robber and bootlegger Alvin "Creepy" Karpis began his life of crime in Topeka, where he spent his childhood. In 1936 Karpis replaced John Dillinger as "Public Enemy Number One."

Truman Capote's In Cold Blood is based on the chilling murder of the Clutter family at Holcomb in November, 1959. Perry Smith and Richard Hickock were hanged for murdering the family of four. Capote's best-selling book was made into a movie, filmed on location in Garden City.

Kansas trivia

- Before studying law, Charles Curtis was a jockey and newspaper reporter.
- The concept of the flyswatter was envisioned by Dr. Samuel J. Crumbine while attending a softball game in 1905. Crumbine, a member of the state board of health, was obsessed with the extermination of the fly in Kansas because of its ability to spread typhoid fever. The softball game was tied. Some of the fans were screaming to the batter, "Sacrifice fly! Sacrifice fly!"
 Others yelled, "Swat it, swat
 the ball." Suddenly, it came to Crumbine, "Swat the fly." Later, schoolteacher Frank H. Rose made a fly-flattening device out of a yardstick and wire screen. He called it a "fly bat," but Crumbine said, "Let's call it a flyswatter."
- Two Kansans made up the battery that faced midget Eddie Gaedel who was sent in to pinch hit for the St. Louis Browns in a 1951 game against Detroit. The pitcher was Bob "Sugar" Cain from Longford and the catcher was Bob Swift of Salina.
- Bandleader Stan Kenton was born in Wichita.
- William Mathewson, the original Buffalo Bill, is buried in Highland Cemetery, Wichita.
- William Allen White was the first native Kansan to appear on a U.S. postage stamp.
- Mystery writer Rex Stout grew up in Topeka. He created the character Nero Wolfe.
- Jazz great Charles "Yardbird" Parker was born in Kansas City, Kan., in 1920.

Lyun, Riggins among state's best athletes

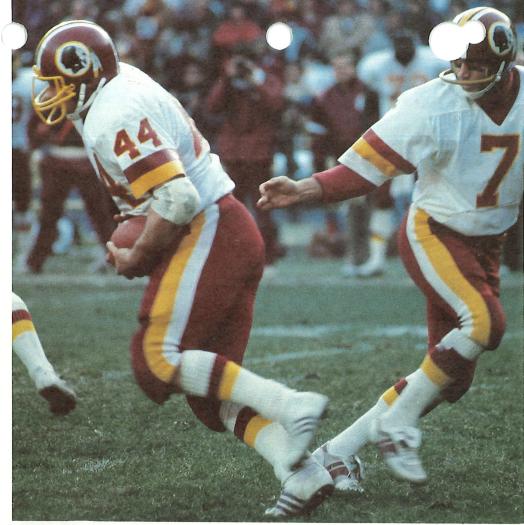
A number of fine athletes have come from Kansas. The state is particularly noted for its excellent runners. In the 1960s, Jim Ryun, Wichita, set a new world's track record for the mile run, becoming the first American mile titlist in 30 years. He also held world records for 1500 meters and the half mile. Ryun was named the World's Outstanding Athlete in 1966 and 1967, and was a three-time Olympian. The state's running tradition began with Glen Cunningham of Elkhart who, like Ryun, was a world record holder in the mile run.

During the World War I era, Jess Willard of Emmett was the world heavyweight champion boxer.

One of major league baseball's greatest right-handed pitchers and a member of the Baseball Hall of Fame, Walter "Big Train" Johnson was a native of Humboldt. Joe Tinker, part of the great double-play combination of Tinker to Evers to Chance, was from Muscotah in Atchison County. Two respected major league baseball managers are from Kansas: Ralph Houk is from Lawrence and Gene Mauch is from Salina.

Other Kansans succeeding in major league baseball include: Mike Torrez (Topeka), Bill Russell (Pittsburg), Don Lock (Wichita), Steve Renko (Kansas City), Ross Grimsley (Topeka) and Rudy May (Coffeyville).

Kinsley native Pete Mehringer won a gold medal at the 1932 Olympic games in the light heavyweight wrestling competition. Dean Smith, an Emporia native, has been head basketball coach at the University of North Carolina since 1961. Smith, who played basketball at the University of Kansas, coached the U.S. Olympic basketball team to a



From schoolboy sensation to Super Bowl MVP, Centralia's John Riggins has had a superb football career.

gold medal in 1976. In 1982, the Tar Heels, under his guidance, won the NCAA national title.

In 1985, John Riggins completed his 15th year in professional football. Picked sixth overall in the 1971 draft by the New York Jets, he led the team in both rushing and receiving as a rookie. After five seasons with the Jets, Riggins signed with Washington and completed 10 seasons with the Redskins through 1985. In his long career, Riggins has established a number of NFL records. In 1984 at the age of 35, he also became the oldest player in NFL history to rush for 1,000 yards in a season. He is the NFL's number five career rusher, an all-pro selection in 1975 and Super Bowl MVP in 1982. At the University of Kansas Riggins rushed for 2,706 career yards. He was named an all-American his senior season and was a three-time all-Big Eight selection. Riggins is a native of Centralia.

Professional golfer Jim Colbert honed his game in Kansas. He won the Kansas State Junior Golf title at age 11. While a student at Kansas State University he placed second in the 1964 NCAA tournament. In 1965 he won the Kansas Amateur title and that fall he qualified for the PGA tour. He has eight tour victories.

Marilyn Smith, a Topeka native, has 22 career victories on the Ladies Professional Golf Association circuit. Smith won the Kansas State Amateur title three consecutive years beginning in 1946 and the National Collegiate title in 1949 while attending the University of Kansas. She is a founder and charter member of the LPGA and was LPGA president from 1958 to 1960. Nicknamed "Miss Personality," Smith is considered one of golf's great ambassadors.

Kansas women at vanguard of history

From pioneer days to the present, Kansas women have been at the vanguard of history. They have compiled an impressive list of "firsts"—from the nation's first woman mayor to the first woman treasurer of the United States. Their ranks range from the heroic aviatrix Amelia Earhart to the brazen, bar buster Carry Nation.

Earhart, who was born at Atchison July 24, 1897, was the first woman granted a pilot's license by the National Aeronautics Association. She was also the first woman to fly across the Atlantic Ocean. She disappeared somewhere between New Guinea and Howland Island during her 1937 attempt to fly around the world.

Around the turn of the century, Carry Nation became nationally known as a symbol of the temperance movement. She is best known for destroying illegal saloons with her hatchets.

Other Kansas women who have made their mark include:

- Lucy Hobbs Taylor overcame "bitter opposition and foolish objections" and the constant admonition that her place was "in the home" to become the first fully trained woman dentist in the world. She practiced dentistry in Lawrence from 1867 to 1907.
- Lutie Lytle, Topeka, was the first black woman to be admitted to the practice of law in the United States (1897).
- Jesse McCormack, Moran, was the first woman in the United States to pass the examination for bank cashier, December 21, 1912.
- On April 4, 1918, Nellie Cline, Larned, became the first woman lawyer to appear before the U.S. Supreme Court.
- In 1920, novelist Margaret Hill McCarter became the first woman to address a Republican National Convention. McCarter published her first novel, The Price of the Prairie, in 1910. She was a prolific writer, producing

more than 15 other novels, several volumes of short stories and miscellaneous writings.

- A Topeka banker and businesswoman, Georgia Neese Clark Gray, was the first woman appointed as Treasurer of the United States. She served in that position from 1949 to 1953.
- Kathryn O'Loughlin was the first woman elected to represent Kansas as a member of the U.S.





Carry Nation

Amella Earhart





Deborah Bryant



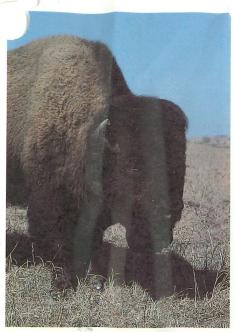
Nancy Kassebaum

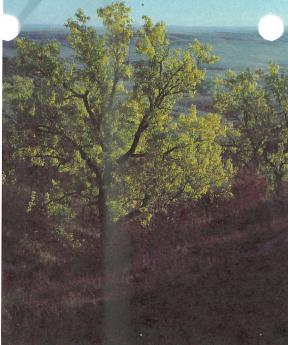
Congress. A Democrat, she served from 1933 to 1935.

- In 1978, Kansas elected its first woman U.S. Senator-Nancy Landon Kassebaum. She is the first woman in history to be elected to a full term in the Senate in her own right. Other women have served in the Senate, but all were originally appointed to fill unexpired terms. Kassebaum is the daughter of former Kansas Governor and 1936 presidential nominee Alf Landon.
- Supreme Court Justice Kay McFarland is the first woman to serve on the state's high court. McFarland was appointed to the Kansas Supreme Court in September, 1977, by Governor Robert Bennett. In 1973, McFarland

became the first woman ever elected district judge.

- Two Kansas women have been crowned Miss America: Deborah Bryant of Overland Park in 1966, and Debra Barnes of Moran in 1968.
- Actress Vera Miles spent her childhood in Wichita. Another Wichita native, Carla Burns, was a 1983 nominee for a Tony Award for Best Featured Actress for the role of Queenie in the Broadway musical, "Show Boat." Dee Wallace, who played the part of Elliot's mother in the movie "E.T.," is from Kansas City.
- Topekan Marilyn Schreffler had one of the more successful and unusual entertainment careers. As a "voice-over" actress, she was heard, but not seen, in many commercials and cartoons. Perhaps her most famous role was the voice of Olive Oyl in the "Popeye" cartoons. Schreffler graduated from Topeka West High School and Washburn University. She appeared in many Topeka Civic Theater productions and was later a member of Second City, a Chicago improvisational comedy group. Schreffler died of cancer at age 42 in 1988.
- Lynette Woodard, a Wichita native, became the first female member of the Harlem Globetrotters in October, 1985. The all-time best female college scorer when she graduated in 1981 from the University of Kansas, Woodard was captain of the 1984 Olympic gold medal-winning U.S. women's basketball team. She attended Wichita North High School.
- The provocative drawings of Elizabeth "Grandma" Layton have earned her national recognition. Layton draws pictures of herself, reflecting the joys and pains of being a woman, and of growing older in a society that seems to value being male and young. Art critics have compared Layton's works to van Gogh.











All photos/Gene Brehm except Sunflower/Nancy Clevinger

State symbols, clockwise from center, are: the Cottonwood tree, the Sunflower, the Honeybee, the Meadowlark and the Buffalo.

Kansas rich in natural resources

Kansas lies at the heart of the nation. The geographic center of the contiguous 48 states is near Lebanon in Smith County in northcentral Kansas. A site in Osborne County, about 40 miles southeast of the geographic center, is the controlling point for all land surveys in the United States, Canada and Mexico.

A 208-mile by 411-mile rectangle, Kansas ranks 14th among the states in geographic size with a total of 82,264 square miles. It is bounded by Oklahoma to the south, Colorado to the west, Nebraska to the north and Missouri to the east. Although most of the state lies within the region known as the Great Plains, Kan-

sas has a rich variation of climate, terrain, soil and native plants and animals.

The average annual temperature is 55 degrees. The state averages about 27 inches of rain a year, ranging from about 40 inches in the southeast to less than 20 inches in the west. More than 70 percent of the annual precipitation falls between April 1 and September 30. The western half of the state has as many as 300 clear or partly clear days. There are about 275 such days in the eastern half. Kansas is a windy state; an average wind speed of 14 mph makes Dodge City the windiest city in the country.

Kansas has five river systems and more than 50,000 streams large enough to be named. The Missouri, Kaw and Arkansas rivers are considered navigable, although the Missouri is the only river in the state on which there is a considerable amount of traffic. There are 25 federal reservoirs in Kansas and 48 state fishing lakes. Osage County is the only county in the nation with two federal reservoirs, Melvern and Pomona.

Among the state's unique topographical features is the Flint Hills, a bluestem or tallgrass prairie in the east-central part of the state. The prairie once stretched from Canada to Okla-

rlint Hills one of a kind

homa and Kansas to Indiana. Today, the Flint Hills, which is about 50 miles wide, is the only extensive, unplowed tract of bluestem or true prairie remaining in the United States. It has not been widely cultivated because of the characteristic steep slopes and shallow upland soils. The prairie was a natural habitat for the buffalo or American Bison. whose numbers were once estimated at 60 to 75 million. In 1871, Major Richard Irving Dodge reported traveling at least 25 miles through one immense buffalo herd. The herd, he said, "was about five days passing a given point, or not less than 50 miles deep." The buffalo provided food, shelter, clothing and fuel for Indians of the Great Plains. Even some war material could be made from the buffalo carcass. In later years, market hunters slaughtered buffaloes for their hides, often leaving the carcasses to rot.

Chalk beds containing some of the world's most extensive specimens of pre-historic fossils are found in Logan and Gove counties. The fossils include fish, batlike reptiles, the sea serpents called mosasaurs and toothed





Photos/Rachel Snyder

Wildflowers such as ragwort (left) and downy phlox add a touch of color to the Kansas countryside.

swimming birds. Kansas chalk beds are also famous for the pinnacles, spires and odd-shaped masses formed by chalk remnants. Particularly notable are Monument Rocks and Castle Rock in Gove County and the chalk bluffs along the Smoky Hill River in Logan, Gove and Trego counties.

Kansas leads the nation in the production of helium, ranks fifth in the production of natural gas and is eighth nationally in petroleum production. Helium is re-

covered from the natural gas of the Otis-Albert field and other smaller fields in Rush County and adjacent counties. Natural gas is found in huge quantities at the Hugoton Gas Area. One of the world's most important gas fields, it encompasses Finney, Grant, Hamilton, Haskell, Kearny, Morton, Seward, Stanton and Stevens counties. Leading mineral resources in Kansas by total dollar value of production are: petroleum, natural gas, propane and helium, cement, salt, coal, build-



Photo/Kathy Borchers

Ten canoe routes, offering scenery and serenity, have been developed by the Kansas Canoe Association and the Kansas Department of Wildlife and Parks (see routes at right).

KANSAS RIVER

Section 1—K-77 Bridge, Republican River to the Kaw River access ramp—U.S. Highway 24 east of Manhattan.

Section 2—Kaw River access ramp near Highway 24 east of Manhattan to the Topeka access.

Section 3—Kaw River access ramp near I-70 at Topeka to Burcham Park at Lawrence.

MARAIS DES CYGNES RIVER Section 1—Miami County State Lake to La Cygne.

Section 2—La Cygne to Marais des Cygnes Waterfowl Management Area.

ARKANSAS RIVER
Section 1—Raymond to Sterling.
Section 2—Sterling to Hutchinson.
LITTLE BLUE and BIG BLUE RIVERS

LITTLE BLUE and BIG BLUE RIVERSMarshall-Washington County line to Irving Bridge.

FALL RIVER
Highway K-99 bridge to Climax boat ramp.

SMOKY HILL RIVER

20 miles west to four miles southeast of Kanopolis.

Wild game is plentiful

ing stone, sand and gravel, and clay and shale. Limestone is an especially important resource in Kansas. Used extensively in the past to construct buildings and fenceposts, today it is the basis for a large cement manufacturing industry.

Kansas is graced with an abundance of wildflowers, from native ferns in the moist eastern woods to the yucca plant and tumbleweed or Russian thistle in the arid west. Many of the wildflowers are prairie flowers that root deeply to withstand the weather's swings from wet to dry and hot to cold. Wildflowers were a source of medicine, food,

charms and dyes for the early settlers. The Kansas Wildflower Society, headquartered at the Mulvane Art Center in Topeka, is dedicated to developing public awareness of Kansas wildflowers, their use in landscaping and their place in our ecology.

Kansas sportsmen hunt a wide selection of game within the state. Kansas boasts the largest flock of prairie chickens on the North American Continent. Pheasants are Kansas' staple game bird. Annual harvest always approaches, and sometimes exceeds, one million birds, placing Kansas consistently in the top three pheasant harvest states in

the nation. The harvest of box white quail usually tops two million, also one of the best in the nation. Mourning dove, turkey, duck, geese, coyote, deer, rabbit and squirrel are also plentiful. Fur trapping is permitted for beaver, bobcat, raccoon, oppossum, skunk, muskrat, mink, badger, fox and coyote. The Kansas Department of Wildlife and Parks manages 69 wildlife areas, encompassing more than 200,000 acres, where public hunting is permitted. Another eight wildlife areas are managed by the federal government. Fishing is also bountiful. Largemouth bass, crappie, channel catfish, white bass, bluegill, flathead catfish, Kentucky or spotted bass, striped bass, walleye and wipers are among the species found in Kansas lakes and streams.

Federal reservoirs found throughout Kansas

- 1. Big Hill Reservoir—four and one-half miles east of Cherryvale.
- 2. Cedar Bluff Reservoir—13 miles south of I-70 on K-147.
- 3. Cheney Reservoir—20 miles west of Wichita.
- 4. Clinton Reservoir—five miles west of Lawrence on K-10.
- 5. Council Grove Reservoir—one mile north of Council Grove.
- El Dorado Reservoir—three miles east and two miles north of El Dorado.
- 7. Elk City Reservoir—five miles northwest of Independence.
- Fall River Reservoir—25 miles southeast of Eureka off K-96.
- 9. Glen Elder Reservoir—12 miles west of Beloit on U.S. 24.
- Hillsdale Reservoir—three miles northwest of Paola.
- 11. John Redmond Reservoir—two miles north and one-half mile west of Burlington on U.S. 75.
- Kanopolis Reservoir—33 miles southwest of Salina on K-149 and K-141.
- 13. Keith Sebelius Reservoir
 (Norton)—three miles southwest of
 Norton off U.S. 36.
- Kirwin Reservoir—15 miles southeast of Phillipsburg off K-9.
- La Cygne Reservoir—five miles east of La Cygne.
- Lovewell Reservoir—four miles east and 10 miles north of Mankato on U.S. 14.
- 17. Marion Reservoir—four miles northwest of Marion off U.S. 56.
- 18. Melvern Reservoir—35 miles south of Topeka on U.S. 75.

- Milford Reservoir—five miles northwest of Junction City on U.S. 77.
- 20. Perry Reservoir—18 miles northeast of Topeka on U.S. 24.
- 21. Pomona Reservoir—25 miles south of Topeka on U.S. 75.
- 22. Toronto Reservoir-15 miles

- southwest of Yates Center off U.S. 54 and K-105.
- 23. Tuttle Creek Reservoir—six miles north of Manhattan on K-13.
- 24. Webster Reservoir—eight miles west of Stockton off U.S. 24.
- Wilson Reservoir—eight miles north on K-232 from Wilson exit on I-70.

State offers 48 fishing lakes

- 1. Atchison State Lake
- 2. Barber State Lake
- 3. Big Hill Wildlife Area
- 4. Bourbon State Lake
- 5. Brown State Lake
- 6. Butler State Lake
- 7. Chase State Lake
- 8. Cimarron National Grasslands Fishing Pits
- 9. Clark State Lake
- 10. Cowley State Lake
- 11. Crawford State Lake
- 12. Douglas State Lake
- 13. Finney Sandpits
- 14. Geary State Lake
- 15. Hain State Lake
- 16. Hodgeman State Lake
- 17. Jewell State Lake
- 18. Kingman State Lake and Wildlife Area
- 19. Kiowa State Lake
- 20. Leavenworth State Lake
- 21. Lyon State Lake
- 22. Marais des Cygnes Wildlife Area
- 23. McPherson State Lake

- 24. Meade State Lake
- 25. Miami State Lake
- 26. Mined Land (Strip Pits) Lakes
- 27. Montgomery State Lake
- 28. Nebo State Lake
- 29. Nemaha Wildlife Area
- 30. Neosho State Lake
- 31. Neosho Wildlife Area
- 32. Osage State Lake
- 33. Ottawa State Lake
- 34. Polk Daniels State Lake
- 35. Pottawatomie State Lake No. 1 36. Pottawatomie State Lake No. 2
- 37. Pratt Backwater Channels
- 38. Rooks State Lake
- 39. St. Francis WMA Sandpit
- 40. Saline State Lake
- 41. Scott State Lake
- 42. Shawnee State Lake
- 43. Sheridan State Lake
- 44. Sherman State Lake
- 45. Texas Lake Wildlife Area
- 46. Washington State Lake
- 47. Wilson State Lake
- 48. Woodson State Lake







Mascots for the state's three major universities are, clockwise from top, the Wichita State University Wheatshocker, the Kansas University Jayhawk and the Kansas State University Wildcat.

Education is top priority

Education in Kansas springs from simple settings-sod huts and one-room schoolhouses. If the means were modest, the goals were not. Early-day Kansans understood the value of education as revealed in the original State Constitution which provides: "The legislature shall encourage the promotion of intellectual, moral, scientific and agricultural improvement by establishing a uniform system of common schools, and schools of a higher grade, embracing normal, preparatory, collegiate and university departments.'

From such humble beginnings, Kansas has developed a comprehensive network of public schools. The State Board of Education supervises all public elementary, secondary, vocationaltechnical schools and community colleges. The 10 members of the board, each representing different districts, are elected by the voters. They serve four-year terms, with five being elected every two years. Higher education in state universities is the responsibility of the State Board of Regents, a nine-member board appointed by the governor.

Within the public system there are 1,051 elementary schools, 85 junior high schools, 348 high schools, six four-year state universities, one municipal university, 19 community colleges, 14 area vocational-technical schools and one two-year technical institute. There are also 186 parochial, private or special elementary and secondary schools, 20 church-affiliated colleges and universities, four private twoyear colleges and a federally operated junior college for Indians.

Elementary and Secondary Education

Elementary and secondary education is provided in Kansas primarily through the public school system. The state is divided into 306 unified school districts. Each district is controlled by a seven-member board of education, which is elected by the district residents. The unpaid board members serve four-year terms.

Local control of public education has a long history in Kansas. The state provides supervision, basic finance and related resources as well as general guidelines, but educational policies and operational matters are left to local school districts. Local boards are responsible for the quality of educational services available in their communities. They select their own textbooks and teaching materials, determine what is taught, establish graduation requirements and hire their own staff. The more than \$500 million spent annually on elementary and secondary schools is divided almost evenly between local property taxes and state aid.

The Kansas educational system was in the national spotlight on May 17, 1954, when the U.S. Supreme Court handed down its landmark decision in the case of Brown vs. Board of Education of Topeka. The decision held that "separate but equal" school facilities were inherently unequal and that school segregation violated the Constitution's guarantee under the 14th Amendment. Topeka had unusual segregation—it existed only in grade schools. The city's junior highs and high schools had been integrated for several decades. Before the court heard the case, complete integration of Kansas schools was underway. The Brown decision set in motion the desegregation of schools throughout the United States.

Higher Education

Kansas ranks fifth in the United States in the number of institutions of higher learning per ca, and eighth among the states in the number of public institutions of higher learning per capita.

Bethel College, Newton, was the first Mennonite College in the nation. Haskell Indian Junior College in Lawrence is the only federally operated two-year college for Indians. Haskell celebrated its centennial in 1984. The school was dedicated September 17, 1884. Three days later, "the arrival of a wagon train bringing 42 Cheyennes and 36 Arapahoes created a stir at Haskell." The students came "with their parents wearing paint and feathers." Baker University, Baldwin City, is the oldest institution of higher learning in Kansas. Washburn University, Topeka, is the state's only public municipal university. It is home to one of the state's two law schools. The school's mascot is the "Ichabod," which is named for founder Ichabod Washburn.

Vocational-Technical Schools

Vocational-technical schools are the fastest growing educational area in the state. The 14 vocational-technical schools in Kansas are scattered throughout the state. They provide Kansas business and industry with skilled craftsmen and technicians. The state system covers seven general occupational areas: trade and industry, technical training, agriculture, distribution, home economics, business and office occupations and health occupations. Course offerings include agricultural production, distributive education, practical nursing, food management and production, clerical work, auto mechanics, carpentry, drafting, electronics, printing, welding and computer work.

Regents' Institutions

The seven Regents' institutions offer a variety of academic programs. Each institution has certain unique activities and offerings. A brief description of each follows:



Picken Hall is one of the many fine old buildings that grace the campus of Fort Hays State University.

University of Kansas, Lawrence-KU opened in 1866. It was the first state university in the Great Plains region. KU has an enrollment of nearly 27,000 students, the largest of any school in the Big Eight Conference. Its academic programs include the only medical school and the only pharmacy school in the state. It also has one of the two law schools in Kansas. The KU Medical Center, Kansas City, serves not only as a teaching facility for health professionals, but also as an important research and treatment hospital. KU's Mid-America Cancer Center is nationally recognized as one of the top cancer research and treatment centers, and a recently completed Radiation Therapy Center is one of the best in the country. The KU Medical Center operates a branch in Wichita. Special activities at KU include: the State Geological Survey, the Law Enforcement Training Center and the Bureau of Child Research, an internationally recognized leader in the study of mental retardation and developmental disabilities. KU athletic teams, the Jayhawks, are members of the Big Eight Conference.

Kansas State University, Manhattan—Established in 1863, K-State was the nation's original land-grant university. Although the main campus is in Manhattan, the university owns or leases more than 14,000 acres in 19

Education is state's top priority

counties for agricultural research. It also conducts agricultural programs in several foreign nations. More than 18,000 students are enrolled in the university, which offers off-campus education in several areas of the state. K-State is especially noted for its academic programs in agriculture, home economics and veterinary medicine. Through the Federal Land-Grant Act, Kansas State is responsible for all county extension activities in the state. K-State has one of the most prestigious lecture series in American colleges and universities, the Alfred M. Landon Lecture Series on Public Issues. In athletic events, the K-State Wildcats compete in the Big Eight.

Wichita State University, Wichita—Founded as Fairmount College in 1895, WSU became a municipal university in 1926 and a state university in 1964. Enrollment is more than 17,000. WSU has a cultural program that serves not only the student body, but also the city of Wichita. Activities include theater, music, art exhibits and lectures, including the Dwight D. Eisenhower Lecture Series. The Center for Gerontology and the Center for Urban Studies provide special research and services. WSU's mascot is the Wheat Shocker. WSU is in the Missouri Valley Conference.

Emporia State University, Emporia—Established in 1863 as the Kansas State Normal School, ESU was later called the Kansas State Teachers College of Emporia. Training of educators is still emphasized, although other academic programs are offered. Enrollment is nearly 5,500. The ESU campus is designed to accommodate handicapped students, and an extensive program for the handicapped is available. ESU is also home to the Center for the Study of the Great Plains. The ESU Hornets are in the Central States Intercollegiate Conference.

Fort Hays State University, Havs—FHSU was established in 1901 as the western branch of the State Normal School. It is on land which was once the Fort Hays Military Reservation and is the only state university in the western two-thirds of the state. It has an enrollment of about 5,400. The FHSU Tigers are members of the Central States Intercollegiate Conference. Fort Hays burst into national basketball prominence in the 1980s. The Tigers made their first appearance at the NAIA national basketball tournament in Kansas City, Mo., in 1981 and in 1983 they finished third in the nation. In 1984 and 1985, they won back-to-back national championships.

Pittsburg State University, Pittsburg—PSU was established in 1903 as the Auxiliary Manual Training Normal School, a branch of the Emporia Normal School. Enrollment is about 5,000. A unique part of the university is the School of Technology and Applied Science, which works toward improvement of various industries in Kansas. The school conducts seminars and workshops for industries and provides consultations on industrial safety. The Center for Business and Economic Development is another special program. PSU's athletic teams, the Gorillas, are members of the Central States Intercollegiate Conference.

Kansas College of Technology, Salina—Opened in 1966, the college offers two-year programs in solar energy technology, computer science technology and surveying technology, as well as more traditional fields of technical study. It has an enrollment of more than 600.

Kansas: Basic Facts

POPULATION: The population of Kansas is approximately 2,461,000 (as of July 1, 1987). The 10 largest cities in Kansas and their populations are:

Wichita 283,496	Olathe 46,762
Kansas City 160,468	Salina 42,933
Topeka 118,945	Hutchinson 40,431
Overland Park 89,178	Leavenworth 33,068
Lawrence 54,197	Manhattan 32,381

STATE NICKNAMES: Sunflower State, Wheat State, Jayhawker State.

KANSAS SEAL AND MOTTO: The Great Seal of Kansas was adopted in May, 1861, by the legislature. The design embraces a prairie landscape with buffalo pursued by Indian hunters, a settler's cabin, a river with a steamboat and a cluster of 34 stars surrounding the motto, "Ad Astra per Aspera" (To the stars through difficulties). The seal is encircled by the words, "Great Seal of the State of Kansas, January 29, 1861."

STATE MARCH: "The Kansas March," composed by Duff E. Middleton, was established as the official state march of Kansas in 1935 by the legislature.

STATE SONG: Home on the Range is the official state song. It was adopted in 1947.

TIME ZONES: Most of Kansas is located in the Central Standard Time zone; a small portion of western Kansas is in the Mountain Standard Time zone.

U.S. MILITARY INSTALLATIONS: Air Force—McConnell Air Force Base, Wichita. Army—Fort Leavenworth, Fort Riley.

VOTER REQUIREMENTS: (1) United States citizen, (2) 18 years of age, (3) a resident of Kansas and the voting area, (4) registered to vote.

ansas history unfolds with westward expansion

Kansas entered the Union January 29, 1861, the culmination of the periods of exploration, territorial disputes, and the bloody days that had erupted over slavery. Ahead were the days of growth and development which contributed significantly to the strength and prosperity of the nation.

The region that is now Kansas had been inhabited by Indians for thousands of years before the first white man appeared. In 1540 the Spanish conquistador, Francisco Vasquez de Coronado, marched north from Mexico in search of the Seven Golden Cities of Cibola. In New Mexico he was told of the Land of Quivira, and he turned east and north in search of this fabled place of wealth. By the summer of 1541, 80 years before the Pilgrims

landed at Plymouth Rock, he had reached the Arkansas River in Kansas, crossing it near present Dodge City. Coronado found no gold in Quivira, but he called the country, which is now part of Kansas, "the best that I have ever seen for producing all the products of Spain."

Coronado returned to New Mexico, but the following year a priest who had accompanied him returned to Kansas. Father Juan de Padilla hoped to bring Christianity to the Indians. He was killed, however, by those he tried to help. The exact place of his death is unknown, but it is presumed to have been in central Kansas. Father Padilla is said to have been the first Christian martyr in the United States.

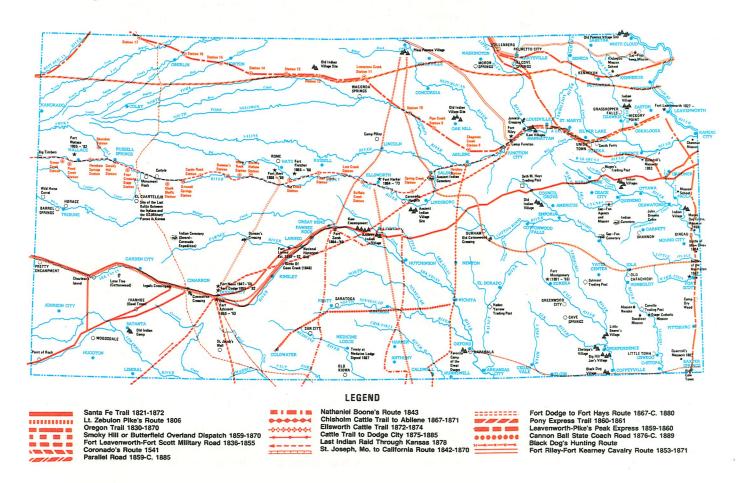
During the years between 1682 and 1739, France sent several ex-

plorers to the Kansas area. Claude Charles du Tisne crossed southeastern Kansas in 1719, and Bourgmont arrived in 1724. The Mallet brothers, Paul and Pierre, crossed Kansas in 1739, as they sought to establish trade between the French and Spanish traders from Santa Fe.

For a time Spain, France and England all had claims on the Kansas area. The English did nothing to further their claim. French claims were ceded to Spain in 1762, but in 1800 title was returned to France, from whom the United States purchased the entire Louisiana territory in 1803. This transaction ended the trading era for Kansas and brought forth the exploration of a new American settlement.

While exploring the Louisiana Purchase, Meriwether Lewis and

Early trails of Kansas





This mural on the second floor of the Kansas Capitol depicts the sacking of Lawrence in 1856.

Slave question led to bloody battles

William Clark made camp at several points on the Kansas side of the Missouri River in late June and early July, 1804. Two years later, Lt. Zebulon Pike of the United States Army crossed the Kansas area on an exploring expedition during which he met with the Indians and signed treaties with them as the representative of the new "White Father." He continued westward on this journey to discover the mountain that is now called Pike's Peak.

With the continued exploration of Kansas, trails were established by traders and immigrants. William Becknell, a Missouri trader, opened the Santa Fe Trail to trade with the Spanish in what is now New Mexico. Early in the 1820s wagon trains were being sent over this route from the Missouri River to Santa Fe. By 1825 the trail had become so important that Congress authorized a survey of the route. This survey, completed in 1826, provided a 775-mile route for the Union; two-thirds of it was in Kansas.

The Oregon Trail to the northwest was used during the middle decades of the 1800s. The route crossed the northeastern section of the state and impressed many of those who traveled the trail. Some stopped and made their homes in Kansas while others returned later to settle on the rich farmlands.

The Territorial Period

In May, 1854, Kansas was organized as a territory, with boundaries that included most of the eastern half of present-day Colorado. Conflict over the slavery question led to bloody battles between freestaters and proslavery forces. In May, 1856, Lawrence was sacked by border ruffians led by Sheriff Jones. Many active freestaters lived there, and Lawrence became a mecca for escaped slaves. It was after this sacking that John Brown came into prominence. Brown, with his sons and a few other men, retaliated with a massacre. They dragged five proslavery neighbors out of their homes and killed them. This led to the Battle of Black Tack near Baldwin when Missourians came to avenge the massacre. In a later raid on Osawatomie in August, John Brown and 40 defenders were beaten back by about 400 Missourians, and all but four homes were burned.

Battle for Statehood

From 1855 to 1861 the battle for statehood was as intense as any fought in the state. The first attempt occurred in 1855 when a freestate constitution was framed in Topeka. It did not receive serious consideration in Congress. In 1857 a second constitution, which provided that Kansas be admitted as a slave state, was written at Lecompton. The constitution was adopted in an election in which freestate men refused to vote and later was rejected at a second election in which the proslavery men took no part. This constitution was sent to Washington, but while it was being debated by Congress, a third constitutional convention convened. The meeting was at Leavenworth, and the constitution drafted there was adopted by the people in 1858, but this too failed final acceptance.

The fourth and last convention assembled at Wyandotte, now part of Kansas City, in July, 1859. This time freestate advocates were solidly in control, and the document they drafted barred slavery and fixed the present boundaries of the state. It was accepted by a vote of the people in October, and in December a provisional state government was elected. In April, 1860 the U.S. House of Representatives voted to admit Kansas, but the Senate, under proslavery domination, refused. Statehood for Kansas thus became a national issue, and the Republican platform of 1860 included a plank for immediate admittance. The victory of Abraham Lincoln in November was followed by secession of Southern states. The withdrawal of their senators and representatives gave control of Congress to the Republicans even before the change of administrations. In January, 1861, the Kansas bill was passed by both houses of Congress and was signed by President James Buchanan on January 29. Kansas thus became the 34th state of what at the time was a rapidly disintegrating union.

Kansans had known civil war since the territory was organized in 1854. Now large-scale rebellion faced the entire nation. In answer to President Lincoln's first call for troops in April, 1861, Kansas supplied 650 men. Before the war ended in 1865, the state

I furnished more than 20,000 men, a remarkable record in view of the fact that the population included less than 30,000 men of military age. Kansas also suffered the highest mortality rate of any of the Union states. Of the black troops in the Union army, 2,080 were credited to Kansas, though the 1860 census listed fewer than 300 blacks of military age in the state; most of them actually came from Arkansas and Missouri.

Although Kansas soldiers saw action in many of the important engagements of the war, only one major battle was fought within the state. This was the Battle of Mine Creek, which took place October 25, 1864, in Linn County. Some 25,000 men were involved. The confederate army under Major Gen. Sterling Price was defeated, and the threat of a Southern invasion of Kansas was ended. Civil War action within the state consisted primarily of guerrilla skirmishes and raids. Of these, the most notorious was William C. Quantrill's surprise attack on Lawrence, August 21, 1863, in which 150 residents were slaughtered, and the city was looted and burned and about \$1.5 million worth of property destroyed.

Late 19th Century Development

After the Civil War a series of Indian outbreaks threatened the western frontier. The tribes were alarmed by the steady encroachment of white settlers. Although undermanned military outposts did their best to protect settlers and travelers, and federal commissioners held peace talks with the chiefs, no permanent peace was obtained. Indian attacks reached their height in Kansas in 1867, when nearly 130 settlers were killed. By the end of 1869 most of their troubles had shifted to other areas. However, western Kansas continued to have Indian problems until the last Indian raid in Decatur County in 1878.

Meanwhile, rapid settlement was being made. Towns were founded, schools established,



The state's most famous work of art is this mural by native-born John Steuart Curry. The mural is found on the second floor of the Kansas Capitol. The central figure is John Brown surrounded by free soil and proslavery forces, symbolic of the turbulent Territorial era when Kansas was known as "Bleeding Kansas."

businesses and small industries started, and railroads pushed westward across the state. By 1870 the Kansas (now Union) Pacific Railroad reached the Colorado line, and by the end of 1872, the Santa Fe Railroad had done the same. The era of the great cattle drives, which focused national attention on several Kansas towns, came in with the railroads. Abilene became a shipping center for Texas cattle in 1867 when Joseph McCoy persuaded Texas drovers to use the extended Chisholm Trail to bring their herds to the just-arrived Union Pacific, Eastern Division (later the Kansas Pacific). Newton, Ellsworth, Caldwell, Wichita and Dodge City were other towns which became prominent as tracks were built south and west.

The introduction of Turkey Red wheat by Mennonites from Russia in 1874 was a milestone in Kansas agriculture. This hardy winter wheat was ideally suited to crop-growing conditions in the state and provided the early basis for the pre-eminence of Kansas as a producer of wheat.

Kansas in the 20th Century

Significant changes occurred in agriculture, industry, transporta-

tion and communication in the years after 1900. Mechanization became almost universal in farming; heavy industry began replacing individual shops and mills; transportation entered a new era which was to be characterized by diesel-powered trains, commercial air travel and multilane highways; and communication was revolutionized by radio and television which augmented the state's large publishing industry.

World War I brought an unprecedented boom in agriculture because of the demand for food from the warring nations of Europe. Thousands of previously uncultivated acres were planted in wheat, and this land, allowed to lie fallow during the recession of the 1920s, became part of the "dust bowl" of the 1930s. In the 1940s conditions improved. New industries came to Kansas and by the early 1950s industry for the first time surpassed agriculture as the state's largest source of income. Kansas became steadily more urbanized as industry concentrated more and more in the population centers around Kansas City, Wichita, Topeka and other major Kansas communities.

rogressive spirit pervades government

The state government of Kansas is based in Topeka, the state capital since 1861. The first capital of Kansas was Fort Leavenworth, where territorial Governor Andrew Reeder had his headquarters. Other state capitals during the territorial period were Shawnee Mission, Pawnee, Lecompton, Minneola, Leavenworth and Lawrence. Some of those towns served as the capital several times—the capital changed whenever the territorial leaders decided to move it.

Kansas became a state January 29, 1861. In November of that year an election was held to decide on a capital and Topeka was selected over Lawrence and several other cities. In later years there were several attempts to move the capital to a more central location, but none came close to succeeding.

A progressive yet cautious spirit has always characterized the government of Kansas. The state has led the country in many important areas. Kansas government has changed to meet contemporary needs, yet it has retained those things which are "tried and true" and which continue to be necessary, effective and efficient.

Kansas is one of the few states in the nation that does not issue revenue bonds to finance general government activities. A "cashbasis law" requires that the state operate strictly on the money available. Bond issues are allowed for capital improvements, such as major roads and buildings.

The state pioneered the use of the direct primary election. It was Senator Joseph L. Bristow, the first United States Senator nominated in Kansas under that system, who introduced in Congress the resolution which put direct election of U.S. Senators into the U.S. Constitution. Prior to that time senators were not elected by the people, but were chosen by the state legislatures.



The Kansas Judicial Center houses the state courts and the Attorney General.

Kansas was the first state to create a Legislative Council to carry on legislative functions when the lawmaking body is not in session.

State government operations are located in several main buildings in Topeka:

The Capitol houses the Governor, Lieutenant Governor, Secretary of State, Department of Administration's main offices, and the State Library. The legislature meets in the Capitol and each senator and representative has an office there. Offices directly attached to the legislature are also in the building.

The Docking State Office Building, named after the late Governor Robert B. Docking, is located directly west of the Capitol. The Landon State Office Building, formerly the Santa Fe Office Building, was named after the late Governor and 1936 Republican presidential nominee Alfred M. Landon. The Landon Building is located directly east of the Capitol. Both buildings house a number of state agencies.

The Kansas Judicial Center, directly south of the Capitol, houses the offices of the state courts and the Attorney General.

In the event of a national emergency or disaster, the Gov-

ernor and other state officials would be evacuated to the State Defense Building about two miles south of the Capitol. The Defense Building, completed in 1977, is specially designed for use in any disaster. The building has an emergency operations center, its own generator, water supply, and blast resistance and radiation shielding. Offices of the Kansas National Guard and the Emergency Preparedness Division are located there.

Several other buildings in Topeka have been leased or purchased by the state of Kansas as needed to house state agencies.

A number of state agencies also have local offices in communities throughout the state.

Kansas has the traditional three branches of government.

Legislative

The State Senate and the House of Representatives make up the Legislative Branch. There are 40 senators and 125 representatives, all elected by the voters of Kansas. Each senator represents approximately 60,000 people and each house member represents about 19,000 Kansans. Senators serve four-year terms and representatives serve for two years. The legislature, which

ets annually, has the responsioulity to create, amend or repeal state laws, appropriate money to be spent by state government, and approve or disapprove proposed amendments to the state and federal constitution.

A "Legislative Improvement Award" was presented to the Kansas Legislature in 1976. The award was given by Legis 50/The Center for Legislative Improvement ". . . to recognize the progress made in strengthening the legislative institution in order to provide better representation for the people of the state of Kansas."

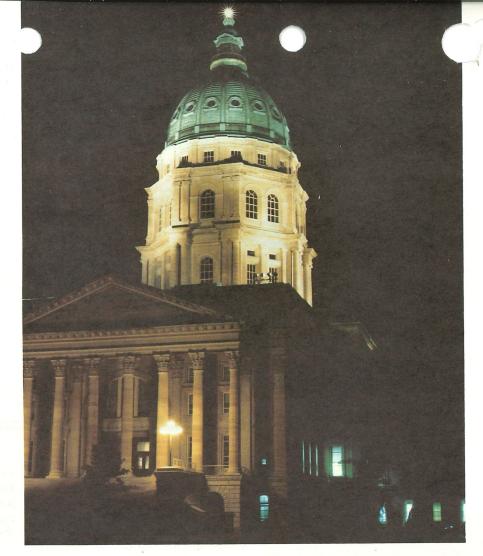
One major reform enacted in recent years is the lengthening and expanding of legislative sessions to allow more time and flexibility. Sessions are now limited to 90 days in even-numbered years and are unlimited in odd-numbered years, although generally they are held to 90 days.

Organizational meetings are now held every other year, following election of new legislators, before the session begins. Legislative officers are chosen at that time, and the meetings give freshman lawmakers a chance to get oriented.

Pre-filing of legislative bills between sessions, carry-over of bills from one session to the next in non-election years, and committee meetings between sessions are reforms which have helped to increase flexibility and provide better workload distribution.

Restructuring and improvement of support services have been vital elements in the legislative revamping. All legislators now have offices in the Capitol available throughout the year, and clerical services are provided during sessions. The legislative leaders have full-time administrative and clerical staffs. The Revisor of Statutes' Office, the Division of Legislative Administrative Services and other support offices have been strengthened.

Increased pay for legislators has made service in the lawmaking body more attractive to and possible for qualified citizens.



Construction of the Capitol was completed in 1903, 37 years after work first began.

Strong ethics legislation has been adopted to regulate legislative lobbying by special interest groups.

Executive

The Executive Branch includes the elected state officers provided for in the Kansas Constitution: Governor, Lieutenant Governor, Secretary of State, Attorney General, and the 10 members of the State Board of Education. Other elected state officers are the Commissioner of Insurance and State Treasurer. All serve four-year terms.

All offices in the Executive Branch are either directly or indirectly controlled by one of the elective officers, or are special agencies created by the legislature to function independently within state government.

The Executive Branch offices

exist to enforce or carry out the laws enacted by the Legislative Branch.

The structure of the Executive Branch has evolved through the years to its present form. Governors and legislatures have made changes as necessary through executive reorganization orders, constitutional amendments and legislation.

Major state agencies are now headed by cabinet-level secretaries. In recent years, the efficiency of state government has been increased by combining similar agencies and abolishing antiquated, unnecessary ones.

In 1978, the legislature adopted a "Sunset Law," which automatically abolishes specified state agencies at certain times. When an agency is due to be abolished, it may only be continued by receiving renewed statu-

Government progressive, yet stable

tory authority. The legislature has the power to abolish any state agency (except constitutional offices) at any time.

Kansas was the third state in the country to establish a position of Ombudsman for Corrections. The Ombudsman, who serves as a liaison between the Department of Corrections and the inmates of the correctional institutions, investigates complaints and works with corrections authorities to resolve problems.

A Public Disclosure Commission administers recent laws which mandate strict ethics in government.

The Legislative Division of Post Audit was created to audit each state agency periodically to review the legality, efficiency and appropriateness of the agency's operations. Post Audit is

WITHIN THESE WALLS THE BALANCE OF JUSTICE WEIGHS EQUAL

A Kansan donated the money for this sculpture in the Judicial Center lobby. A high school student suggested the message on the wall.

Salaries of state officials

Position	Term	Salary
Governor	4 years	\$65,000
Lieutenant Governor *	4 years	18,207
Secretary of State	4 years	50,000
Attorney General	4 years	57,500
Treasurer	4 years	50,000
Commissioner of Insurance	4 years	50,000
State Board of Education Members	4 years	**
Chief Justice of the Supreme Court	6 years	64,125
Justices of the Supreme Court	6 years	62,396
Chief Judge, Court of Appeals	4 years	61,810
Judges, Court of Appeals	4 years	60,169
District Court Judges	4 years	54,245
Associate District Judges	4 years	51,779
District Magistrate Judges	4 years	26,000
State Senators	4 years	***
State Representatives	2 years	***

* Part-time position
** \$57 per day for attendance at meetings, plus expenses as provided by law.
*** \$57 per day during legislative sessions plus \$66 per day expenses; \$600 per month when the legislature is not in session. (As of July 1, 1988.)

responsible to the legislature and reports its findings and recommendations to that body.

The Crime Victims Reparations Board, created in 1978, provides compensation to certain victims of crime.

Judicial

The state's Judicial Branch, which interprets state laws, is headed by the Supreme Court, with a Chief Justice and six justices. The Supreme Court is the highest court in Kansas. The Court of Appeals is a middle court between the Supreme Court and the district courts. The Court of Appeals has a Chief Judge and six judges, and there are 31 district courts throughout Kansas presided over by 71 judges. Each judicial district also has associate district judges and district magistrate judges, as prescribed by law.

Supreme Court Justices and Court of Appeals Judges are appointed by the Governor. Each time a vacancy exists the Supreme Court Nominating Commission submits names of several qualified nominees for the Governor to choose from. The justices stand for retention by public vote

every six years, and the judges do the same every four years. The justices and judges must retire at age 70 or as soon thereafter as they finish serving their term.

District judges, associate district judges, and district magistrate judges are elected locally. Most are selected on a non-partisan ballot, although some districts have opted for partisan elections.

Local Government

Kansas has 105 counties and 627 incorporated cities.

Fifteen cities operate under the commission form of government; 14 have a mayor-councilmanager system; 40 have a commission-manager system; and 558 operate under the mayor-council plan.

Local government in Kansas has a colorful history. In the early days of statehood, "county seat wars" took place. Being named the county seat could help to insure the future of a town, so there was a great deal of competition for that designation. During the county seat wars, records were stolen, ballot boxes were tampered with and shooting and bloodshed took place.

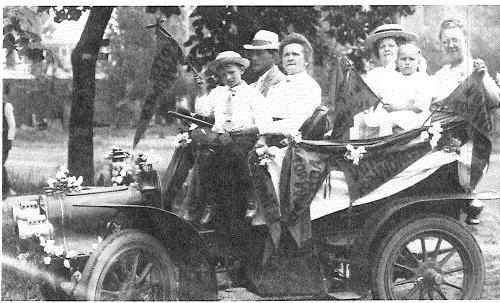
Kansas leader in women's movement

Politically, Kansas has always been a leader in the field of women's rights. The state's first constitution, adopted in 1861, gave women the right to acquire and possess property and to retain equal custody of their children. Such concepts were virtually unheard of in other parts of the country and Kansas quickly gained a reputation as a progressive state. That same year, the Kansas Legislature became the second in the country to allow women to vote in school elections. When this right was challenged as unconstitutional, the Kansas Supreme Court concluded in an 1875 opinion that "women are members of society, members of the great body politic, citizens, as much as men, with the same natural rights, united with men in the same common destiny, and are capable of receiving and exercising whatever political rights may be conferred upon them.'

In 1867, Kansas became the first state in the nation to consider full suffrage for women as the legislature placed a constitutional amendment before the voters. Numerous suffrage advocates, including Susan B. Anthony and Elizabeth Cady Stanton, traveled to Kansas to speak for the cause. From overseas, John Stuart Mill, the British philosopher, praised the state for its consideration of the amendment. Mill termed the legislature's "enlightened." George views Francis Train, who had come from Florida to campaign for women's suffrage, wrote a poem to honor the occasion:

Kansas will win the world's applause
As the sole champion of the woman's cause
So light the bonfires, have the flags unfurled
To the banner state of all the world.

The movement failed that year, but the national attention it received gave a much-needed boost to the cause of suffrage around the country.



Kansas Historical Society

Kansans took the lead in the battle for women's rights such as in this parade for women's suffrage in Columbus in 1912.

Women were granted further privileges in 1887 when the legislature allowed them to vote and run for office in all city and school elections. On April 4, 1887, less than two months after the law was passed, the people of Argonia elected Susanna Madora Salter the nation's first woman mayor. By the turn of the century, 15 women had won mayoral elections in the state. Minnie Morgan was elected mayor of Cottonwood Falls in 1889, along with an all-woman city council.

Full suffrage for women was finally granted in 1912. A constitutional amendment was passed by wide margins in both houses of the legislature, and approved by voters November 5, 1912. Although it had been 45 years since the issue was first considered here, Kansas remained in the forefront of social change—becoming only the eighth state to grant full suffrage to women, and doing so eight years before the adoption of the 19th Amendment to the U.S. Constitution.

On January 22, 1919, the Kansas Legislature passed a resolution urging Congress to adopt the 19th Amendment. Congress presented the amendment to the

states June 4, 1919, and Kansas ratified it 13 days later.

The Kansas House of Representatives received its first woman member that same year. Mrs. Minnie Tamar Grinstead, a Republican from Liberal, was elected from the 123rd District. She served until 1925.

Kansas was the seventh state to ratify the Equal Rights Amendment, doing so 69 days after its presentation to the states by the U.S. Congress. The amendment was ratified in Kansas March 28, 1972, passing the House by a vote of 86 to 37 and the Senate 34 to 5.

The voters of Kansas have repeatedly demonstrated their willingness to take the lead in women's rights. Although Kansas ranks 32nd in population of women and 31st in the ratio of women to men, it ranks sixth in the number of women holding public office. In addition to boasting one of only two women U.S. Senators in the country, Kansas also has one of only 10 women state treasurers. Kansas is also above average in its numbers of women legislators, county commissioners, mayors and city council members.



Boeing Military Airplane Co. is the largest private employer in Kansas, followed by Southwestern Bell Telephone.

State offers ideal industrial climate

Walter Beech, founder of Beech Aircraft Corporation, once said, "No matter where you deliver an airplane from Wichita, you're already halfway there." Beech knew what many other businessmen have since discovered—that Kansas' central location makes it an ideal site for business and industry. Other strong selling points for the state—a high worker productivity rate and an excellent system of air, rail and ground transportation.

With such strong assets the state has attracted a diversity of business and industry, resulting in a healthy state economy and a good job market. Unemployment in Kansas is consistently among the lowest in the nation. Products bearing a "Made in Kansas" label range from pizza to sewing patterns, camping equipment to greeting cards and tires to insulation. Meat packing, mining, flour milling and petroleum refining are among the major industries. Much of the credit for the variety of industry in Kansas goes to the

Kansas Department of Commerce, a state agency, and the Kansas Cavalry, a group of about 300 Kansas business leaders who volunteer their time and expertise to help lure business and industry to Kansas. Delegations of Cavalry members have traveled, at their own expense, all across the United States and to several foreign nations such as Germany and Taiwan.

Aircraft and agriculture dominate Kansas industry. The state is the world leader in the production of general aviation aircraft. Three Kansas companies—Beech, Boeing and Cessna—manufacture two-thirds of all the general aviation aircraft produced in the world. All three major aircraft companies are in Wichita, "the Air Capital of the World." Nearly 39,000 people are employed by aircraft firms or firms supplying aircraft component parts.

Hutchinson is a major salt production center. It is home to one of the world's largest salt mines and three of the largest salt evar oration plants. There is also a salt mine and a salt processing plant, operated by the American Salt Co., in Lyons.

Southeast Kansas is a center of strip coal mining operations. McNally Pittsburg Inc. at Pittsburg is the nation's largest plant devoted mainly to the production of coal preparation equipment. Pittsburg is also home to one of the country's largest ammonium nitrate plants.

Kansas ranks in the top 10 nationally in the production of popcorn, railroad cars, cattle and rubber tires, as well as wheat, milo and aircraft. The state is the country's leading producer of helium.

The following companies are several of the largest or more unique industries in Kansas:

Atchison, Topeka and Santa Fe Railway Company: In 1985 Santa Fe completed construction of a new office building in Topeka, where it employs more than 1,000 people. Santa Fe is the largest railroad company in the state with more than 2,500 miles of track.

Beech Aircraft Corporation: Beech employs more than 6,000 people in its plants at Wichita, Salina and Liberal. The company manufactures business aircraft ranging in size from two- to 19-passengers.

Boeing Military Airplane Co.: In operation since 1927, the Wichita plant is one of Boeing's primary centers for aircraft engineering, fabrication and assembly. The company does extensive avionics development and modification work for the nation's bomber and tanker fleets and produces assemblies for all Boeing jetliners. The plant, which employs 17,000 people, is believed to be the largest private aerospace complex at a single site in the free world.

The Cessna Aircraft Company: Cessna produces nearly 52 percent of all general aviation aircraft. The Cessna Skyhawk (172) is the largest selling general aviation aircraft in history. The mpany employs 8,000 at its

wichita plant.

The Coleman Company, Inc.: Founded in Wichita, Coleman now has plants in several states as well as foreign countries. It is the nation's leading manufacturer of insulated coolers and other molded plastic products. The company also produces camping products including tents and sleeping bags, canoes, recreational vehicle equipment, and heating and air conditioning units at its Wichita plant. Coleman plants in other states make power boats, water skis, catamarans and air guns. The company employs 2,500 people at its Wichita plant.

Olathe Boot Company, Inc.: Olathe Boot Company manufactures more than 25,000 pairs of western boots each year. The boots are sold throughout the United States.

Pizza Hut, Inc.: The international restaurant chain is based in Wichita, where it was founded in 1958. From a single restaurant, Pizza Hut has grown to 4,492

restaurants in all 50 states and 26 foreign countries.

Player Piano Co., Inc.: The Wichita company has the largest selection of player piano parts and accessories in the world. The company sells music rolls and other supplies in its Wichita store and through the mail.

Shepler's, Inc.: The world's largest western store, Shepler's sells western wear, equestrian supplies and accessories. The Wichita business has a mail order center as well as a retail store.

Tony's Pizza Company, Inc.: More than 1,000 people are employed at Tony's Pizza, Salina. The company makes frozen pizza and frozen Mexican food. Its products are sold throughout the contiguous United States.

Underground Vaults & Storage, Inc.: A Carey Salt mine in Hutchinson is the home of Underground Vaults and Storage (UVS). A constant temperature of 68 degrees combined with a relative humidity of 50 percent makes the 350-acre salt mine an ideal storage facility. UVS'

clients include Metro-Goldw, Mayer, which stores all of its fine grain masters, including "Gone With the Wind," in the old mine. Other clients include hospitals, cities, major oil companies and corporations. UVS has about 20,000 depositors from all 50 states and 32 foreign countries.

Western Insurance Companies: Founded in 1910, Western employs nearly 1,000 people in its home office at Fort Scott and has another 1,500 employees nationwide. The company has 54 branch offices throughout the country and about 3,500 independent agents. In 1981, the company built a \$5 million communications center south of Fort Scott. Western has an annual payroll of more than \$30 million.

Hesston Corporation: Founded in 1947, the Hesston Corporation is a major international producer of farm equipment. The firm makes equipment for tillage, mowing and haying, including several models of hay balers. Fiat tractors, which are produced in Italy, are also assembled and distributed by the company. More than 1,200 people are employed at the corporation's plant in Hesston.

Harold Hillman—Spheremaker: In a small shop in Ellis, rocks are turned into decorative spheres, which resemble large, beautiful marbles. The spheremaker, Harold Hillman, invented, built and patented all the machinery in his shop. As far as he knows, he is the only person in the world who produces spheres for public sale. Hillman's special equipment shapes and polishes spheres, ranging from two to five inches in diameter.

Josten's Printing and Publishing: Formerly Josten's American Yearbook Co., Josten's Printing and Publishing in Topeka publishes high school and college yearbooks. The company has also recently expanded its commercial printing department. More than 1,000 people are employed at the plant, which is a division of Josten's of Minnesota.

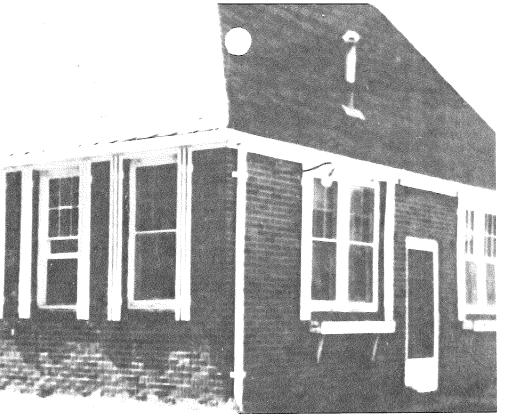
King Radio Corporation: King Radio is one of the world's leading producers of aircraft avionics

Boeing state's largest employer

Kansas' largest private employers based on data from the Kansas Department of Human Resources:

- 1. Boeing Military Airplane Company, Wichita.
- 2. Southwestern Bell Telephone, statewide.
- 3. General Motors Corporation, Kansas City.
- Beech Aircraft Corporation, Wichita, Salina, Andover, Liberal.
- 5. Cessna Aircraft Company, Wichita, Hutchinson, Strother Field.
- 6. Wesley Medical Center, Wichita.
- 7. Dillon Companies, Hutchinson and statewide.
- 8. J.C. Penney Company, statewide.

- 9. St. Francis Medical Center, Wichita.
- 10. Coleman Company, Wichita.
- 11. Goodyear Tire and Rubber Company, Topeka.
- 12. Hallmark Cards, Kansas City, Leavenworth, Lawrence, Osage City, Topeka.
- 13. Kansas Power and Light Company, Topeka.
- 14. K Mart, statewide.
- 15. IBP, Garden City, Emporia.
- 16. Safeway Stores, statewide.
- 17. Duckwall-ALCO Stores, Abilene and statewide.
- 18. King Radio, Olathe, Lawrence, Ottawa.
- 19. Blue Cross and Blue Shield, Topeka.
- 20. Kansas Gas and Electric Company, Topeka.



This building at the corner of Kellogg and Bluff in Wichita housed the first Pizza Hut.

Kansas produces airplanes, pizzas

equipment. Equipment manufactured by the company includes navigation and communication radios, radar, radar altimeters and auto pilots. King equipment is used in military aircraft as well as private and commercial airplanes from a small Cessna to the Concorde SST. In 1985, the company's land mobile division in Lawrence began manufacturing two-way FM communication radios. In 1982, the company's Florida division began production of marine electronic equipment such as depth finders and navigation radar. King Radio employs about 2,100 people at its plants in Olathe, Paola, Ottawa and Lawrence, and has an office in Geneva, Switzerland.

McCall Pattern Company: McCall's only manufacturing plant in the United States is in Manhattan. Nearly 100 million sewing patterns are produced there each year. The patterns are distributed to 86 countries. The plant employs 400 people.

Duckwall-ALCO Stores, Inc.:

A. L. Duckwall founded the first "Duckwall Racket Store" in Abilene in 1901. Today, the firm has more than 158 stores in 14 states with gross annual sales of \$380 million. Corporate headquarters and a new modern warehouse-distribution center are in Abilene.

Evans Products, Inc.: Evans Products of Dodge City is one of only three companies in the country that manufactures plastic drum heads for musical instruments. The company, which has been in business since 1958, sells heads customers to throughout the world, including many top rock groups. Evans is the only company in the world that makes such products as the 'hydraulic head," an oil-filled drum head.

Gates Learjet Corporation: Gates Learjet, Wichita, is the world's leading producer of business jet aircraft. The U.S. Air Force and many of the world's largest corporations are among its customers. Wichita is also the headquarters for Gates Learjet Aerospace Division, which performs work for many of the nation's major defense contractors. The new division manufactures missile components for the General Dynamics Corporation and tooling for Rockwell International Corporation's B-1B bomber.

Goodyear Tire & Rubber Company: The Goodyear factory in Topeka manufactures giant earthmover, heavy equipment and truck tires. About 2,500 people are employed at the plant.

Gott Corporation: The Winfield-based Gott Corporation designs, manufactures and distributes double-walled, insulated beverage coolers, cooler chests and other molded plastic products. The company was started in 1916 when Henry Gott invented the first portable water cooler for oilfield workers in Kansas, Oklahoma and Texas. Today, the company employs more than 500 people and has annual sales of \$45 million to rank third nationally in industry sales.

Hallmark Cards, Incorporated: The world's leading publisher of greeting cards, Hallmark has three production centers in Kansas. More than 2,000 people are employed at the plants in Topeka, Lawrence and Leavenworth. Items produced by the company include greeting cards, stationery, paper party goods, candles, writing instruments, key chains and Springbok jigsaw puzzles.

- The first forward pass in football history was thrown in December, 1905 in a football game between Washburn University and Fairmount College.
- The first nighttime football game in Kansas was between Fairmount College and Cooper College (now Sterling College).
- In 1981 Kansas received a national award for having the Most Beautiful License Plate.

Agriculture dominates Kansas

It would take a train stretching from western Kansas to the Atlantic Ocean to contain all the wheat grown in Kansas in a single year. Kansas leads the nation in wheat production, growing 18.5 percent of all the wheat produced in the United States. Only seven countries produce more wheat than Kansas, which, in 1982 alone, produced a record 462 million bushels of wheat, living up to its billing as the "Wheat State" and the "Breadbasket of the Nation."

As its biggest cash crop, wheat secures Kansas' position as a leading agricultural state. But the state's multi-billion dollar agribusiness industry extends far beyond the annual wheat harvest. Kansas has more than 30 million acres of cropland in production the most of any state except Texas. It boasts about 75,000 farms with sales of at least \$1,000. Kansas farmers produce more milo and lespedeza seed than any other state except one and, in 1983, the state produced 1.9 million tons of sorghum silage—the most in the country. Kansas farmers also harvest ample supplies of corn, soybeans, sugar beets, oats, alfalfa hay and seed and barley. Kansas has more than six million cattle and ranks second nationally in the number of cattle in feedlots. Farmers also raise sheep, hogs and chickens. Kansas farm products include wool, eggs and honey. Nationally, the state ranks third in the manufacture of farm equipment. The agribusiness industry also includes the production of fertilizer and the processing of farm products. Kansas has more flour milling capacity, and Kansans mill more flour, than any other state.

Early explorers disagreed as to the state's agricultural prospects. Some referred to the region as the "Great American Desert," but others recognized the richness in the soil that a century later would establish Kansas as a leader in



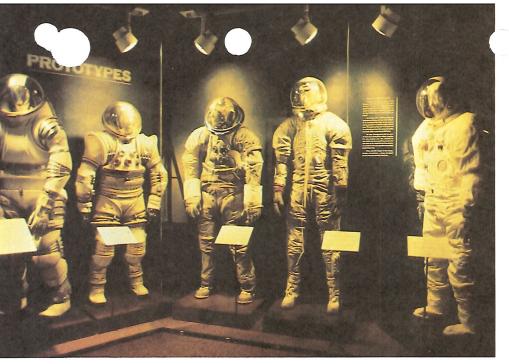
The rich Kansas soil produces a variety of cultivated crops.

agricultural production. An integral development in Kansas' emergence as the "Wheat State" was the introduction of Hard Red Winter Wheat or "Turkey Red Wheat," which was brought to Kansas from Russia by the Mennonites in 1874. The development of the windmill, barbed wire and the mechanical combine in the last half of the 19th Century was also instrumental to agricultural progress.

Cattle were very important in the early development of Kansas. Cattle raised in Texas were driven to Kansas railroad towns to be shipped to eastern markets. Abilene, Wichita, Ellsworth, Newton, Dodge City and Caldwell were flourishing cowtowns. Although the great cattle drives brought business to the state, they also brought problems. Texas cattle spread Texas and Spanish fever in Kansas and quarantines had to be enacted during warm weather to protect livestock here.

Through the years, Kansas farmers have been cursed by droughts, floods, and plagues of

grasshoppers. The agricultural history of the state reveals cycles of boom and bust; great periods of expansion of agricultural holdings followed by thousands of farm foreclosures. In the 1930s, financial woes brought on by the Great Depression were compounded by drought and dust storms. Strong winds swept away the dry soil of the Great Plains, creating massive clouds of dust, thousands of feet high and miles across which obscured the sun for hours. Shelter belts (rows of trees) planted with federal funds to diminish soil erosion are still in evidence throughout parts of the state. Soil erosion has yielded to scientific farming methods. Today, thousands of acres of Kansas farmland are irrigated by modern irrigation systems supported by wells, federal and state reservoirs and farm ponds. Although grasshoppers and other pests periodically invade crops, the great plagues of past generations have been all but eliminated by modern chemical pesticides; yet farm woes continue on new fronts. Farmers must still



The Kansas Cosmosphere and Discovery Center in Hutchinson houses one of the largest collections of space artifacts in the world, including a collection of spacesuits.

A land of delights

A glimpse of the future or a taste of the past, Kansas offers visitors both. The future is found at the Kansas Cosmosphere in Hutchinson, the past in a 36-hour wagon train ride through the Flint Hills near El Dorado. A sampling of popular tourist attractions in Kansas include:

A 2,000-mile trip can be completed in a 10-minute stroll through scenes from the arctic to the tropics in the Panorama of North American Plants and Animals at the Museum of Natural History on the campus of the University of Kansas. It is one of the largest diorama exhibits in

Agriculture

contend with the vagaries of the weather and, in some instances, the solutions to old problems have created new troubles. The use of pesticides, along with herbicides and chemical fertilizers, has greatly increased farm production costs. Despite high costs, prices for many farm products, including wheat, have remained low in recent years. Farm foreclosures are again a mounting concern. The frustrations of farmers have spilled into the political arena. Farmers have expressed their discontent through strikes," "tractorcades" and other demonstrations.

Better agricultural methods are constantly being explored by re-

searchers in Kansas. Kansas State University is recognized as one of the outstanding agricultural research institutions in the nation. Researchers on campus, and at agricultural experiment stations throughout the state, are noted for their work in the eradication of plant and animal diseases, and for the development of new hybrids of wheat and other grains.

The Kansas Wheat Commission, financed by an excise tax on first sales of wheat, assists wheat farmers and promotes the use of wheat products. Farm support is also provided by 4-H clubs, Future Farmers of America, Grange, Farm Bureau, Farmers Union, National Farmers Organization, livestock associations and local farm cooperatives.

the world. The museum also houses an array of fossils and minerals, including a reconstruction of a tar pit and fossil marine reptiles from Kansas; exhibits on native North Americans from Greenland Eskimos to the Plains Indians; the U.S. Cavalry horse "Comanche," a survivor of the Battle of the Little Bighorn; and live snakes, bees and fishes of Kansas. The museum is open 361 days each year. Dyche Hall, which houses the museum, is on the National Register of Historic Places.

Built in 1857 or 1858, the Pony Express Station near Hanover is said to be the only unaltered pony express station which remains on its original site. It was built along the Oregon-California Trail, one of the most heavily traveled routes in the West, by Gerat H. Hollenberg, a German immigrant. The building served as Hollenberg's family home, a neighborhood store, a tavern, a stage station for the Overland Express and, in 1860, a pony express station.

The Kansas Cosmosphere and Discovery Center, Hutchinson, houses one of the largest and most significant collections of space artifacts in existence. It also boasts the world's largest movie projection system. Artifacts include a 25-foot tall Lunar Module and an Apollo Command Module. Many of the artifacts are restored at the Cosmosphere.

A re-creation of Wichita in its developmental years of 1865 to 1880, the Old Cowtown Museum has 36 buildings on 17 acres. Among the exhibits is a log cabin that was the first two-story dwelling in Wichita. It was built by hand by a town founder about 1868. Other buildings on display include a church, drugstore, blacksmith shop, saloon, newspaper office and jail. Many of the buildings are authentically furnished with items from the museum's extensive collection of 19th century artifacts. Cowtown sits on the banks of the Big Arkansas River in Wichita's Sim

k. It is open seven days a week March through December and is open Monday through Friday in January and February.

Abilene, the boyhood home and final resting place of President Dwight D. Eisenhower, is also home to the Eisenhower Center. The center comprises the Eisenhower family home, a museum and library, a visitors' center and a Place of Meditation where Eisenhower is buried. The family home is on its original site and contains original furnishings belonging to the family. The museum contains thousands of mementoes of Eisenhower's military career and Presidency. The library features exhibits and has research facilities for scholars. In the visitors' center a free movie about Eisenhower's life and the Presidential Library is shown regularly.

Abilene is also home to the Museum of Independent Telephony, the Greyhound Hall of Fame and the National Greyhound Association. The only museum of its kind in the nation, the Museum of Independent Telephony has a collection of telephones dating from 1875 and a large research library. The Greyhound Hall of Fame pays tribute to famous racing dogs and personalities connected with the sport. It features a miniature race track and other displays. Abilene is also the site of the National Greyhound Association Meet, the "world series" of greyhound racing. The National Greyhound Association is headquartered west of Abilene. It is the official world registry for all racing dogs that compete in the United States.

The High Plains Museum in Goodland houses America's first patented helicopter, which was built about 1910 by two machinists. Also on display are prehistoric fossils, Indian artifacts including a collection of arrowheads, pioneer artifacts from household equipment to toys and dolls, and farming tools and implements used by the pioneers. The museum is in Steever

Park, south of the Goodland Municipal Pool.

Once the "Cowboy Capital of the World," Dodge City features an authentic reproduction of Old Front Street as it appeared in 1872 at the foot of Boot Hill cemetery. The display includes the famous Long Branch Saloon, and gun fights are staged during the summer. Other attractions are the Boot Hill Western Museum, the Beeson Museum and the home of Lindsborg is rich in Swedish heritage and tradition. Its unique Main Street has a distinctly European flavor. Found at the McPherson County Old Mill Museum complex is the centuryold Smoky Valley Roller Mill, which has been restored to operating condition; the Swedish Pavilion from the St. Louis World's Fair; and a large variety of early frontier collections. Both the mill and the pavilion are on



A 36-hour wagon train ride through the Kansas Flint Hills is a popular and unique tourist attraction.

Colonel R. J. Hardesty, an early day cattle baron.

A glimpse of pioneer life is found at the Chisholm Trail Museum, Wellington. Exhibits include the Old Parlor, Old Kitchen, Grandmothers' Room, the Doctor's Office and the Barber Shop. The museum has 42 rooms of displays with more than 12,000 exhibits. It also contains an archives section containing unpublished biographies, diaries, family records, photographs and the early history of Sumner County. The museum is on Washington Avenue across from the Sumner County Courthouse.

the National Register of Historic Places. Bethany Lutheran Church contains a century-old, hand-carved railing and Birger Sandzen murals. Coronado Memorial Park gives a spectacular view of the entire Smoky Valley.

Built in 1870, the Brookville Hotel, Brookville, is nationally famous for its family-style chicken and its old-fashioned atmosphere.

The State Capitol in Topeka is one of the most beautiful capitols in the country. The building features extensive murals, elaborate frescoing and beautiful woodwork. The chambers of the Senate and House of Representatives

Kansas offers a variety of attractions

are outstanding examples of 19th century decor. Nearby is the modern Judicial Center, completed in 1978.

Topeka is also the home of the Kansas Museum of History, the Menninger Foundation and the World Famous Topeka Zoo. The museum moved from downtown Scott played a key role in the nation's westward expansion. The fort, established in 1842, was part of a series of forts built to maintain peace between the Indians to the west and the white settlers to the east. Fort Scott has 19 buildings spread across 14 acres. It is a National Historic



Photo/Gene Brehm

The pronghorn antelope is among the state's natural wonders.

Topeka to a new building on Topeka's west side in mid-1984. The Menninger Foundation is a psychiatric center for professional education, research, treatment and prevention of mental illness. The main building of the foundation's west campus is fashioned after Independence Hall. It contains a unique collection of papers and objects related to psychiatry, including one of the country's largest collections of Sigmund Freud's papers. The Topeka Zoo features a water bird lagoon; a tropical rain forest—the first of its type in the world; and the world's only walk-through gorilla exhibit. The zoo has about 500 animals of 200 different species. It is open to the public every day of the year.

An authentic military fort, Fort

Park and has been restored by the National Park Service.

Fort Larned was established in 1859 by the U.S. Army to protect travelers and commerce on the Santa Fe Trail. The fort also served as a military base for action against hostile Indians and later as a center for peaceful relations with the tribes. Six miles west of Larned, the Fort Larned National Historical Site is administered by the National Park Service.

The Safari Museum in Chanute honors the late Osa and Martin Johnson, who are noted for their contributions to wildlife photography and exploration. The museum contains trophies and souvenirs of their African and South Pacific trips.

The infamous Dalton family

made a bloody raid on the city of Coffeyville October 5, 1892, in an attempt to rob two banks simultaneously. Death Alley and the graves of two of the gang can be seen. The Dalton Museum displays mementoes of the famous gun battle. It also features Hall of Fame pitcher Walter Johnson and 1940 Republican presidential nominee Wendell Willkie, who once taught history at Coffeyville High School. The stately Brown Mansion is on South Walnut in Coffeyville. Built in 1906 by W. P. Brown, the home shows the influence of architect Stanford White.

"Little House on the Prairie" near Independence is a reproduction of a log cabin on the site where Laura Ingalls Wilder lived as a child. Wilder wrote the nine children's books which provided the basis for the "Little House on the Prairie" television series. The cabin, a one-room schoolhouse and an early-day rural post office are 13 miles southwest of

Independence.

Fort Riley is one of the nation's most important military installations. It is the home of the famous 1st Infantry Division, the "Big Red One." The historic 100,000acre military reservation has many beautiful limestone buildings, barracks and homes. Also at Fort Riley is the first Territorial Capitol of Kansas, which is maintained by the state as a public museum. It houses artifacts concerning the taming of the Old West. Also on the grounds are the U.S. Cavalry Museum, a herd of buffalo and the quarters which General Custer used when he was stationed at the fort.

The Brown Grand Theatre, Concordia, opened as an Opera House in 1907. Built at a cost of \$40,000, it was elegantly decorated in white, green and gold with 535 "electric bulbs." The theater showed motion pictures from 1925 to 1974, during which time the inside was repainted pink and blue. The building fell into disrepair, but in 1973 it was placed on the National Register

Iistoric Places. From 1973 to 1980, a committee of interested people worked to restore the Brown Grand. It was reopened in 1980 and is once again an elegant theater, presenting a variety of live entertainment.

Fort Leavenworth is the oldest army post in continuous existence west of the Mississippi River. Established in 1827, it provided protection against the Indians and served as a starting point for wagon trains. The fort is now the site of the U.S. Command and General Staff College. Points of interest include the Post Museum, with an exhibit of 19th century horse-drawn vehicles; Bell Hall, home of the Command and General Staff College; the French cannon; the U.S. Disciplinary Barracks; and the National Cemetery. The Leavenworth Federal Penitentiary is nearby.

The Thomas County Museum, Colby, contains an outstanding collection of American and European antiques acquired by Nellie and Joseph Kuska. It includes dolls, glass, ceramics, furniture, paintings, textiles, clothing, silver and clocks. It also has a gallery devoted to the history of Thomas County.

In Beloit, the Little Red Schoolhouse offers schoolchildren the opportunity to experience school as it was taught in the late 1800s. Children learn reading, 'riting and 'rithmetic in halfday classes taught by retired schoolteachers with experience teaching in one-room schools. The schoolhouse is open to the public afternoons from May 1 to October 1. It is in north Beloit near the junction of U.S. Highway 24 and Highway 9.

Visitors can also experience frontier life in El Dorado with a Flint Hills Overland Wagon Train Trip. Passengers on the 36-hour expedition through the scenic Flint Hills can ride in either an authentic covered wagon or a stagecoach. Meals are eaten around a campfire. At the beginning of the journey, passengers are given a tin cup and a red bandana. The tin cup is for their

coffee. The bandana is looped through the latch of the outhouse door to warn other travelers when the outhouse is occupied. Trips are scheduled in the spring, summer and fall. Information is available by contacting Ervin E.

one to shriving service. In he, haste, she forgot to remove her apron and ran to the church with skillet still in hand. Not to be outdone, her neighbors got into the act the next year and carried their skillets to church. The race



Photo/John Bock

There are 25 federal reservoirs in Kansas.

Grant, P. O. Box 1076, El Dorado 67042, (316) 321-6300.

The Sedgwick County Zoo, Wichita, has six major exhibit areas containing more than 1,000 animals. It has the only underwater hippo viewing tank in the world and offers an extensive educational program.

Special Events

Among the more unusual events in Kansas is the International Pancake Race in Liberal. Conducted each Shrove Tuesday, the day before Ash Wednesday, the race is run in competition with Olney, England—home of the original pancake race. Legend has it that more than 500 years ago on Shrove Tuesday an Olney housewife was using up cooking fats, which were forbidden during Lent, to cook pancakes. As she was cooking, the church bell tolled calling every-

has been run ever since, with Liberal joining in 1950. Female competitors, wearing housedresses, aprons and headscarves run an S-shaped course, carrying skillets and flipping their pancakes twice.

The oldest continuous annual event in Kansas is the Old Soldiers and Sailors Annual Reunion in Erie each July. First held in 1873, it is sponsored by the American Legion Post 102. There is a rodeo on Tuesday and Wednesday nights and a "bean feed" on Friday.

Bird City is host to the annual four-day Tri-State Antique Engine and Threshers Show in late July.

An Indian Peace Treaty Pageant is staged every three years in the fall at Memorial Peace Park, Medicine Lodge. A cast of 1,000 presents the pageant in memory of peace treaties negotiated in

State offers a variety of attractions

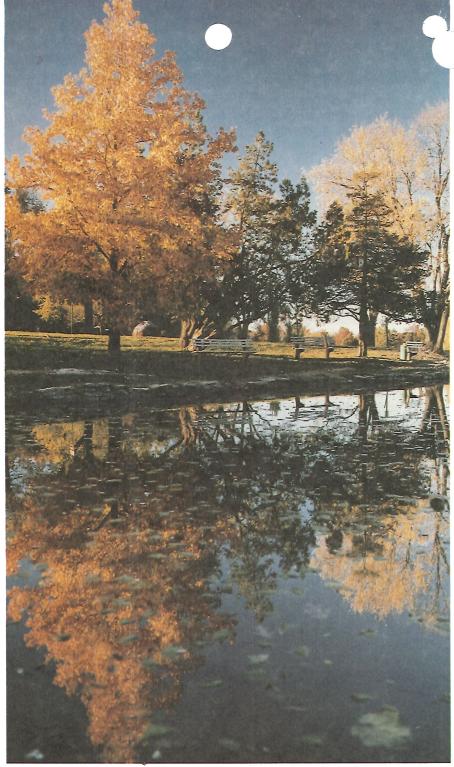
1867 by the United States with five hostile Plains Indian tribes.

The infamous Dalton raid is re-enacted in Coffeyville each October. Coffeyville also features the Inter-State Fair and Rodeo in August. The rodeo observed its 77th anniversary in 1985. The city's annual Christmas parade is in early December and it hosts an arts and crafts show in late November.

Each March, Hutchinson is host to the National Junior College Basketball Tournament. The Annual Kansas Barbed Wire Swap and Sell Session meets in May in La Crosse. The third week in September Winfield is host to the Bluegrass Festival and Flat-Picking Championship Contest. There is horse racing at Eureka Downs, Eureka, during the spring, summer and early fall. Bethany College, Lindsborg, is world famous for its Messiah Festival, which has been performed annually during Holy Week since 1882.

Arkansas City's Arkalalah, Independence's Neewollah (Halloween spelled backwards) and the Maple Leaf Festival in Baldwin are celebrated in October each year. They feature parades, carnivals, queen pageants, dances and concerts.

The Biblesta at Humboldt is an annual parade portraying Biblical scenes in floats. It is the first Saturday in October. The annual Kansas State Fair is at the Fairgrounds in Hutchinson in mid-September. Attractions include



Photo/John Bock

The beauty of an autumn day in Kansas was captured in this photograph taken at Lake Shawnee near Topeka.

games, rides, agricultural shows and exhibits and concerts by popular performers. An After Harvest Czech Festival is on the last Saturday in July each year at Wilson, the "Czech Capital of Kansas.' The annual Scott County Easter Pageant at Scott City is a special religious program presented by area volunteers. It is staged outside on each Good Friday evening.