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KANSAS AGRICULTURE BEFORE 1900.

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

KANSAS AGRICULTURE BEFORE 1900

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KANSAS AGRICULTURE BEFORE 1900

APPROVED BY

DISSERTATION COMMITTEE

PREFACE

In his voluminous History of Kansas, published in 1883, A. T. Andreas wrote:

> The history of husbandry is barren of events wherefrom to weave a narrative. Its growth and development is as silent as the growth of the wheat or corn, and as gradual as the increase of the herds and flocks. It can only be measured by comparative results and returns from year to year, and can only be embodied in statistical reports.

Andreas' misapprehension of the power of the historian notwithstanding, it is a fact that no one has attempted to "weave a narrative" of what has been, and what surely must continue to be, the basic industry of Kansas. But a history of Kansas agriculture can be written.

This study deals mainly with agricultural settlement and crop farming in Kansas in the period before 1900. Because of space limitations, discussion of some important aspects of agriculture have been purposely omitted. The range cattle industry, for instance, is mentioned only incidently, and the livestock industry as a whole is treated as it relates to general farming. Also the social aspects of agriculture have been ignored and no attempt has been made to record the activities of the Populist movement which had deep roots in the Kansas soil. This, then, is mainly an account of Kansas dirt farmers and how they swarmed over a raw, undeveloped prairie and within about a single generation transformed it into a region of thriving farms.

The sources which deal with this phase of Kansas agricultural history are largely centered in the Kansas State Historical Library in Topeka. Appreciation is expressed, therefore, to the following members of the State Historical Library staff who were most helpful in researching this study: Mr. Nyle Miller, Secretary; Mr. Robert Richmond, State Archivist; Mrs. Lorene Hawley, Assistant Librarian; and Mrs. Eileen Charbo, staff. A special word of thanks goes to Professor Gilbert C. Fite, who directed this dissertation. Indeed, this work would never have been completed without his assistance, encouragement, and patient understanding. Finally, words cannot express my appreciation for the sacrifices made by my wife, Evelyn, and my children during the course of this study.

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KANSAS AGRICULTURE BEFORE 1900

CHAPTER I

THE PHYSICAL SETTING

The land that is Kansas has a long and interesting record of national ownership. From the time of its discovery until 1845, all or some of the soil belonged at various times to Spain, England, France, Mexico, the Republic of Texas, and the United States. The latter nation acquired most of the area in 1803 when it purchased Louisiana from France; the remaining portion was gained in 1845 with the annexation of the Republic of Texas.

Shortly after creating Kansas Territory in 1854, Congress established the Pawnee Land District, which included all the public lands in the Territory to which Indian title had been extinguished, and provided for the location of a land office.[1] However, settlers could not legally enter the Territory until the land had been surveyed into salable tracts. This task was initiated in the summer of 1854 with the appointment of a surveyor-general who was instructed to establish the base line and then "determine on a working program for making available surveys of the

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[1]U. S., Statutes at Large, X, 309-10.

particular bodies of land . . . requisite to meet the wants of the earliest pioneers."[2]

Although the work of surveying the territory progressed slowly at first because of "an enormous error in the base line," which later had to be corrected, and "an unusual amount of sickness" among the large working force, the surveyor-general was able to report at the end of September, 1856, that all lands in Kansas east of Range 12 East, except the Indian reservations, had been surveyed into sections embracing approximately 4,600,000 acres.[3] During the course of the next six years, 13,500,000 additional acres passed under the surveyor's chains.[4] Labor on the project all but ceased at this point as the sectional struggle came to demand the full attention of the government at Washington.

The Kansas survey was renewed after the Civil War. Because of a great inrush of settlers into the area during the early 1870's--prompted largely by the rapid extension westward of the railroads, special efforts were made to complete the task as quickly as possible. The last of the unmeasured lands were surveyed during 1875, and at the end of the next fiscal year the surveyor-general's office was closed and his

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[2]John Calhoun was commissioned Surveyor-General of Nebraska and Kansas Territories on August 4, 1854, and was given his instructions for the survey of the Territories by General Land Commissioner John Wilson in a letter dated August 26, 1854. See U. S., General Land Office, Report of the Commissioner of the General Land Office for November 30, 1854 (Washington, 1855), pp. 35-40.

[3]U. S., Congress, House, Annual Report of the Surveyor General of Kansas to the Commissioner of the General Land Office Thomas A. Hendricks dated October 20, 1856, for the Year Ending September 30, 1856, 34th Cong., 3d Sess., 1857, House Exec. Doc. No. 1, v. 1, pp. 526-29.

[4]Compiled from the Annual Reports of the Commissioner of the General Land Office for the years 1857 through 1862.

records delivered to state officials.[5] The task of surveying 51,768,976 acres of Kansas land had been accomplished. Meanwhile, in 1861 Kansas had achieved statehood.[6] The new state lay in the approximate geographical center of the nation, forming a nearly perfect rectangle 400 miles from east to west by 200 miles from north to south. Kansas was bordered on the east by Missouri, on the north by Nebraska Territory, on the south by Indian Territory and No Man's Land, and on the west by Colorado Territory.

With the exception of the extreme southeastern corner, Kansas lies in the midst of the two major physiographic provinces into which the western portion of the Interior Plains of the United States is divided, the Prairie Plains and the Great Plains.[7] The eastern one-third of the state lies within the Prairie Plains which, in turn, is subdivided into three physiographic sections: the Dissected Till Plains, the Osage Plains, and the Arkansas River Lowlands. The western two-thirds of the state is situated in the Great Plains Province and is made up of the Dissected High Plains and the High Plains physiographic sections.

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[5]U. S., General Land Office, Report of the Commissioner of the General Land Office for the Fiscal Year Ending June 30, 1876 (Washington, 1876), p. 48.

[6]U. S., Statutes at Large, XII, 126.

[7]The extreme southeastern corner of Kansas, an area embracing no more than fifty square miles, is included in the Springfield-Salem Plateaus Section of the Ozark Plateaus Province of the Interior Highlands. This portion of the state is essentially flat with an average relief of less than sixty feet, but with sufficient slope to afford good drainage. See Walter H. Schoewe, "The Geography of Kansas. Part II, Physical Geography: Geology," Kansas Academy of Science, Transactions, L (September), 1949, pp. 261-333.

The Dissected Till Plains Section includes all or part of sixteen counties in the northeastern corner of the state and is subdivided into the Kansas Drift Plain and the Attenuated Drift Border. This physiographic section is in reality a northward extension of the Osage Plains which was modified by glacial action during the Pleistocene epoch. The Attenuated Drift Border constitutes a rather narrow strip of land lying athwart the Kansas River, Big Blue River, and Little Blue River. Its topography is less bold than that of the Osage Plains because of the glacial action; however, it is decidedly rougher and has greater relief than the Drift Plain to the north. The Drift Plain has a gently undulating surface.

The Osage Plains Section of the Prairie Plains Province includes the area east of the ninety-seventh meridian and south of the Dissected Till Plains; it is divided into the Cherokee Lowlands, Chautauqua Hills, Osage Cuestas, and Flint Hills Uplands physiographic units. The Cherokee Lowlands is an erosional plain occupying some 1,000 square miles of Bourbon, Crawford, Cherokee, and Labette counties. Its surface is gently undulating, and it slopes to the west at about ten feet per mile. The Chautauqua Hills evolved chiefly from the erosion of a thick sandstone belt; this land forms a narrow triangular wedge approximately ten miles wide, and it extends from southwestern Woodson County southward to the state line in Montgomery and Chautauqua counties. The Osage Cuestas occupy most of the four eastern tiers of counties south of the Kansas River; they consist of a series of northeast-southwest, east-facing escarpments between which are flat to gently rolling plains. The Cuestas were formed by differential erosion in the alternating hard and soft shales and limestones in the area.

The Flint Hills Upland extends southward from Washington County to the state line in Cowley County. The surface of the Upland is gently rolling and is separated on the east from the Osage Cuestas by a prominent rocky escarpment several hundred feet high. To the west it gradually blends with the Arkansas River Valley.

The Arkansas River Lowlands Section of the Prairie Plains Province lies adjacent to the Flint Hills Upland on the east and extends westward to the state line, following the valley of the Arkansas River. This physiographic section is made up of the Great Bend, McPherson, Wellington, and Finney lowlands. The Great Bend Lowland is an undulating plain of slight relief extending from the vicinity of Dodge City in an easterly direction to Hutchinson and thence southeastward to Wichita and Arkansas City. The width varies from twenty-five to forty miles, and the Arkansas River traverses the middle. Large areas of this unit are extremely flat, poorly drained, and consist of sandy soil. The McPherson Lowland, similar in most respects to the Great Bend Unit, encompasses McPherson County and the northeastern and northern portions of Reno and Harvey counties, respectively. The Wellington Lowland is a triangular-shaped area confined primarily to Kingman, Harper, western Sumner, and southeastern Barber counties. Its topography is decidedly rolling in contrast to the more uniform and flat-lying surfaces of the other Arkansas River Lowland Units. The Finney Lowland includes all of the Arkansas River Valley in Kansas west of Dodge City and embraces both the inner and outer valleys of the river. The inner valley ranges from less than a mile to about four miles in width whereas the outer valley varies from five to twenty miles. The topography is essentially flat.

The Great Plains Province is the largest of the three major physiographic provinces in Kansas. It includes all of the western portion of the state west of a line from the northeastern part of Washington County to a point in southeastern Barber County. This province is composed of the Dissected High Plains and High Plains sections which are separated into northern and southern parts by the intrusion of the Arkansas River Lowland. The Dissected High Plains includes the Smoky Hills, Blue Hills, and Red Hills areas. The Smoky Hills lie adjacent to the Dissected Till Plains, Flint Hills Upland, and McPherson Lowland Area, thus forming the eastern part of the Dissected High Plains. The area is a dissected, hilly belt twenty to forty miles wide; it is carved mainly in Dakota sandstone, and it has a relief in many places of from 200 to 300 feet. The region is well-drained from west to east by the Republican, Solomon, Saline, and Smoky Hill rivers. The Blue Hills, so-called because of the bluish haze of the atmosphere found in them, lie immediately to the west of the Smoky Hills.

The Red Hills, or Cimarron Breaks, form in eastern Meade County and include all or most of Clark, Commanche, Barber, Harper, and Kingman counties. The terms "Red Hills" and "Cimarron Breaks" are both accurate descriptions of this area, the former referring to the red color of the soil and rocks exposed there and the latter to the abrupt and sharp break in the topography which marks the edge of the High Plains along the valley of the Cimarron River. The "breaks" proper constitute a belt ten to twenty miles wide and it has a variation in elevation of as much as 500 feet.

The High Plains occupy the entire western one-third of the state and constitute the most level part of Kansas. Generally speaking,

this section may be characterized as a treeless and featureless plain, although the topography is not without relief and surface expression. The High Plains lie between 2,000 and 4,000 feet in altitude and rise gradually westward at an average rate of ten to fifteen feet per mile. Scattered throughout the High Plains are numerous basins, such as those found in Scott and Meade counties, and sand-dune areas, the largest of which lie south of the Cimarron River in Morton, Stevens, and Seward counties.

The highest point in Kansas is 4,125 feet in Wallace County. The lowest point above sea level is 700 feet in Montgomery County where the Verdigris River enters Oklahoma.[8] The average altitude along the eastern border of the state is approximately 850 feet, while elevation along the western boundary reaches close to 4,000 feet. Thus the general slope of the surface of the state is from west to east at an average of nearly eight feet per mile with a slight declination to the south, sufficient to turn the flow of water in the southern half in that direction.[9]

Kansas is well-drained by an estimated 50,000 rivers and streams.[10] Their general flow is easterly, southeasterly, or northeasterly, although there are some notable exceptions. In the glaciated northeastern

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[8]U. S., Bureau of the Census, Statistical Abstract of the United States: 1961 (Washington, 1961), p. 164.

[9]See Schoewe, "Geography of Kansas," for a discussion of elevation and relief in Kansas.

[10]Walter H. Schoewe, "The Geography of Kansas. Part III, Hydrogeography," Kansas Academy of Science, Transactions, LIV (September, 1951), p. 272. See also Kansas Water Commission, Surface Waters of Kansas, 1895-1919, prepared in cooperation with the U. S. Geological Survey (Topeka, 1921).

part of the state, for example, the Big Blue River flows south. The Walnut, Verdigris, and Neosho rivers in southeastern Kansas also flow in a southerly direction. A few streams, such as the South Fork of the Nemaha, flow northward, while Spring River, in the extreme southeastern corner of the state, pursues a southwesterly course--the only stream of considerable size in the state to flow in that direction. Finally, there are a number of streams which terminate in closed basins, most notably White Woman Creek in the extreme west-central part of the state.

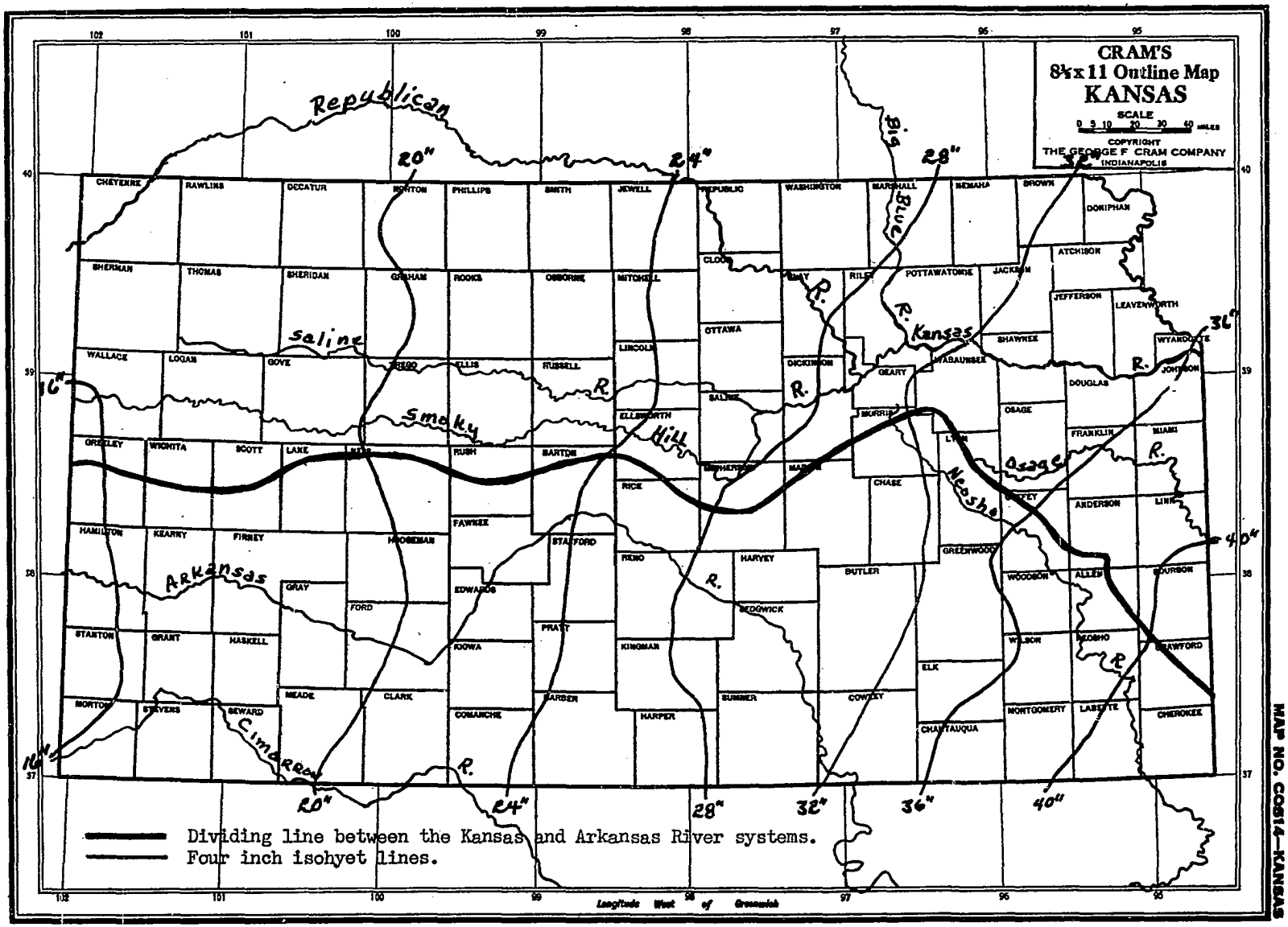
Nearly all of the surface runoff waters are carried away by the Kansas and Arkansas river systems. The line separating these drainage basins is a well-marked uplands barrier which divides the state into two almost equal parts. This barrier extends eastward from Greeley County into McPherson County where it turns northeasterly to Alta Vista in Wabaunsee County and then arcs southeasterly to Pittsburg in the southeast corner of the state. The water courses to the north of this line belong to the Kansas River drainage basin, and those to the south constitute the Arkansas River system.[11]

The Kansas River is formed at Junction City, Geary County, by the confluence of the Republican and Smoky Hill rivers, both of which rise in the arid plains of eastern Colorado.[12] The river flows in an easterly

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[11]Two exceptions to this description of the drainage system should be noted: first, the Missouri River drains, directly or indirectly, part or all of several counties in the extreme northeastern portion of the state; and second, a comparatively small area of about 4,300 square miles in the east-central portion of the state is drained by the Marais des Cygnes River. This river rises near Eskridge, Wabaunsee County, about thirty miles southwest of Topeka, and flows in a southeastwardly direction across Lyon, Osage, Franklin, Miami, and Linn counties where it enters Missouri to become the Osage River.

[12]The Smoky Hill River is generally accepted as being the westward extension of the Kansas River.



MAP NO. CO514—KANSAS

direction through the remarkably fertile Kaw Valley where it empties into the Missouri River at Kansas City. The south tributaries of the Kansas-Smoky Hill River system are small and few in number because of the close proximity to the uplands barrier. The principal affluents to the north of this system are the Saline, Solomon, Big Blue, and Delaware rivers. The principal feeders of the Republican River are Sappa, Beaver, and Prairie Dog creeks, all in the northwestern portion of the state.

The Arkansas River rises high in the Rocky Mountains. This river enters Kansas in Hamilton County and flows southeasterly to a point in Ford County where it makes a bold curve to the northeast and forms what is known as the "great bend." Below this "great bend" the river courses southeasterly and crosses into Oklahoma a few miles south of Arkansas City, Cowley County. The principal tributaries of the Arkansas on the north are Walnut and Big Cow creeks and the Pawnee, Little Arkansas, Walnut, Verdigris, and Neosho rivers. The southern affluents of the Arkansas are Rattlesnake Creek, and the Ninnescah, Cimarron, and Salt Fork of the Arkansas rivers.[13]

Kansas has three rather distinct climates, conforming generally to its eastern, middle, and western thirds.[14] This phenomenon is largely accounted for by the fact that the state extends some 400 miles from the moderate elevations and rather humid conditions of the Prairie

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[13]The Verdigris, Neosho, Cimarron, and Salt Fork of the Arkansas rivers are tributaries of the Arkansas River in the state of Oklahoma.

[14]See A. B. Cardwell and S. D. Flora, "The Climate of Kansas," Kansas State College, Agricultural Experiment Station Bulletin No. 302 (Manhattan, 1942); S. D. Flora, "Climate of Kansas," Kansas State Board of Agriculture, Report No. 285 (June, 1948); and H. R. Hilton, "The Three Belts of Kansas," Kansas State Board of Agriculture, World's Fair Report, 1893 (Topeka, 1893).

Plains in the eastern part to the high elevations of the dry High Plains along the eastern slope of the Rockies in the west. The eastern one-third of the state rises gradually from an elevation of less than 800 feet in the southeastern portion to near 1,200 feet along its western border. This eastern section has an average annual precipitation of over thirty-five inches. It has a higher relative humidity, more cloudy days, and less range between day and night temperatures than do the other portions of the state, and its winters are somewhat milder and the growing season longer.

The middle one-third of the state ranges between 1,200 and 2,000 feet in elevation, and it has an average annual precipitation of twenty-six inches. The air is drier here than in the eastern one-third, and there is also more sunshine, a higher wind velocity, and a greater range between day and night temperatures. The western one-third rises from around 2,000 feet on its eastern extreme to nearly 4,000 feet in the western extreme. The precipitation here averages close to nineteen inches annually, and is somewhat higher than in the adjacent sections of Colorado and some parts of western Nebraska and South Dakota. The number of cloudless days exceeds that of the rest of the state, the wind movement is higher, and the range between day and night temperatures is considerably greater than in the eastern portions of the state.

Fortunately for Kansas agriculture, 70 to 77 per cent of the annual total precipitation falls during the six crop-growing months of April through September. The eastern one-third of the state averages 24.64 inches during these months--an amount exceeded only by a few of the Gulf Coast states. The average for the middle one-third during the crop-growing period is 19.49 inches and is within 14 per cent of that of

either Iowa, Illinois, Indiana or Ohio; the western one-third receives an average of 14.70 inches which is about 70 per cent of the average for states in the Corn Belt during the growing season. January is the month of least precipitation when only 3 per cent of the average annual moisture falls. Thereafter, a steady increase in normal precipitation occurs in all parts of the state until the end of June which, on the average, is the wettest month of the year. Precipitation then gradually decreases until near the end of July, except in some of the extreme western counties where there is little difference between the May, June, and July normals. From September until the end of the year, there is a steady decline in precipitation.

The length of the growing season, as well as average temperatures, is important in the adaptation of crops in a given area. And in this respect, as in the case of precipitation and the general lay of the land, nature has generously endowed the state of Kansas. The average length of time between the last killing frost in the spring and the first killing frost in the fall ranges from 160 days in the northwest corner to 195 days in the south, central, and southeastern parts. Thus the growing season in southern and eastern Kansas is longer than that of the most important corn-producing states and is sufficient in the northern and western portions for general agriculture. The annual mean temperature varies from fifty-six to fifty-eight degrees in the southern counties to fifty-two to fifty-four degrees in those along the northern border, thus giving the state an average temperature of fifty-five degrees which is comparable to that of Missouri and Virginia. It is from two to four degrees higher than the mean temperature of Illinois, Indiana, and Pennsylvania and from five to six degrees higher than that of Iowa and Nebraska.

Kansas, generally, is favored with more clear and fewer cloudy days than any state to the east or north of it. In the western portion almost half the days are clear and less than one-fourth cloudy. In the eastern part, the average annual number of clear days is 145, more than one-third of the year, and the number of cloudy days is ninety-four or slightly less than one-fourth. During the early spring and summer months, these conditions favor the progress of farm work and the growth of crops.

Wind velocities in eastern Kansas are not materially different from those over the mid-western states to the east, including Missouri, Iowa, Illinois, Indiana, Ohio, and Pennsylvania. The south-central and western regions of the state, however, have an average wind movement that ranks close to that of the Oklahoma-Texas panhandle region, which is one of the windiest inland areas in the nation. The prevailing winds are from the south to southwest in the summer months and from the north to northwest between November and March.

The average relative humidity over Kansas, especially during daylight hours and early evening, is less than that of any state lying entirely east of the Continental Divide of the Rocky Mountains. As a result, the climate is drier and more bracing during the summer months and less damp in winter than in the states to the east and south. Significantly, while this low relative humidity induces rapid evaporation, the soil over the western part of the state, where evaporation is highest, retains moisture fairly well.

Kansas has unusually fertile soil that developed from glacial and aeolian deposits, and water-transported and residual materials.[15] The

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[15]See R. I. Throckmorton, "Kansas Soils and Soil Map," Twenty-Eighth Biennial Report of the State Board of Agriculture, Kansas, 1931-1932

soil varies considerably in thickness, color, particle size, fertility, productivity, and biological characteristics which determine its suitability for a wide range of crops adapted to a temperate climate. The soils in the southeastern part of the state, for example, are mostly residual from shale, and they have a clay-pan development at depths of six to eighteen inches. They vary from gray to light brown in color and, due to leaching, are low in lime and organic matter. The topography of this section of Kansas is level to gently rolling and is poorly drained. This area comprises much of the soft winter wheat belt of Kansas, and it is also adapted to the sorghums, flax, oats, lespedeza, soybeans, and corn. In addition, alfalfa and sweet clover do well.

Corresponding generally to the Dissected Till Plain Section are the wind-deposited and glacial soils in the northeastern corner of the state. The former is situated in the bluff area adjacent to the Missouri River Valley and is classified as Brown Loess. Although the soil is deep and fertile, it is susceptible to severe water erosion and, therefore, demands careful farming practices to insure its continued productivity. This wind-deposited soil area is rolling to hilly, and it is well-adapted to fruit growing and, where the land is less rough, to corn, alfalfa, and other general farm crops. Most of the northeastern portion of the state is covered by glacial soils. They are variable in all features but like the Brown Loess are subject to extreme water erosion. If properly managed, however, they are productive and well-adapted to

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(Topeka, 1933); R. I. Throckmorton and F. L. Duley, "Soil Fertility," Kansas State College of Agriculture, Agricultural Experiment Station Bulletin No. 260 (September, 1932); and O. W. Bidwell, "Major Soils of Kansas," Kansas State College of Agriculture, Agricultural Experiment Station Circular No. 336 (July, 1956).

general farming. Indeed, the darker and more level soils in this region constitute some of the best upland farms in the eastern part of the state.

The east-central section of the state has soils which are residual from limestone, sandstone, and shale. The surface condition of this region varies from level to rolling or gently hilly, and the soils are adapted to much the same crops grown in the southeastern portion of Kansas. The fertility of land in this area is generally low with the more broken sections limited to grazing. Soils in the Bluestem or "Flint Hill" Region have been formed largely from limestone. This area, as a whole, is adapted to the growing of bluestem grasses which are excellent for grazing purposes. The topography of the Bluestem Region changes from rolling to hilly, but in local areas the soils are relatively level and well-adapted to general farm crops. The valleys are especially fertile while the more level of the uplands are suited to the production of corn, sorghums, alfalfa, and sweet clover.

The Western Residual Soils comprise the great general farming area of central Kansas. The soils here are newer than those farther east and were formed predominantly from limestone, although sandstone and shale also serve as parent material. Significantly, there is a notable absence of a clay pan in this region, while the lay of the land varies from level to rolling with occasional hills adjacent to the larger streams. In the eastern part of this area, the soils are well-adapted to hard winter wheat, alfalfa, the sorghums, sweet clover, and, in the more favorable areas, corn. Those in the west-central area on the other hand, are primarily adapted to wheat and sorghums with a great deal of corn being grown in the northern portion. Crop distribution in this broad area, however, is determined more by climatic rather than soil conditions.

The soils of a great portion of northwestern Kansas were formed by the Northern Wind Deposits. These soils, like the Western Residuals, are relatively young and the subsoils, in the absence of a clay-pan development, open to a great depth. They are high in plant food materials and under proper management and rainfall will produce all the general farm crops. Throughout much of the northern portion of the area corn is an important crop; but farther south, under different climatic conditions, sorghums replace corn as the primary feed crop. Winter wheat is adapted to this entire region. The area is level to rolling, thus facilitating the use of power machinery and making possible extensive farming operations.

The southwestern part of the state is comprised of the Outwash Plains Soils, a mixture of outwash material and the weathering of Plains Marl. The combination of a deep subsoil and a high content of all plant food materials, together with the absence of a clay-pan, make this region well-adapted to winter wheat and the sorghums. The surface of the area varies from level to gently rolling; it is also well-adapted to extensive farming practices.

Permian Redbed and Southern Brown Residual soils are present in the southern tier of counties extending from eastern Meade County to the extreme western edge of Sumner County. The Permain Redbed Soil varies widely from fairly fertile land adapted to the production of general farm crops such as winter wheat, sorghums, and sweet clover, to sharply broken areas which are of little agricultural use. The Southern Brown Residual Soils are relatively level, fairly high in plant nutrients, and well-suited only for grazing purposes.

Plains Marl Soil is found in a long, narrow strip of bluff area north of the Arkansas River Valley, extending from the Colorado line

eastward into Ford County. This soil was formed from the weathering of marl, an earthy, crumbling deposit consisting mainly of clay and calcium carbonate. It is not suitable for general farming purposes. Situated on the south side of the Arkansas River and reaching from Harvey and Reno counties westward to the state line is the sand-dune area of the state. These dunes are scattered indiscriminately throughout this section and are generally unfit for anything more than stock-grazing.

The Alluvial, or Bottom Land, Soils vary from dark heavy to sandy loams and constitute some of the most productive areas in the state as well as sections that are practically barren. The Alluvial Soils of northeastern, southeastern, and east-central Kansas are subject to frequent flooding, whereas the bottom-land soils along the streams in central, north-central, and northwestern Kansas are generally well above the stream beds and, consequently, subject only to occasional flooding.

An account of the physical setting of the state would not be complete without mention of what Senator John J. Ingalls in 1872 called the "universal beneficence of grass."[16] Nature richly endowed Kansas with a native grass cover which has played a most significant role in the agricultural fortunes of the state. The native grasses of Kansas may be separated into two general classes, the tall or prairie grasses and the short grasses.[17] The principal tall grasses include Big and Little Bluestem, Indian, Sido Grama, Switch, Prairie Drop-seed, Slough, and Prairie

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[16]See Twelfth Biennial Report of the State Board of Agriculture, Kansas, 1899-1900 (Topeka, 1901), pp. 343-44.

[17]The reader is referred to two excellent articles on Kansas grasses: "Grasses in Kansas," Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1936 (Topeka, 1937); and W. A. Kellerman, "The Native Grasses of Kansas," Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1889 (Topeka, 1889).

June. The short grasses consist mainly of Buffalo and Blue Grama. The distribution of these native grasses over the state is determined largely by the variations in the soil and weather conditions. Most of the eastern one-third--that corresponding generally to the area of heaviest rainfall--is covered with the tall grasses; the western one-third, the area of slightest rainfall, is covered, with the exception of the sand-hill areas, with the short grasses. The central portion of the state is the area of transition between the short and tall grasses. Here the tall grasses occupy the bottom lands and better soils where more moisture is available, and the short grasses abound on the higher lands with their thinner soil and less moisture.

Thus Kansas was admirably situated and generously endowed with all the elements for a successful and diversified agriculture. It had a fertile, arable soil, a nutritious grass cover, adequate precipitation which fell mostly during the growing season, an excellent drainage system, and a salubrious climate. All that was lacking in the early days to tap and utilize these natural advantages was a people with a technology. When the white man displaced the Indian and applied his methodology to this rich land, the prairies and plains produced an abundance of crops and livestock. Within an amazingly short period, Kansas was transformed from an unsettled prairie-plains wilderness to one of the greatest agricultural states in the Union.

CHAPTER II

KANSAS AGRICULTURE PRIOR TO 1865

Indians were the earliest agriculturalists in present-day Kansas. They were not record-keepers, however, and knowledge of their agricultural activities is scanty and superficial. What is known of the agrarian pursuits of the Red Man is based almost wholly upon archeological findings, observations made by various early-day explorers who traversed the area, and reports by government agents and missionaries who lived and worked among them during the two or three decades prior to territorial organization and subsequent white settlement.

One of the earliest recorded instances of Indian agriculture in Kansas dates from the mid-seventeenth century, when a party of Pueblo Indians reportedly fled their Spanish overlords near Taos and founded a settlement, El Cuartelejo, along the banks of Beaver Creek in present Scott County.[1] For many years these natives tilled the soil adjoining their pueblo dwellings, raised corn, and may even have practiced irrigation. Much later, in the early part of the nineteenth century and long after the El Cuartelejo settlement had vanished, explorers and

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[1]Scott County Clippings, I (Kansas State Historical Library, Topeka), pp. 17-19. See also S. W. Williston and H. T. Martin, "Some Pueblo Ruins in Scott County, Kansas," Kansas State Historical Society, Transactions, VI (Topeka, 1900), pp. 124-28; and Louise Barry, comp., "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Spring, 1961), pp. 73 and 75-76.

other government agents traveled over the region and reported on the hunting and farming activities of the Indian tribes which occupied the region. In the spring of 1811, for example, George C. Sibley, the factor at Fort Osage in Missouri, undertook a tour among the Osage and Kansas Indians and reported viewing "little fields or patches of corn, beans and pumpkins" that the Kansas Indians had just finished planting.[2] Dr. Thomas Say, chief zoologist for the Stephen Long Expedition, visited the Kansas Indian village in 1819 and reported their food consisted of bison meat and various preparations of Indian corn or maize.[3] These and other reports establish the Indian as the first husbandman in Kansas, although his agricultural methods were primitive and only supplemented an uncertain meat supply secured during the spring and summer hunts.

With the appearance after 1825 of the emigrant Indian tribes in the eastern portion of what is now Kansas, Indian agriculture slowly changed from a primitive art into one based on the methods of the white man.[4] This transition was fostered by the federal government and executed, in part, under the guidance and watchful care of Indian agents and government farmers who were assigned to the tribes as they removed to the new Indian Country. Removal treaties negotiated with local as well as

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[2]Louise Barry, comp., "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Autumn, 1961), p. 369. These Indians abandoned their village near the confluence of the Big Blue and Kansas rivers in 1829 and moved some forty miles west so as "to enjoy and advantage from opening fields and cultivating the earth." See Louise Barry, comp., "Kansas Before 1854: A Revised Annals," ibid., XXVIII (Spring, 1962), p. 58.

[3]Louise Barry, comp., "Kansas Before 1854: A Revised Annals," ibid., XXVII (Winter, 1961), pp. 499-500.

[4]A. T. Andreas, History of the State of Kansas (Chicago, 1883), I, 253. Andreas asserts that "the dawn of husbandry began with the arrival of these emigrant tribes of Indians in Kansas after 1825."

eastern tribes usually contained provisions requiring the United States government to furnish agricultural assistance to the Indians in their new location. The treaty concluded with the Kansas Indians in 1825, for example, committed the federal government to purchase and transport 300 head of cattle, 300 hogs, 500 domestic fowls, three yoke of oxen, two carts, and various farming implements to the removal site. In addition, the government promised to support a blacksmith, agriculturalists, and others, and to erect buildings to accommodate people, tools, and the like.[5] Subsequently, the Kansas Indian Agency was established a few miles below the mouth of Grasshopper Creek, and Daniel Morgan Boone, son of the famous frontiersman, took up residence as the government farmer.[6] Removal treaties signed with the Osage, Shawnee, Delaware, and Kickapoo Indians, among others, contained similar provisions. The effectiveness of this governmental aid, however, varied from tribe to tribe. The Indian agent at Fort Leavenworth, for example, reported in 1839 that the Shawnee "may thoroughly be considered an agricultural people; they depend almost entirely on their labor for support; they have raised the present year bountiful crops of corn, pumpkins, Irish potatoes, cabbage, beans, and some wheat and oats."[7] The Delawares and Kickapoos, he continued,

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[5]Louise Barry, comp., "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Winter, 1961), pp. 532-34. On May 20, 1826, Congress appropriated money for carrying into effect the treaty provisions. U. S., Statutes at Large, IV, 181-82.

[6]Martha B. Caldwell, comp., Annals of Shawnee Methodist Mission and Indian Manual Labor School (Topeka, 1939), p. 7. See also Louise Barry, comp., "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVIII (Spring, 1962), pp. 31-32.

[7]As quoted in Floyd B. Streeter, The Kaw: The Heart of a Nation (New York, 1941), p. 221.

were not far behind the Shawnees in their farming activities, while the Kaws (Kansas) "raised more corn than is good for them."[8]

Meanwhile, the Indians were also improving their agricultural methods under the guidance of Christian missionaries. The Methodists, Baptists, Society of Friends, and Roman Catholics were among the groups which established stations among the Indians in the eastern part of Kansas as early as the second decade of the nineteenth century.[9] In addition to instructing the Indians in Christian teachings, these emissaries hoped to induce the Indians to settle upon the land, till the soil, and become agriculturalists. To achieve this, the churchmen brought fruit trees, vines, seeds of all sorts, domestic animals, and even apiaries to the mission farms until the latter acquired all appearances of eastern agriculture. Indeed, as early as 1840 the Shawnee Methodist Mission had fenced 540 acres, and had produced that year 2,000 bushels of wheat, 4,000 of oats, 3,500 of corn, 500 bushels of potatoes, and other vegetables.[10] The farm stock consisted of 130 cattle, 100 hogs, and five horses. The total value of the farm investment,

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[8]Ibid. Some other tribes, however, did not fare as well in their efforts to take up the white man's ways. See Anna H. Abel, "Indian Reservations in Kansas and the Extinguishment of their Title," Kansas State Historical Society, Transactions, VIII (Topeka, 1904), pp. 72-109; Roy W. Meyer, "The Iowa Indians, 1836-1885," Kansas Historical Quarterly, XXVIII (Autumn, 1962), pp. 273-300; and Louise Barry, comp., "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVIII (Autumn, 1962), pp. 324-25.

[9]Many secondary accounts have been written concerning mission work among the Indians in eastern Kansas. See Caldwell, Annals; Streeter, The Kaw; Charles C. Howes, This Place Called Kansas (Norman, Oklahoma, 1952); Everett N. Dick, Vanguards of the Frontier (New York, 1941); and numerous articles in the Kansas Historical Collections.

[10]Caldwell, Annals, p. 37.

including buildings, stock, crops, fencing, and miscellaneous items was set at $28,620.[11]

Another of the many mission farms worthy of note was the one established by the Jesuits at St. Mary's in the summer of 1848.[12] In addition to religious instruction, the mission fathers proposed to teach the Pottawatomie youth a "practical knowledge of agriculture. . . ." Under the supervision of Father John Duerinck, the mission farm developed rapidly. By September, 1852, mission workers had fenced 170 acres, and had ninety-five acres under cultivation, including sixty in corn, twenty-five in oats, six in potatoes, and the remainder in turnips, hemp, and buckwheat.[13] Indeed, Father Duerinck turned St. Mary's into a model farm and made it a leading agricultural unit. It grew experimentally such crops as clover, blue grass, timothy, and Hungarian millet; and Father Duerinck used such "modern" implements as mowing machines, corn shellers, cultivators, rollers, and other labor-saving devices in teaching the Indians to work the soil and harvest the crops. After Fort Riley was established in 1853 it provided a ready market for the surpluses of the mission farm. The territory opened to white settlement the following year. Here was truly a pioneering agricultural operation.[14]

And so the missionary, along with the Indian Agent and government farmer, played an important role in the early agricultural development

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[11] Ibid., p. 42.

[12] Robert Taft, "Agriculture in Early Kansas: The St. Mary's Model Farm," Kansas Academy of Science, Transactions, LVIII (Spring, 1955), p. 10.

[13] Ibid.

[14] Ibid.

of Kansas. The civilizing influence of the missionary in the areas of religion and agriculture certainly helped smooth the way for the peaceful entry of the homeseeker, while the never-ending quest for mission funds served to advertise Kansas throughout the United States.

Although Indian agriculture was significant in showing what could be done, the greatness of Kansas as an agricultural state did not rest upon Indian endeavors. It remained for the white man to occupy and utilize the vast natural resources. Within little more than a generation, settlers had developed the soil resources and with improved technology, had carved a highly productive agricultural empire from that region.

The earliest farming by white man prior to 1854 occurred in the immediate vicinity of Indian missions, military forts, and trading posts which were established along the various wagon trails penetrating the area. At the time of territorial organization, some 700 military personnel were stationed at the various forts, and an estimated 800 civilians lived in or near the mission stations, forts, and trading posts.[15] Agricultural production was encouraged by the demand of those following the Santa Fe, the California, James Lane, Oregon, and Butterfield trails. In addition, soldiers at Forts Riley and Leavenworth and personnel at Shawnee, St. Mary's, and other Indian missions, helped create a market for farm produce. The surplus meat, cereals, and other products of the mission farms found a ready market by people in those areas. It is not surprising, then, that many of the civilians, and military personnel, too, remained in Kansas as bona fide settlers after passage of the Kansas-Nebraska Act.

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[15]Andreas, History, I, 82.

The resulting sectional struggle over slavery in Kansas, however, soon overshadowed the more prosaic economic aspects of the settlement process. Both northerners and southerners immediately organized energetic campaigns to get settlers into the new territory. Large numbers of Missourians, for example, rushed across the border to stake claims along the streams and on other timbered locations in the belief that possession of those areas provided the key to dominating the region. Nature, however, decreed that the plantation system of the South should forever be barred from the new territory, and the North, with a more mobil population, was able to counter the move of the Missourians by sending settlers into eastern Kansas in overwhelming numbers.

And yet it is significant to note that while Kansas was born in the heat of sectional controversy that was shortly to plunge the nation into civil strife, only a limited number of those who entered the territory did so for the express purpose of struggling for or against slavery. Despite the fact that both the North and the South founded emigrant aid societies and town companies to populate the new territory, Kansas was mainly settled by neither New Englanders nor Southerners. The Federal Census of 1860 indicates that only 4,208 inhabitants of Kansas were born in the six New England states, whereas 11,617 were born in Ohio, 9,949 in Indiana, 9,367 in Illinois, and 6,556 in Kentucky.[16] Next to Ohio, Missouri furnished the birthplace of the largest number of Kansas inhabitants with a total of 11,356.[17] In none of the subsequent censuses

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[16] U. S., Census, Eighth Census (1860), "Population," p. 166. See also Carroll Clark and Roy L. Roberts, People of Kansas. A Demographic and Sociological Study (Topeka, 1936), p. 19.

[17] Ibid.

does New England occupy a prominent place, and the significance of Missouri as a major source of the Kansas population is to be found in its geographical proximity to the Kansas border and not to the zeal of Missourians wishing to make Kansas safe for slavery. The fact is that the pioneer wave was relentlessly moving westward across the prairies at this time and Kansas was next in the line of settlement.

The organized campaigns in both the North and the South to flood the Territory with settlers for or against slavery had only the effect of expediting temporarily the natural and inevitable trend of westward expansion. Those who went west to plant the institution of slavery, however, were few in number. Indeed, had the institution of slavery never been planted on American soil, the host of emigrants, chiefly from the Northern States, would, of their own volition, soon have made Kansas their home. As one authority noted:

> One motive alone underlay the great migrations, and that was land hunger. So long as good lands lay ahead, nothing could hold back the American frontiersmen, whether distance or hardship or international boundaries. If anything in history approached an irresistible force, it was the pioneer who had learned that fertile fields to the west awaited his plow.[18]

The first settlers to enter Kansas Territory after passage of the Kansas-Nebraska Act proceeded to locate a number of townsites along the entire length of the Kansas River Valley in June, 1854. A considerable number of settlers arrived during the spring and summer of 1855, but immigration was less than anticipated, partly because of a severe drouth

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[18] Ray A. Billington, The Far Western Frontier: 1830-1860 (New York, 1956), p. 91. Although Billington is writing about the manifest destiny drive of the 1830's and 1840's, his remarks apply equally well to Kansas in 1850's. See also William O. Lynch, "Population Movements in Relation to the Struggle for Kansas," reprint from Indiana University Studies in American History (June, 1926), p. 404; and Clark and Roberts, People of Kansas, p. 18, for similar interpretations.

which prevailed during the summer.[19] Crop conditions were better the following year, and despite the fact that bitter conflict sometimes raged in the territory, the tide of settlers was larger. Still more colonists arrived in 1857, but the next year was disastrous as Kansas felt the full effects of the Panic of 1857. Property values declined, business fell off, and farmers generally had difficulty selling their crops. As a consequence, many became discouraged and left the territory.[20] Economic conditions improved in 1859, however, and settlers began moving back into Kansas. The first census was taken in February, 1855, and it revealed 8,601 inhabitants,[21] while the population estimates for 1856, 1857, and 1859 were 24,000, 25,321, and 71,770 respectively.[22]

The early pioneers settled mostly in the rich, alluvial bottom lands in the three eastern tiers of counties. There soil and climatic conditions were suited to much the same system of crops grown farther east, and timber along the rivers and streams met the fencing, building, and

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[19]Sara T. L. Robinson, Kansas: Its Interior and Exterior Life. Including a Full View of its Settlement, Political History, Social Life, Climate, Soil, Productions, Scenery, etc. (Boston, 1856), p. 56.

[20]Paul W. Gates, Fifty Million Acres: Conflicts over Kansas Land Policy, 1854-1890 (Ithaca, New York, 1954), p. 82.

[21]Fourth Annual Report of the State Board of Agriculture, Kansas, 1875 (Topeka, 1875), p. 67. For the inadequacy of this census enumeration, see James R. McClure, "Taking the Census and Other Incidents in 1855," Kansas State Historical Society, Transactions, VIII (Topeka, 1904), pp. 227-50.

[22]These population statistics, like the census enumeration of 1855, are probably unreliable, but they afford the only estimates available. Refer to George W. Martin, "Early Days in Kansas," Kansas State Historical Society, Transactions, IX (Topeka, 1906), pp. 126-43; and to "Address of the Honorable T. Dwight Thacher," ibid., III (Topeka, 1894), p. 444, for information concerning the population estimates for these years.

fuel needs of the settlers.[23] Later pioneers did venture onto the uplands, when the bottom lands became settled, and eventually occupied the entire region. Furthermore, the military road extending from Fort Leavenworth westward along the valley of the Kansas-Smoky Hill system afforded protection to frontier outposts in Saline, Ellsworth, and Ellis counties and encouraged early settlement and development. The Neosho and Maris des Cygnes river valleys farther south were the scene of less extensive settlements. At the close of the territorial period, population density in twelve of the eastern-most counties exceeded five inhabitants per square mile, and several towns were located along the larger rivers while smaller settlements were scattered through the hinterlands.[24] Westport, Atchison, and Leavenworth were thriving villages along the banks of the Missouri River, while Lawrence, Lecompton, Topeka, Manhattan, and Junction City were important towns along the Kansas River.

Considering the times and conditions, these early settlers made remarkable progress in farming. The thirty-seven counties which responded to the agricultural census in 1860 reported 10,400 farms embracing nearly 2,000,000 acres. Furthermore, farmers reported some production of all the forty-eight categories on the census schedule except rice, hemp, and sugar cane. This fact indicates that the pioneers were busily engaged in determining crop and livestock capabilities in Kansas.[25] Among the more "exotic" crops attempted by Kansas agriculturalists were

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[23]It is interesting to note that, with the possible exception of the Kansas River, the streams in eastern Kansas were not navigable and only in this respect did pioneering differ from that experienced farther east where the rivers and streams were an important avenue of transportation.

[24]Clark and Roberts, People of Kansas, pp. 22-23.

[25]U. S., Census, Eighth Census (1860), "Agriculture," I, 55-57.

hops, flax, silk cocoons, maple molasses, tobacco, and cotton. Through experimentation, however, it soon became obvious that some crops were not suited to soil and climatic conditions and that agriculture would develop around cereal and livestock production. This fact is evident from the census figures reported in 1860. In that year farmers produced 6,000,000 bushels of corn, 200,000 bushels of wheat, and 88,000 bushels of oats. In addition, livestock products totaled $3,300,000. On the other hand, only sixty-one bales of cotton, 20,000 pounds of tobacco, and 1,100 pounds of flax were grown, forty pounds of silk cocoons were produced, and two gallons of maple molasses manufactured.[26]

Important though they are, the statistics of population and production growth do not tell the full story of Kansas agriculture as it unfolded in the second half of the nineteenth century. Three developments in particular occurred during the first decade after territorial organization, each of which influenced greatly the future growth of the state. These events were the founding of an agricultural society, the establishment of an agricultural college, and the enactment of the Homestead Law.

The State Agricultural Society was organized in an open-air meeting held in front of the Old Topeka House in the capital city on July 16, 1857.[27] The chief function of this private organization was to advertise the agricultural possibilities of Kansas Territory. Unfortunately, the poverty of the settlers, together with the unsettled political conditions of the times, soon brought it to an untimely end.[28] Before its

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[26] Ibid.

[27] Second Annual Report of the State Board of Agriculture, Kansas, 1873 (Topeka, 1874), p. 7.

[28] Ibid. See also Andreas, History, I, 358.

demise, however, officials of the Society had acquired copies of the agricultural reports of the newer states, together with those of several eastern states. They had also begun the collection of statistics and other valuable information relating to Kansas agriculture. When the Society disbanded in 1859, the non-Kansas agricultural reports were entrusted to Judge E. D. Ladd, of Lawrence, and the Kansas records were deposited in the Kansas Historical Society Library, which was also in that city. Regrettably, these valuable records were destroyed during Quantrill's raid in 1863.[29]

Some five years after the meeting that gave birth to the ill-fated State Agricultural Society, a second meeting was held in Topeka for the purpose of organizing another society "to promote the improvement of agriculture and its kindred arts, throughout the State of Kansas."[30] Thus was born the Kansas State Agricultural Society. To achieve its objectives, the constitution provided that yearly reports of the transactions of the Society embracing committee reports, statements of experiments, cultivation and improvement data, proceedings of county societies, correspondence, crop and livestock statistics, and the like, be prepared and transmitted to the Speaker of the House for the use of the legislature.[31] It was expected that these publications would serve to promote the general prosperity of the state by publicizing the agricultural

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[29]Kansas State Board of Agriculture, Clippings, I (Kansas State Historical Library, Topeka), p. 152.

[30]Second Annual Report of the State Board of Agriculture, Kansas, 1873, pp. 7-12. See also Kansas Farmer, I (May 1, 1863), p. 1. A copy of the constitution of the Kansas State Agricultural Society is found in this first issue of the Society's journal.

[31]Kansas Farmer, I (May 1, 1863), p. 2.

interests of Kansas and by diffusing knowledge which would add to the productiveness of agricultural and household labor. Furthermore, the executive committee was empowered to determine the place and time for holding an annual state fair and to "regulate and award premiums on such articles of production and improvement as they may deem best calculated to promote the agricultural and household manufacturing interests of the state, having special reference to the most economical or popular mode of competition in raising the crops or stock, or in the fabrication of the articles offered."[32]

The Society held its first annual meeting on January 13, 1863, and, among other things, decided to publish a journal called The Kansas Farmer.[33] This periodical was to be printed monthly and to sell for fifty cents a year in single subscriptions, or forty cents a year in clubs of ten or more.[34] In addition, the Kansas State Agricultural Society endeavored to promote the agricultural fortunes of the state by establishing the Kansas Immigration Society to attract settlers into the State, and to promote an annual state fair.[35] In each of these areas the Society achieved signal success and over the years contributed significantly to the record of Kansas agriculture.

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[32] Ibid.

[33] Second Annual Report of the State Board of Agriculture, Kansas, 1873, p. 12.

[34] Ibid.

[35] Kansas Farmer, I (May 1, 1863), p. 2. See also The Topeka Daily Capital, October 5, 1928, p. 4. The first annual Kansas State Fair was held at Leavenworth on October 6-9, 1863. Fairs were not held during the following two years due to the unsettled conditions. In 1866 and again in 1867 the fairs were held at Lawrence. Thereafter they were held at different locations.

Furthermore, the advancing fortunes of Kansas farming may in no small measure be attributed to the founding of Kansas State Agricultural and Mechanical College. The roots of this institution lie in the chartering of Bluemont Central College in 1858 at the newly settled town of Manhattan.[36] Although Bluemont was conceived in the classical tradition, a section of its charter provided that the authorities might establish, in addition to the literary department of arts and sciences, "an agricultural department with separate professors to test soils, experiment in the raising of crops, the cultivation of trees, etc., upon a farm set apart for the purpose, so as to bring out to the utmost practical results of the agricultural advantages of Kansas, especially the capabilities of the high prairie soils."[37] When Kansas was admitted into the Union, Bluemont made a strong bid to become the state university, but, due to the vagaries of state politics, lost out to the city of Lawrence.[38] Disappointed but undismayed, the Bluemont trustees offered their institution to the state in the following year after Congress had passed the Morrill Land Grant College Act.[39] This time the offer was accepted, and Bluemont became Kansas State Agricultural and Mechanical College.[40]

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[36] J. D. Walters, "The Kansas State Agricultural College," Kansas State Historical Society, Transactions, VII (Topeka, 1902), p. 169.

[37] Ibid.

[38] Ibid., p. 170.

[39] U. S., Statutes at Large, XII, 503.

[40] Ibid., pp. 171-73. The Kansas Farmer carried a reprint from the Prairie Farmer in the September 1, 1863, issue; it noted: "A rather novel 4th of July celebration was held at Manhattan, Kansas. On that day the Bluemont College Association gave the State of Kansas $20,000 worth of property consisting of 100 acres of land, a fine college building library, and apparatus, which institution now becomes the Agricultural College of the State of Kansas." See also Andrew Stark, ed., Kansas

Thus Kansas was among the first of the states to accept the proffered land under this legislation. As an agricultural institution, Kansas State College was destined to play a leading role in determining agricultural capabilities and relaying this information to husbandmen as they settled in all sections of the state.

The third development which had an important bearing upon the agricultural fortunes of Kansas was the passage of the Homestead Act in the spring of 1862.[41] This historic act made available to those desiring it a quarter-section of land on the Public Domain for a few dollars in fees and five years' residence on the land. Although the law did not work out in practice as it was conceived in theory, it did enable thousands of Kansas settlers to secure title to farms. Indeed, during the first three years of its operation, a total of 320,812 acres were entered.[42] Without question, this law had a catalytic effect upon the settlement and development of the state.

The first decade of Kansas history coincided with the political and sectional turmoil preceding the Civil War. As a result, early settlers

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Annual Register for 1864 (Leavenworth, Kansas, 1864), pp. 80-81, for an article written by the Reverend Joseph Denison, the first president of the college.

[41] U. S., Statutes at Large, XII, 392-93.

[42] Forty-seven per cent of the area of Kansas was either sold as Indian reserves and never became a part of the public domain or was granted to railroads or to the State for eduction. The remaining 53 per cent of Kansas lands passed to private ownership under the general public-land laws that provided for sales to, or entries with scrip and warrants by persons, partnerships, or companies; and for pre-emption, homestead, and timber-culture entries of 160 acres each by persons residing upon and improving their lands. Between 1863 and 1890 a total of 20,881,818 acres in Kansas were filed on by homesteaders, and 8,805,990 acres were entered under the Timber-Culture Act. Of the total acreage, approximately 12,000,000 acres were carried to patent as free grants, while 3,191,377 acres were commuted to cash entries and purchased at $1.25 an acre. See Gates, Fifty Million Acres, pp. 231ff.

were not able to become acquainted with all of the agricultural conditions in Kansas. Still, during the initial period of settlement much was accomplished in the way of laying the foundation for a flourishing agriculture. The land in the eastern portion of the state was surveyed and, following extinguishment of Indian claims, opened for settlement. The state was well-advertised by people passing through on their way to the California gold fields, to Oregon, and to Santa Fe. Government agents, missionaries among the Indians, and authors of numerous emigrant guides also spoke a good word for Kansas as a farming region.[43] Furthermore, during this first decade the people gained a certain familiarity with climatic conditions and soil potential. The newly formed Agricultural Society, the Kansas Farmer, and the Agricultural College all sang the praises of the new land. Finally home-coming soldiers and other people in the eastern part of the United States, and Europe as well, read and heard of the agricultural opportunities in this part of the New West.

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[43]Copies of many of these emigrant guides are in the Kansas Historical Library at Topeka. The reader is referred to an excellent article by Robert A. Taft, "A Century of Kansas History: Emigrant Guides for Kansas Settlers," Kansas Teacher, LXIII (October, 1954), pp. 109-112.

CHAPTER III

A DECADE OF SETTLEMENT, 1865-1875

Completion of government land surveys, extinguishment of the remaining Indian land titles, advancement of county organization, and the building of railroads westward, all contributed to a steady expansion of Kansas agriculture during the decade following the Civil War. The population of the state rose from 140,000 in 1865 to 528,000 ten years later, while the number of acres under cultivation increased from less than 300,000 to nearly 5,000,000. The total value of all livestock and farm products advanced from $17,000,000 to $66,000,000 during the same period. Great as these advances were, however, they were modest compared to agricultural development after 1875. The status of Kansas agriculture during this postwar decade, then, might be characterized by a Chinese proverb, altered to fit the occasion: "What Kansas agriculture was to be, it was now becoming."

Nothing had a greater impact upon Kansas agricultural settlement in the decade after 1865 than the advent of railroads. At the end of the war there was not a single mile of track in the state. Five years later over 1,100 miles were in operation, and by 1875, fifty-six counties were served by a total of 2,117 miles.[1] That railroad building did not begin

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[1] O. C. Hull, "Railroads in Kansas," Kansas State Historical Society, Collections, XII (Topeka, 1912), pp. 44-46. This article includes a compilation of the population and railroad mileage for each Kansas county for each five-year interval from 1860 through 1900.

in Kansas until after the Civil War is not to imply that the earlier settlers were unaware of the importance of adequate transportation facilities. They appreciated the fact that the Santa Fe and Oregon trails and a few military roads, mostly in the eastern portion of the territory, were the only clearly defined highways serving the region. Steps were taken, therefore, in the very beginning to encourage the building of a railway network. Five lines were chartered in 1855 and many companies had been incorporated by 1860.[2] Indeed, it has been said that during these years paper railroads were more common in Kansas than weeds in a railroad ditch.

Great confusion surrounded the multitude of railroad projects, however, as each was advanced in the interest of some town, locality, or promoter without reference to the needs of the state as a whole. Edmund P. Ross, editor of the Topeka Record, therefore, suggested holding a convention to plan a sound rail system for Kansas which would, at the same time, secure the greatest amount of federal land grant aid.[3] This idea was endorsed by many territorial leaders, including John A. Martin, editor of the Atchison Champion, and Cyrus K. Holliday of Topeka. Because of his railroad activities, Holliday was chosen to issue the call for a convention to meet in Topeka in 1860 "for the purpose of devising a system of railroad land grants for the territory to be petitioned for at the next session of Congress."[4]

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[2]Charles C. Howes, This Place Called Kansas (Norman, Oklahoma, 1952), pp. 101-02.

[3]George W. Glick, "Railroad Convention of 1860," Kansas State Historical Society, Collections, IX (Topeka, 1906), p. 468.

[4]Ibid.

The "Railroad Convention," as it became known, met October 17, 1860, with 150 delegates present from nineteen counties.[5] Samuel C. Pomeroy of Atchison was elected chairman, and a committee composed of one member from each county drafted a proposal for a system of railroad land grants. This committee recommended that Congress be memorialized for an appropriation of public lands to aid in the construction of five railroads in the state.[6] The delegates to the convention approved the committee action and General Benjamin Stringfellow was appointed to prepare the plea. Finally, a committee of five was named to present the petition to Congress and to assume responsibility for its execution.

Ironically, the first railroad mentioned in the memorial was the only line that did not materialize. It was to have run westward from the boundary of Missouri where the Osage Valley and Southern Kansas Railroad terminated. The route was to go by way of Emporia, Fremont, and Council Grove to the Fort Riley Military Reservation. The fact that the other four lines became realities, however, is a tribute to the wisdom of the men who conceived and carried out the scheme.[7]

The second line projected in the petition was to begin in the city of Wyandotte, and travel up the Kansas River Valley by way of Lawrence, Lecompton, Tecumseh, Manhattan, and the Fort Riley Military Reservation, and then continue to the western boundary of the territory.[8] Construction of the Leavenworth, Pawnee, and Western Railroad, as this line was called, began shortly after Congress passed the Pacific Railway Act, and

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[5] Ibid., p. 472.

[6] Ibid., p. 475.

[7] Hull, "Railroads in Kansas," p. 39.

[8] U. S., Statutes at Large, XII, 493-94.

continued until the summer of 1863.[9] At that time the road became the Eastern Division of the Union Pacific Railroad and still later, in March, 1869, it became the Kansas Pacific Railway Company.[10] Meanwhile, construction was resumed, and the track was completed to Manhattan in August, 1866; to Abilene in March, 1867; and on to Fort Harker in Ellsworth County by June of that year. The Kansas Pacific was finally completed to Denver in August, 1870.[11]

In March, 1863, Congress granted land to Kansas for the purpose of aiding in the construction of the third and fourth railways projected in the memorial.[12] The third line was to run from Lawrence in the direction of Fort Gibson and Galveston Bay, to the southern boundary of the state. Unfortunately, the Leavenworth, Lawrence and Fort Gibson Railroad Company, later reorganized as the Leavenworth, Lawrence and Galveston, lost out in a three-way construction race with the Border Tier and the Missouri, Kansas, and Texas railroads in the summer of 1870. The plan had been to reach the Indian Territory border and thus earn the sole right to build south through the lands of the Five Civilized Nations.[13]

The fourth railroad was planned from Atchison, by way of Topeka, through the Territory in the direction of Santa Fe.[14] This project had

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[9] Ibid., pp. 489-98.

[10] Ibid., XV, 348.

[11] Hull, "Railroads in Kansas," p. 51.

[12] U. S., Statutes at Large, XII, 772-74.

[13] Ibid., XIV, 238. See also Hull, "Railroads in Kansas," p. 47; and V. V. Masterson, The Katy Railroad and the Last Frontier (Norman, Oklahoma, 1952).

[14] Ibid., XII, 772-74.

its inception in Cyrus K. Holliday's Atchison and Topeka Railroad Company which had been incorporated under Kansas law in February, 1859.[15] Construction did not begin, however, until November, 1868. The line was completed to the western boundary of Kansas late in December, 1872, just prior to the expiration of the land-grant offer.[16] Meanwhile, the name of this railroad was changed to Atchison, Topeka and Santa Fe Railroad Company.[17]

The fifth line suggested by the Railroad Convention called for a grant of land enabling the Hannibal and Saint Joseph Railroad to extend 100 miles west from Atchison to a connection with a branch of the Union Pacific which was to be built up the Republican River Valley.[18] This railroad later assigned its rights to the Atchison and Pikes Peak Railroad Company which, in turn, became the Union Pacific, Central Branch.[19] In January, 1868, 100 miles of the road were completed to Waterville. The railroad was later extended so that the main line and its branches provided transportation facilities for most of the northern Kansas counties.

The land-grant railroads were extremely active and successful colonizers. The directors of these enterprises were well aware of the value of a densely settled agricultural country, and they fostered the rapid settlement and development of the land through which their lines passed.

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[15] Eleventh Annual Report of the Board of Railroad Commissioners for the Year Ending December 1, 1893, Kansas (Topeka, 1894), p. 103. See also Hull, "Railroads in Kansas," p. 47.

[16] U. S., Statutes at Large, XII, 773-74.

[17] Ibid., p. 772.

[18] Ibid., pp. 494-96.

[19] Hull, "Railroads in Kansas," p. 50.

This was especially true of the two great land-grant railroads in Kansas, the Santa Fe and the Kansas Pacific.

The Land Department of the Santa Fe, for example, began to survey and appraise its land grant in the spring of 1870.[20] A force of nine men labored more than four years at this task, periodically forwarding their records and appraisal values to the Topeka headquarters where plats were made for each of the counties through which the line ran. Recognizing the importance of rapid settlement near the railroad, company officials offered railroad lands for cash sale or on easy terms. Moreover, they recruited an army of land agents and sent them throughout the eastern and middle states, each amply supplied with attractive brochures which described in glowing terms the agricultural and industrial advantages of the Santa Fe lands and the country adjacent to them.[21] Finally, a system of newspaper advertising was inaugurated which soon brought to the Land Department an enormous volume of inquires from all parts of the nation.

An interesting and important feature of the Land Department was the foreign immigration office, which was placed under the direction of Carl B. Schmidt.[22] The operations of this office soon reached from the American Pacific Coast to the Ural Mountains as Schmidt sent agents into all parts of Europe and to those areas in the United States where the German element was especially prominent. Large numbers of pamphlets and maps

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[20]U. S., Statutes at Large, XII, 772. The Santa Fe grant amounted to 2,944,788 acres. See Report of the Commissioner of the General Land Office, 1900 (Washington, 1900), pp. 255-57.

[21]Carl B. Schmidt, "Reminiscences of Foreign Immigration Work for Kansas," Kansas State Historical Society, Collections, IX (Topeka, 1906), p. 487.

[22]Ibid., p. 488.

gave full descriptions of the state and set forth the great natural advantages it possessed for foreign agriculturalists. These pamphlets were printed in German, French, Bohemian, and Scandanavian and were distributed by Santa Fe agents and by various steamship lines which were competing for the emigrant traffic. Furthermore, the liberal land laws of the United States were widely publicized, and contracts were made for an extensive system of newspaper advertising throughout Europe.

Excursions were also organized for prominent journalists who wished to visit the state as guests of the railroad. These correspondents were encouraged to pass on to their readers and those seeking western homes firsthand observations of the advantages of railroad lands. Of course, these excursion trips were usually in the spring when the state looked its best or in the fall after a good crop had been harvested. Nonetheless, reams of descriptive material flowed to all parts of the country and beyond, and the name of Kansas soon became a household word throughout the United States and in much of Europe.[23]

An excursion, for example, was organized in October, 1872, for a group of newspaper editors.[24] The Santa Fe reaped an untold amount of free publicity in the editorial columns of the newspapers represented by writers who took the tour. The editor of the Kansas Farmer wrote of observing young and thriving towns at intervals of fifteen or twenty miles over the entire distance of the road, and of seeing homesteads for a considerable portion of the way. Moreover, he described the Arkansas River Valley as one of the most beautiful valleys he had ever seen. Although its grain-producing capabilities remained unknown at the time,

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[23]ATSF Clippings, I (Kansas State Historical Library, Topeka), pp. 32-33.

[24]Kansas Farmer, IX (November 1, 1872), p. 333.

he speculated that the valley would prove the equal of any other portion of the state for agricultural production. It seemed to have the necessary qualities, in the editor's opinion, to raise both forest trees and fruit trees. As for livestock, he believed that in the not too distant future this area would be the great stock producing section of the state.[25]

In his capacity as head of the foreign immigration office, Schmidt traveled to Europe on a number of occasions for the purpose of persuading people to emigrate to Santa Fe lands in Kansas.[26] His efforts were not in vain. Not long after his first visit to Russia, a Red Star steamer transported to Philadelphia 600 Mennonite families with their household goods, farm implements, and wagons. They left the city of Brotherly Love by rail and arrived in Harvey County in 1874 simultaneously with the grasshoppers. But they were not discouraged, or empty-handed. Each family had brought along some gold and a small quantity of winter wheat which had been hand-picked and stowed away in their baggage.[27] With part of their gold they purchased some 60,000 acres of land for homesites and with the hard winter wheat they unwittingly laid the basis for a revolution in Kansas agriculture. The arrival of this group marked the beginning of an influx of European Mennonites onto Santa Fe lands, and within a decade their numbers reached 15,000.[28]

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[25] Ibid.

[26] Schmidt, "Reminiscences," pp. 488ff.

[27] James C. Malin, "Beginnings of Winter Wheat Production in the Upper Kansas and Lower Smoky Hill River Valleys: A Study in Adaptation to Geographical Environment," Kansas Historical Quarterly, X (August, 1941), p. 253. See also Hutchinson, Kansas News Herald, April 20, 1941, p. 18.

[28] A great amount of material has been written about the Mennonites. An excellent account is Charles H. Smith, The Coming of the Russian

The Santa Fe also appointed an industrial agent, S. T. Kelsey, who was responsible for demonstrating to the public the capabilities of railroad lands for growing any and everything within the climatic limitations of the region. To do this the company reserved for experimentation a section of land every tenth mile for the entire distance from Hutchinson to the west line of the state. During the next few years, Kelsey planted forest and fruit trees and a wide range of grains, grasses, and vegetables. The results of his efforts were widely circulated in company publications and in the news media and served to induce many people to settle upon these lands.[29]

The Kansas Pacific also received a huge federal land grant in the state.[30] Although it marketed these lands more slowly than the Santa Fe, the Kansas Pacific immediately undertook an aggressive immigration campaign to dispose of its holdings. This policy bore fruit as a flow of immigrants began settling along the line in 1868, and within a short time settlers flooded into the area. The industrial agent for the line, R. S. Elliott, actively experimented with crops to determine which were

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Mennonites: An Episode in the Settling of the Last Frontier, 1874-1884 (Berne, Ind., 1927). See also Cornelius Krahn, ed., From the Steppes to the Prairies, 1874-1949, Mennonite Church Historical Committee Series (Newton, Kansas, 1949); George Leibbrandt, "The Emigration of the German Mennonites from Russia to the United States and Canada in 1873-1880," Mennonite Quarterly Review, VI (October, 1932), pp. 205-26; and George Leibbrandt, "The Emigration of the German Mennonites from Russia to the United States and Canada in 1873-1880," Ibid., VII (January, 1933), pp. 5-41.

[29]Kansas Farmer, IX (November 1, 1872), p. 333.

[30]U. S., Statutes at Large, XIII, 356. The Union Pacific Railroad Company, Eastern Division (Kansas-Pacific) grant amounted to 3,134,253 acres. See Report of the Commissioner of the General Land Office, 1900, pp. 255-57.

suited to the soil capabilities and climatic conditions along the railroad. The purpose, of course, was to secure sale of the land to permanent settlers. As with Kelsey's work for the Santa Fe, Elliott's findings were widely publicized in the pages of newspapers, the State Agricultural Society publications, and monographs of the Kansas Pacific itself. In the November, 1870, issue of the Kansas Farmer, for example, Elliott discussed his activities at the Wilson Creek, Ellis, and Pond Creek experimental stations under the heading "Farming in the Great American Desert." He had sown wheat, rye, barley, and timothy at each of these stations in the fall of 1870 and now reported that each of them was doing well. Furthermore, he mentioned growing lucerne, perennial rye grass, and Italian rye grass at Ellis. He also advocated tree-planting on the plains, and took applications for seed walnuts. He estimated that from 50,000 to 100,000 walnut trees would be planted that winter and if they did well, millions of trees would soon be growing in the central and western portions of the state.[31]

The Kansas Farmer, official organ of the Agricultural Society, was perhaps the most enthusiatic booster of farming interests in the state. When the government failed to establish an immigration bureau during the 1865 session, the editor suggested to the members of the new legislature that they designate his paper as the advertising medium for the state. He told them that for the modest sum of only $3,000 nearly 4,000 monthly copies of the Kansas Farmer could be sent to leading newspapers throughout the United States. Each issue would contain "at least one article,

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[31]Kansas Farmer, VII (November 15, 1870), p. 173. The Wilson Creek, Ellis, and Pond Creek experimental stations were situated along the Kansas Pacific 236, 300, and 420 miles, respectively, west of Leavenworth.

short, pithy, pointed, showing the resources of our state, its advantages and desirableness as a home for the immigrant. These recipients would be asked to copy these Kansas articles."[32] In this manner, information regarding Kansas soil, climate, production, schools, social and political conditions, as well as other information of general interest, could be widely circulated. The editor informed the legislators that if they acted wisely and promptly, 300,000 immigrants would pour into the state during 1867 and 1868 and that $100,000,000 of productive capital would be added to the state's wealth.[33]

The legislature ignored this suggestion, but it did later establish the Kansas Immigration Society, which the editor promptly hailed as "a new and important enterprise" whose object was "no less than to reduce the cost, increase the certainty, and secure success to all who may desire to visit Kansas in search of homes, or come here to dwell upon the locations already determined."[34] The Immigration Society was to persuade people to secure homes in the state and to provide clear and accurate general information about the location, the cost of reaching, and the modes of acquiring government and railroad lands. In the editor's opinion, Kansas land hunters were frequently misled, or taken in by some land agent working on a commission, or perhaps by a town company promoter, and thus received a bad impression of the state. In some instances, he said, irate or disappointed home seekers had been driven elsewhere. This sort of thing could be minimized, if not stamped out, by establishing a general office and by making available all the data which

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[32] Ibid., III (December, 1866), pp. 178-79.

[33] Ibid.

[34] Ibid., VIII (March 15, 1871), p. 44.

a prospective settler would need.[35] The Kansas Farmer greatly assisted the Immigration Society, as well as the many county immigration societies which sprang up during this period, by printing replies to hundreds of letters sent in by people throughout the United States and Europe who were seeking information about Kansas.

The State Agricultural Society was equally alive in promoting Kansas. This body held weekly meetings in the capitol during legislative sessions, and carried on many and varied other activities. The capitol meetings, for example, were both entertaining and informative, and they provided a forum for an exchange of farming experiences. They were usually well-attended by agriculturalists from all parts of the state, and able, well-informed men spoke on topics previously chosen by the officers of the organization.[36]

As a result of the activities of the land-grant railroads, immigration societies, the Kansas Farmer, and the Agricultural Society, home seekers entered the state in ever-increasing numbers after the Civil War. One of the regions which received a heavy influx of newcomers during this period, and especially after 1870, was the area along the northern border of the state which Franklin G. Adams called "The Great Homestead Region."[37] Narrowly defined, the homestead region lay between the

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[35] Ibid.

[36] Ibid., III (March, 1866), p. 33. The following subjects, for example, were selected for the period January 29 through February 26, 1868: "Capabilities of Kansas as an Agricultural State"; "Is Kansas Adapted to the Successful Production of Butter and Cheese?"; "Geological Resources of Kansas"; "Pomology, Orchards, Hedges and Tree-growing"; and "Stock-raising in Kansas, Spanish Fever."

[37] Franklin G. Adams, The Homestead Guide Describing the Great Homestead Region in Kansas and Nebraska and Containing the Homestead, Preemption and Timber Bounty Laws, and a Map of the Country Described

northern limit of the Kansas Pacific Land Grant on the south and the southern limit of the Union Pacific Land Grant on the north. Here was an area a hundred miles in width and several hundred miles long which was open to the unrestricted operation of the Homestead Act and Pre-emption Law. It was easily accessible from the Union Pacific and Kansas Pacific railroads, as well as from several other lines at the eastern end.[38]

The Kansas counties situated in the homestead region were, from east to west, Marshall, Washington, Republic, Jewell, Smith, Phillips, and Norton along the northern border of the state and Clay, Cloud, Mitchell, Osborne, and Rooks in the second tier south from the Nebraska line. Hostility of the Plains Indians, and the idea that this western region was a treeless area with sterile soil and poor climate, and thus unfit for agriculture, had prevented white penetration prior to 1868. However, the government stationed military personnel on the Republican and Solomon rivers and along the adjacent rail lines in 1868 in order to extend protection to the few settlers who had ventured into the area. By 1870, the homestead region was considered safe for settlement, and large numbers of home seekers began to appear.[39]

Waterville, in Marshall County, represented a significant settlement in the homestead region. It was situated 100 miles west of

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(Waterville, Kansas, 1873). Adams published this book to give "reliable information" as to soil and climatic conditions, entry laws, fees, and farming costs, to homestead seekers in Kansas. The author also relates how the area was obtained, and he gives an account of the progress of settlement within the region. Adams drew largely upon his own observations for the information contained in the guide.

[38] Ibid., p. 13.

[39] Ibid., p. 14.

Atchison at the end of the Central Branch of the Union Pacific. Because the land grant of this railroad was limited to a distance of 100 miles west of the Missouri River, nearly all of the lands beyond Waterville were subject only to homestead and pre-emption entry. Immigrants began to arrive by rail in the spring of 1868, and within five years settlement had extended for miles around this village.[40]

Farther west in Washington County 400,000 acres of land were open to homestead entry. Although some settlements had been made there as early as 1859, it was not until after the completion of the Central Branch to Waterville that homesteaders began to move in on a large scale. The population of the county increased rapidly, growing from less than 4,000 in 1870 to double that figure two years later.[41] By 1873 nearly all the public lands had been entered, although thousands of acres were for sale at prices ranging from three to ten dollars an acre.[42] Many of the earlier settlers commuted their homesteads for a small profit, and moved farther west where they could avail themselves of a pre-emption claim. Or if they had sold their pre-emption claim, they went farther west and homesteaded.

Republic, Jewell, and Cloud counties were well situated in respect to lines of transportation. Moreover, they possessed good soil, timbered streams, building stone, and immense areas of homestead lands. As a result, this general region settled very rapidly. In 1870, for instance,

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[40] Ibid., p. 181.

[41] Ibid., p. 205.

[42] Ibid., pp. 201-03.

there were less than 1,300 people in Republic County.[43] Five years later the population had grown to more than 8,000.[44] The situation in Jewell and Cloud counties was quite similar to that in Republic. The population of Cloud county was 2,300 in 1870.[45] Then in January, 1871, a United States land office opened at Concordia, the county seat, and emigrants immediately began to flood in.[46] Indeed, so many settlers rushed to Concordia in the spring and summer of 1871 that land office officials reportedly were unable to keep up with the press of business and sometimes hundreds of people were waiting to file their claims.[47] During the boom years that followed, Concordia was served by the Southwestern Stage Company, and the town became a central point of influence in the surrounding area.

The settlement of Mitchell County, likewise, was amazingly rapid. In 1868 there were no more than a half-dozen families in the county. By

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[43] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895 (Topeka, 1895), pp. 12-14. A compilation of population figures by county for the census years 1860, 1870, 1875, 1880, 1885, 1890, and 1895 is found in this publication. Provision was made in the Constitution for taking a census in 1865, and each tenth year thereafter. See Kansas, Constitution (1861), Art. 2, sec. 26. The Legislature of 1865 directed the county assessors to take an enumeration of inhabitants and other statistical information under the general management of the Secretary of State. See Kansas, Laws (1865), ch. 20. The Board of Agriculture published the decennial census from 1875 to 1925. By an act of 1933 the state decennial census volume was discontinued. See Kansas, Laws (1933), ch. 114. Since 1873 the assessors have been required annually to make an enumeration of inhabitants and to collect detailed statistics on agriculture and industries. The Board of Agriculture has compiled these statistics collected by them as a part of its biennial and quarterly reports since 1873.

[44] Ibid.

[45] Ibid.

[46] U. S., Statutes at Large, XVI, 189.

[47] Adams, Homestead Guide, p. 249.

1870 the population had increased to nearly 500, and five years later it was well over 5,000.[48] The county embraced more than 400,000 acres of rich valley land and gently rolling uplands well adapted for cultivation. Largely through the efforts of Col. E. H. Cawker and Capt. A. A. Thomas, the Northwestern Land District was created, and a land office was established in Cawker City in the extreme northwestern corner of the county.[49] This office opened for business in August, 1872, and Cawker City quickly became a leading trading center in the homestead country. So rapid did the westward advance proceed that during the early months of settlement buffalo reportedly roamed through the streets of Cawker City and were killed within gunshot range of the newly completed $5,000 school building.[50]

Osborne City, the county seat of Osborne County, was settled in 1871 by a colony of Pennsylvanians. The county was not yet organized, and there were only a few actual residents when the colonists arrived. But in the autumn of 1872 an agricultural fair was held at the county seat. More than 500 attended and witnessed "a remarkable fine exhibition" of farm products and livestock, including blooded horses, cattle, swine and fowls, which had been grown and raised in the vicinity.[51] By 1875 the population of this county was nearly 3,500.[52]

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[48] Ibid., p. 261.

[49] U. S., Statutes at Large, XVII, 157. See also Adams, Homestead Guide, pp. 267ff.

[50] Adams, Homestead Guide, p. 281.

[51] Ibid., pp. 287-89.

[52] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, p. 13.

Smith County grew in population from a mere sixty-six in 1870 to almost 9,000 five years later. Phillips, Norton, and Rooks counties, all lying west of the ninety-ninth meridian, counted only forty-five inhabitants in 1870, but five years later had a population of 4,300.[53] Thus the twelve counties comprising the homestead region experienced a rapid settlement and substantial agricultural growth up to 1875. A decade earlier only three of these counties, Marshall, Washington, and Clay, registered any population at all; they had a combined total estimated at about 3,000 inhabitants.[54] In 1870, nine of the counties reported an enumeration of nearly 19,000, and in 1875 all the counties recorded a combined total population of 68,000.[55] The latter figure is even more significant when considered in the light of the fact that many people had temporarily left the region because of the drouth and grasshopper invasion of 1874, and they had not returned at the time the 1875 census was taken.

While immigrants were moving into the homestead region in large numbers as early as 1872, other parts of the state were also being occupied. In the latter part of the summer of 1866, for instance, Benjamin F. Mudge, the state geologist, spent some six weeks visiting the valleys of the Republican, Smoky Hill, Saline, and Solomon rivers in central Kansas.[56] He observed that some parts of the valley of the Republican had been settled for as long as six years. These residents informed him

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[53] Ibid., pp. 13-14.

[54] Ibid., pp. 12-14.

[55] Ibid.

[56] Kansas Farmer, IV (February, 1867), pp. 22-23.

that with little labor they could raise everything grown in Missouri. He also noted that there were excellent farms in the valley of the Smoky Hill to within thirty miles of Fort Harker, and that farmers were continuing to push even farther westward. The counties of Dickinson, Ottawa, Saline, Lincoln, and Ellsworth, through which Mudge traveled, had increased in total population from less than 400 in 1860 to nearly 1,100 in 1865.[57] Five years later these five counties reported over 11,000 inhabitants and in 1875, almost 22,000.

Settlers were also moving in large numbers into the south-central portion of the state. A resident of Coffey County reported early in 1871 that there were thousands of homes to be had in Sedgwick, Cowley, and Sumner counties.[59] Cowley County, for example, was organized in January, 1869, at a time when the land still belonged to the Osage Indians. It had a population of about 1,200 in 1870, which had increased to an estimated 10,000 two years later. Most of the settlements, it was reported, had been made in the previous eighteen months.[60] Since the county was situated in the Osage Diminished Reserve, it was open only to actual settlers who could purchase land in quarter-section lots. This stipulation had the effect of excluding the large landholder as well as

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[57] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14. A census was taken in 1865 but was never published. The results of the enumeration are available in manuscript form in the Kansas State Historical Library, Topeka. Population figures for 1865 used here have been taken from this source.

[58] Ibid.

[59] Kansas Farmer, VIII (February 15, 1871), p. 27.

[60] First Annual Report of the State Board of Agriculture, Kansas, 1872 (Topeka, 1873), p. 214. This estimate was probably on the optimistic side since the census enumeration for 1870 was 1,174, and that for 1875, 8,927.

the poorer home seeker. The result was that most of these settlers belonged to the middle class of farmers.[61] During the years between 1870 and 1875, the population of these three southern Kansas counties increased nearly ten times, from 2,300 to over 22,000.[62] Eureka in Greenwood County, Eldorado in Butler, Wichita in Sedgwick, and Winfield and Arkansas City in Cowley were all thriving towns by 1875. It is significant to note, however, that nearly all of the trade of these southern towns was commanded by Emporia in Lyon County. Emporia was located on the Santa Fe and railroads had not then penetrated into the southern counties.[63]

As early as 1871, settlements flourished in the southeastern part of the state. The occupation of Montgomery County, for example, began in the latter part of 1869, although the land was not brought into the market until the summer of 1871.[64] By that time, nearly every quarter-section had been claimed, and a great portion of the county was occupied by actual settlers. The census count for 1870 was 7,600, and by 1875 this figure had risen to 13,000.[65] Greenwood and Butler counties, likewise, enjoyed a rapid influx of farmers who raised good crops and initiated extensive livestock operations. Greenwood increased in population from 1,200 in 1865 to 3,500 five years later, and by 1875 the figure had

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[61] Ibid., p. 216.

[62] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14.

[63] Kansas Farmer, VIII (February 15, 1871), p. 27.

[64] First Annual Report of the State Board of Agriculture, Kansas, 1872, p. 229.

[65] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14.

reached 6,500; Butler County's population rose from less than 300 to 3,000 and finally to 10,000 during the same years.[66]

Settlers also invaded the central portion of Kansas between 1868 to 1872. A report from Dickinson County estimated that 50,000 acres of rich farm land were under cultivation there in 1872.[67] Moreover, there were four large flour mills, one woolen factory, two saw mills, several sorghum manufacturers, and a large vinegar manufacturer in the county. All of these businesses attested to the growth and maturity of the area.[68] Dickinson, Ellsworth, Lincoln, McPherson, Marion, Ottawa, and Saline counties, which form a block in central Kansas, increased in total population from only 1,200 in 1865 to 13,000 five years later; in 1875 the number reached 34,000.[69]

The extreme western portion of the state, on the other hand, witnessed very little settlement during the postwar decade. Indeed, in 1875 the western one-third of the state contained less than 2,000 inhabitants, practically all of whom were located in Norton and Ford counties.[70] The only other settlements in this extensive area were in Graham and Hamilton counties. The ninety-six people who lived in Graham County on June 1, 1875, were essentially small stockraisers and ranchers. They had less than 500 acres under cultivation, mostly in corn and spring

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[66] Ibid.

[67] Second Annual Report of the State Board of Agriculture, Kansas, 1873 (Topeka, 1874), p. 225.

[68] Ibid.

[69] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14.

[70] Ibid.

wheat, and they possessed about 1,000 head of range cattle and other livestock.[71] With the arrival of thirty families from Syracuse, New York, the first settlement in Hamilton County was made in March, 1873. Other arrivals raised the total until there were about sixty families in the county by July, 1874.[72] Drouth conditions and the grasshopper visitation of that year, however, caused the evacuation of the area, and the census of 1875 confirmed that no inhabitants remained in the county.[73]

The people who settled Kansas during the decade after the Civil War came from all walks of life and from many states. But mostly they were northern-born farm folk, of whom a large proportion of the heads of families had served in the Union Army.[74] Moreover, these emigrants were attracted to Kansas largely by economic conditions that favored those who desired to sell their farms in the older-settled states and to establish new homes on cheaper land farther west. Although the ruinous effects of the Panic of 1873, together with drouth conditions and the grasshopper invasion in 1874, temporarily halted the incoming tide of settlers, the population of Kansas rose from 140,179 in 1865 to

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[71] Fourth Annual Report of the State Board of Agriculture, Kansas, 1875 (Topeka, 1875), p. 436.

[72] Ibid.

[73] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14. The Fourth Annual Report of the State Board of Agriculture indicates that there were still twenty families in the county on March 13, 1875. This fact would seem to indicate that either the census enumerator did not canvass the county or that the remaining families departed after March 13 and before the census was taken.

[74] Carroll Clark and Roy L. Roberts, People of Kansas. A Demographic and Sociological Study (Topeka, 1936), p. 68. This study reveals that in 1860, 10 per cent of the population were native-born; 77 per cent were born in other states, and 12 per cent were foreign-born. One per cent was unclassified. Ten years later the percentages were 17.4 per cent native-born; 69.3 per cent born in other states, and 13.3 per cent foreign-born.

364,399 in 1870 and then jumped to 528,437 by 1875.[75] Most of these new people were farmers who had come to take up land.

A careful study of the population distribution in Kansas reveals that in 1865, 89 per cent of the people lived in the eastern three tiers of counties, or that portion of the state lying east of the ninety-sixth meridian.[76] An additional 10 per cent had settled in the next two tiers of counties west, and the remaining 1 per cent were in counties lying between the ninety-seventh and ninety-eighth meridians.[77] Five years later the twenty-six eastern counties claimed 70 per cent of the total population while the western counties had increased their share of the total from 11 to 21 per cent.[78] By 1875, the eastern region, although gaining over 300,000 inhabitants, contained only 59 per cent of the state's population. The counties lying between the ninety-sixth and ninety-ninth meridians, on the other hand, had grown over 200,000 in numbers and in 1875 accounted for 39 per cent of the total population.[79]

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[75] Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14.

[76] Figures compiled from the Manuscript Census for 1865 (Kansas State Historical Library, Topeka).

[77] Ibid.

[78] Figures compiled from Report of the Kansas State Board of Agriculture, for the Quarter Ending March 31, 1895, pp. 12-14. Most of the western population was located between the ninety-sixty and ninety-eigth meridians, with only about 5,000 people occupying land farther west.

[79] Ibid. The population center of Kansas was located in Douglas County in 1860, about eleven miles directly south of Lecompton. A decade later, because of a heavy influx of people in the extreme eastern and southeastern portions of the state, the center moved southeastward to a point six miles southeast of Lawrence, Douglas County. However, with the penetration of large numbers of settlers into the central portion of Kansas after 1870, the center moved westward to a point seventeen miles northeast of Emporia in Lyon County in 1875.

Fewer than 8,000 settlers lived beyond the ninety-ninth meridian, an area considered to be unsuitable for general agricultural purposes but which was beginning to attract the attention of stockmen.[80]

The eastern part of Kansas was well-settled by the mid-1870's and had passed the pioneering stage of development.[81] Farmers had familiarized themselves with the climatic and soil conditions of that area and were engaged in a stable, productive grain-livestock type of agriculture. Moreover, the needs of these rural inhabitants were adequately supplied by the many villages, towns, and cities that were situated in the region.[82] Actually, the physical environment of this portion of the state--topography, soil, rivers and streams, timber stand, climate and weather conditions, was quite similar to those areas farther east from which most of the settlers came. These people, therefore, had little difficulty in adjusting to their new environment. They simply applied to their new condition the agricultural methods that they had used in their native state. Meanwhile, the central portion of Kansas was being rapidly settled by farmers and stock raisers, and within a very short period of time it would become more populous and more productive than eastern Kansas.

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[80] Ibid.

[81] Population density is a good measure of settlement progress. The density per square mile of the eastern counties in 1875 was 21.5, compared to 19.7 in 1870, and 6.4 a decade earlier. The central portion registered 0.5 in 1860, 2.5 in 1870, and 6.8 in 1875. For the state, the density figures were 1.3 in 1860, 4.5 in 1870, and 6.4 in 1875.

[82] The eastern counties were 10.9 per cent urban in 1860 and 17.2 per cent in 1870. See Clark and Roberts, People of Kansas, p. 74.

CHAPTER IV

TRENDS IN CROP AND LIVESTOCK FARMING, 1865-1875

The open range cattle industry in Kansas was of short duration, but it had far-reaching consequences.[1] When the ranchman learned that cattle flourished on the buffalo and grama grasses of the western plains, a potential source of wealth appeared. Ranching could not be developed extensively, however, until the buffalo and the Indians were removed or effectively controlled. These aims were achieved within a relatively short period following construction of the Union Pacific and Kansas Pacific railroads. A few years of indiscriminate killing by sportsmen and professional hunters during the 1870's extinguished the vast buffalo herds, and, since the Plains Indians were heavily dependent on the buffalo, they were greatly weakened by the loss of their main livelihood. Thus a formidable barrier was removed for the march of civilization beyond the ninety-eighth meridian.

Although the range cattle industry had originated in southern Texas early in the nineteenth century, it did not spread northward until after the Civil War when cattlemen sought to tap the eastern markets by driving their herds to railroads in Missouri. The first of the great Texas

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[1] See Edward E. Dale, The Range Cattle Industry (Norman, Oklahoma, 1930); Ernest S. Osgood, The Day of the Cattleman (Minneapolis, 1929); Walter P. Webb, The Great Plains (Boston, 1931); and Gene M. Gressley, Bankers and Cattlemen (New York, 1966) for general accounts of the range cattle industry.

trail herds crossed the Red River in 1866, destined for Sedalia, Missouri.[2] This early venture met with disaster, however, as settlers in southeastern Kansas, northern Arkansas, and southern Missouri blocked the drive because of fear that their native stock would be infected with the dread Texas fever. This costly experience taught the drovers to avoid these hostile communities by moving their herds well to the west of white settlements. And so central and western Kansas was destined to become the crossroads where the north-south cattle trails intersected the east-west railroads which were then under construction. Once begun, this business spread rapidly until the major portion of the Great Plains region became known as the Cattle Kingdom.

The first important shipping facility for the Texas cattle business was established by Joseph G. McCoy on the Kansas Pacific in 1867.[3] Abilene, the county seat of Dickinson County, was chosen as the northern terminus because it was situated in an unsettled, adequately watered area whose grass could support thousands of beeves waiting to be shipped east.[4] Despite the lateness of the season when McCoy constructed his facilities and the fact that no well-defined trail existed between Texas and the new outlet, some 35,000 Texas longhorns arrived at Abilene in 1867 and were dispatched to eastern markets.[5] The following spring,

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[2]U. S., Census, Tenth Census (1880), "Agriculture," p. 975. Careful estimates place the number driven north in 1866 at 260,000. See Dale, Range Cattle Industry, pp. 49-53 for an account of this activity.

[3]Webb, The Great Plains, p. 219. See also Dickinson County Clippings, 1875-1931, I (Kansas State Historical Library, Topeka), for a 1908 newspaper interview with McCoy concerning the founding of Abilene; and Dale, Range Cattle Industry, pp. 55ff.

[4]Webb, The Great Plains, p. 221.

[5]U. S., Census, Tenth Census (1880), "Agriculture," p. 975.

McCoy employed a force of engineers and laborers to survey and mark a definite trail to Abilene.[6] This route began at San Antonio, coursed northward to the Red River near Ringgold, Texas, went across Oklahoma to Caldwell, Kansas, and then continued north past Wichita and on to the railhead at Abilene. A few years later two other cattle trails were laid out farther west as the frontier line of settlement moved in that direction: the Ellsworth Cattle Trail which terminated at Ellsworth on the Kansas Pacific, and the Western Trail which reached Dodge City on the Santa Fe.[7]

Abilene reigned as the cowtown capital of the West until the Santa Fe reached Newton in 1871 and thus wedged its rails between the Kansas Pacific and the cattle country to the south. Newton, in turn, yielded to Wichita as the principal shipping point for Texas cattle when the Santa Fe extended its line south in the spring of 1872. When the Ellsworth Cattle Trail was marked in the spring of 1873, Wichita was forced to share the cattle business with Ellsworth. Finally, as central Kansas was permanently settled, the cattle trails shifted farther west to Ellis

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[6]The purpose of this undertaking was to straighten the Trail from the Arkansas River to Abilene. Otherwise, the Abilene Trail, later known as the Chisholm Trail, followed the route blazed by Jesse Chisholm in 1865. Refer to the frontispiece in Kansas Historical Quarterly, XXXIII (Summer, 1967) for the most accurate and up to date map of the Chisholm Cattle Trail in Kansas. For accounts of the Chisholm Trail see Everett Dick, "The Long Drive," Kansas Historical Collections, XVII (Topeka, 1928), pp. 27-97; John Rossel, "The Chisholm Trail," Kansas Historical Quarterly, V (February, 1936), pp. 3-14; George L. Cushman, "Abilene, First of the Kansas Cow Towns" ibid., IX (August, 1940), pp. 129-37. The best book-length study of the subject is Wayne Gard, The Chisholm Trail (Norman, Oklahoma, 1954).

[7]Refer to the map on page 224 in Webb, The Great Plains; also to the map on page 63 in Dale, Range Cattle Industry.

and Dodge City, the two most prominent shipping centers.[8] By 1885 westward settlement and fencing of homesteads had so encroached upon these cattle trails that Governor John A. Martin ordered the enforcement of a long-ignored law forbidding the driving of Texas cattle through any part of the state.[9]

Although the cattleman fought a losing battle against the intrusion of the small dirt farmer, he did make several notable contributions to

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[8]The following is a summary of the Texas cattle drives for the period 1866-1880, taken from U. S., Census, Tenth Census (1880), "Agriculture," p. 975:

For Sedalia, Missouri:	
1866	260,000
To Abilene, Kansas:	
1867 to 1871	1,460,000
To Wichita and Ellsworth, Kansas:	
1872 to 1875	1,072,618
To Dodge City and Ellis, Kansas:	
1876 to 1879	1,046,732
To Dodge City, Caldwell, and Hunnewell, Kansas:	
1880	384,147
Total for 15 years:	4,223,497

[9]Report of the Kansas State Board of Agriculture, for the Quarter Ending September, 1934 (Topeka, 1934), p. 13. Restrictions were placed upon the herding of Texas cattle into Kansas in order to protect native animals. As early as 1861 the entire state was declared off-limit to Texas cattle between the first days of April and November. Later, in February, 1867, a law provided that companies or assiciations could, under bond, lay out a road along which such cattle might be driven into the western portion of the state to a point on the Union Pacific Railroad, whence they might be shipped out of the state. However, the cattle were not to be unloaded anywhere in the state beyond the point of shipment, and the Texas drovers were forbidden to drive their cattle to within five miles of any highway or ranch without prior written consent of the owner of such ranch. Shortly after the enactment of this law, McCoy established his shipping point at Abilene on the Kansas Pacific Railroad. The quarantine lines were changed in 1872 and the stipulation imposed that cattle could not be driven upon the claim or premises owned and occupied by any settler without his written consent. In 1873, 1876, and again in 1877 the lines were modified; in 1873 permission was granted to drive Texas cattle into Chetopa, a shipping point on the Missouri, Kansas and Texas Railroad near the state line in Labette County. Finally, a law was passed in 1884 which forbade Texas cattle to be brought into the state except between December 1 and March 1. This law struck a fatal blow to the cattle drives since the prohibition covered the entire season of the drive.

the settlement and development of the western portion of the state. For example, he demonstrated that the natural grasses of the scant-watered High Plains were a potential source of wealth. He also laid the foundation for the institution of ranching, or the large stock farm, which subsequently became a permanent part of Kansas agriculture. Furthermore, many of the Texas cattle driven north were never sold to eastern buyers. Some were driven farther north or west to supply the needs of military posts and Indian reservations, while others were wintered on the northern range. Kansas farmers soon discovered that winter feeding these cattle was a profitable business, and this practice spread into most parts of the state. Finally, the settlers disposed of grain and other farm produce to the cattle drovers and used Texas cattle to stock their farms. A government official estimated in 1885 that half of all domestic cattle on the plains had a least a trace of Texas blood.[10]

Early residents recognized that Kansas was admirably suited to all aspects of livestock raising. Thus, while the range cattle industry utilized the grasslands in the central and western portions of the state, general livestock raising became increasingly important on the farms in the eastern counties. County agricultural societies pointed out the desirability of their particular localities for stock raising and labored to promote the interests of this aspect of agriculture. The Allen County Society noted in 1872, for instance, that the land there was rich and fertile, that several streams ran through the county affording abundant water for stock purposes, and that many eastern men were moving into the area and turning their entire attention to stock raising.[11]

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[10]Floyd B. Streeter, The Kaws: The Heart of a Nation (New York, 1941), p. 214.

[11]First Annual Report of the State Board of Agriculture, Kansas, 1872 (Topeka, 1873), p. 246.

At about the same time, the Wyandotte Society reported that many of its farmers were turning their attention to the improvement of stock, especially blooded horses and swine, while fairs held by the Northern Kansas Agricultural Society stimulated the interest of farmers in the improvement of stock and the cultivation of tame grasses in Atchison County.[12]

Furthermore, the Kansas Farmer solicited testimonials from its readers concerning their experiences in growing crops, raising livestock, and in pursuing other types of farming. A typical response came from an Anderson County farmer in July, 1865. He reported 130 acres under cultivation of which eighty were in corn, forty-five in timothy and Kentucky Blue Grass, and five in potatoes and garden vegetables. In addition, he had 200 head of livestock, including twelve purebred Shorthorn Durhams. Finally, while he did not consider Kansas as good a farming region as his native state of Ohio, he did believe Anderson County was superior to any other Kansas county for livestock production.[13] Although early records do not disclose the arrival of many cattle, the first settlers did bring with them small livestock herds, and the number of cattle increased from 93,000 in 1860 to 202,000 in 1865.[14] Five years later there were 274,000 head of cattle in Kansas, and in 1875 the count had jumped to 703,323.[15] This growth is an indication of the importance attached to livestock-raising by the early pioneers.

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[12] Ibid., p. 243.

[13] Ibid., p. 207.

[14] Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875 (Topeka, 1875), p. 32.

[15] Ibid.

Kansas stockmen early emphasized quality in beef animals. During the initial years of settlement, purebred cattle were brought into the state and were shown at state and local fairs. A herd of blooded Shorthorns, for example, was brought to Anderson County as early as 1857, and by 1880 this breed was widely distributed throughout the state.[16] The Hereford line was introduced into Marshall County in 1872.[17] a few Devons were reported in Coffey, Norton, and Smith Counties at about this same time, while the Aberdeen-Angus breed was brought into Ellis County in 1873.[18] Some indication of the demand for purebred stock is evidenced by the fact that during the first five months of 1872, over 15,000 head of blooded stock were shipped westward from Kansas City.[19] Although the premium lists for the first two state fairs are missing, the cattle log for the third, held at Lawrence in 1867, is extant and indicates classes for Shorthorns, Devonshires, and Ayrshires, as well as prize money for "other breeds," "grades," and "wilcoxen."[20]

A lively interest in dairying also dates from the very early days of settlement. Indeed, dairy cattle played an indispensable role in the lives of the settlers. A few head of milk cows not only provided the farmer with milk, butter, and cheese for his own table, but usually with

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[16] G. A. Laude, Kansas Shorthorns: A History of the Breed in the State from 1857 to 1920 (Iola, Kansas, 1920), p. 22.

[17] Hays Walker, "First Hereford Herd in Kansas," American Hereford Journal, XXVI (June 1, 1935), p. 105.

[18] Ellis County Clippings, 1931-1951, II (Kansas State Historical Library, Topeka), p. 82.

[19] Report of the Kansas State Board of Agriculture, for the Quarter Ending September, 1934, p. 14.

[20] Ibid., p. 13.

a surplus of milk, cream, or butter to sell. Indeed, butter was one of the principal sources of cash income for most pioneer farmers--often the only source of ready cash. Production statistics bear out the growing importance of this aspect of agriculture. In 1860, Kansas farmers produced slightly over 1,000,000 pounds of butter.[21] Ten years later production had increased to 5,000,000 pounds, and in 1875 it amounted to nearly 9,000,000 pounds.[22] Cheese production, likewise, rose from 29,000 pounds in 1860 to over 500,000 pounds in 1875.[23]

While cream and butter provided much of the cash income for living expenses in the pioneer areas, many farmers were interested in making cheese. As early as 1871, a cheese manufacturer from Ellsworth County spoke before a meeting of the Farmer's Institute at Manhattan concerning this industry and its prospects. He observed:

> Kansas is looked upon as a great beef-producing state and we can certainly make as good cheese here as Ohio and can do it with less expense. Our cows cost less and net more. In Ohio it cost $25 per year to keep a cow; in Kansas less than half that. Cheese in Ohio brings 12½¢ per pound, mine brings 18½¢. Good cheese can be made in Kansas. Dairying is destined to become one of the more interesting and profitable branches of industry in Kansas.[24]

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[21] U. S., Census, Eighth Census (1860), "Agriculture," p. 56.

[22] Fifth Annual Report of the State Board of Agriculture, Kansas, 1876 (Topeka, 1877), p. 223.

[23] Ibid. The cheese statistics for 1875, as reported by the State Assessors, indicate a total product of 1,240,610 pounds compared to 226,607 for 1870 and 644,076 for 1876. Nemaha County was credited with 798,850 pounds in 1875 compared to 28,285 in 1870 and 90,610 in 1876. It seems apparent that the Nemaha figure for 1875 should have been 79,885 pounds. With this adjustment, the 1875 total becomes 521,645 pounds.

[24] As quoted in Franklin G. Adams, The Homestead Guide Describing the Great Homestead Region in Kansas and Nebraska and Containing the Homestead, Pre-emption and Timber Bounty Laws, and a Map of the Country Described (Waterville, Kansas, 1873), p. 27.

The Ellsworth manufacturer, however, was too optimistic in his belief that the cheese making aspect of dairying would pay handsome returns. While dairying had become an accepted part of the general farming operation of Kansas farmers by 1875, and while it contributed to the overall agricultural productivity of the state, cheese production never became a major industry.[25]

Swine raising, like dairying, became prominent in the eastern portion of Kansas during the early years of settlement, although several factors slowed the development of this branch of the livestock industry. Many settlers of limited means, for example, were unable to provide proper shelter and fencing which hog raising required and which it received in the older-settled communities. Nor were they able to breed purebred stock. Furthermore, lack of accessible markets for pork hindered the Kansas farmer.[26] By 1875, however, the availability of rail transportation and the appearance of packing houses in nearby states enabled him to dispose of excess production. Whatever the disadvantages encountered by the hog raiser, they were more than offset by nearly ideal weather conditions and cheap corn. The result was a steady increase in the numbers of swine in the state from less than 100,000 in 1865 to nearly 300,000 a decade later.[27]

Sheep husbandry also received serious consideration by early settlers. In 1865 the Kansas Farmer editorialized that the raising of sheep

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[25]U. S., Department of Agriculture, Bureau of Statistics, "Number and Farm Value of Farm Animals in the United States, 1867-1907," Bulletin 64 (Washington, 1908), p. 123.

[26]U. S., Census, Tenth Census (1880), "Agriculture," p. 1000.

[27]Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875, p. 32.

would at no distant day become "intimately and permanently interwoven" with other great agricultural interests of the state.[28] The basis for this optimism rested on the fact that the state possessed obvious natural advantages for this enterprise. These included a mild climate, an abundance of nutritious grasses, cheap grazing land, and plenty of pure water. Conditions were especially favorable in the northwestern counties.

As the population of the state increased and as farmers began to devote more attention to livestock--the range cattle industry in the West and dairying and beef-pork production in the East--the question of fencing policy arose. A conflict of interest existed between stockmen who wanted farmers to fence their crops to protect them against livestock damage, and farmers who demanded that livestock be confined. Although the matter was debated at length by the contending forces, and despite the fact that the law initially favored the cattlemen, the outcome was never seriously in doubt. Within a relatively short period the open range was pushed westward beyond the line of permanent settlement, and the large-scale stockman, who continued his operation in the settled regions, was forced to confine his livestock.

The first fencing law in Kansas was enacted in 1860. It provided that where the land of two persons joined, each was to build one-half of the divisional fence which was to be made of three strands of No. 9 wire attached to posts set at specified intervals.[29] In the following year, another act was passed which stated that a person who failed to maintain

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[28] Kansas Farmer, II (March, 1865), p. 33.

[29] Kansas, Laws (1860), ch. 68, secs. 1-3; and ch. 69, secs. 1-3.

a lawful fence could not recover damages for crops destroyed or harmed by livestock.[30] Thus the settler was burdened with the responsibility of protecting his crops against marauding animals. For those situated in river valleys and other areas where timber was sufficient to provide rail fencing, this situation was not too burdensome. However, as settlers began to occupy the prairie uplands, where timber was scarce, the cost of enclosing a farm was almost prohibitive.[31]

Nor was there a satisfactory substitute for fencing timber. Stone, which was abundant in some parts of the state, could be utilized for fencing purposes, but to transport fencing stone any great distance was so costly and time-consuming that few settlers were willing or able to pay the price.[32] A hedge was another alternative to timber fencing but, like stone, had its disadvantage. Although a hedge was comparatively

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[30]Kansas, Laws (1861), ch. 37, sec. 7.

[31]Kansas Farmer, IV (May, 1867), pp. 76-77. S. T. Kelsey estimated the cost of enclosing a quarter-section of prairie land with a good timber fence at between $1,000 and $2,000. He further sounded a warning against continued use of the state's timber resources for fencing purposes, saying: "It required from 10 to 20 acres of our average timber to fence a quarter with a single outside fence. It stands to reason that if we use up all the forest of the state we shall then have but a small portion of our lands fenced, while we shall be without timber for building our houses, barns, shops, bridges, and railroads, and the many other uses for which civilized communities need wood." It should be noted, however, that the manuscript census reports reveal that many farmers did not fence for several years, or simply built their fences over a period of years. See also Report of the Commissioner of Agriculture, 1871 (Washington, 1872), pp. 508-10. The Commissioner reported that Kansas had 1,576,802 acres fenced in 1871, at a cost of $7,371,548. The average cost per acre was $4.67, compared to the national average of $1.08. As to specific types of fencing, the following costs per rod of fence were cited: worm, $1.08; post and rail, $0.96; board, $1.27; and stone wall, $2.96. Among all the states and territories, the average cost of board fence in Kansas was exceeded only in Texas.

[32]Kelsey estimated it would cost from $3 to $5 per rod to build a good stone fence in open prairie where the stone had to be imported.

inexpensive to plant and care for, it did not mature sufficiently to turn stock for a period of three to five years.[33] In the meantime, the farmer had to protect not only his growing crops from livestock depredations but the hedge as well. And so, faced with a scarcity of timber, the high cost and laborious task of building stone walls, and the time element involved in growing an effective hedge, it is not surprising that farmers voiced opposition to the so-called fence laws and sought relief from the fencing burden.

The farmer's case was strengthened by the Commissioner of Agriculture who stated in 1871 that it was "beginning to be seen that our fence laws are inequitable in a greater degree than is required by the principle of yielding something of a personal right, when necessary, for the general good."[34] The Commissioner cited figures which revealed that the cost of fencing was nearly equal to the estimated value of all farm animals in the United States. This startling fact meant that for every dollar invested in livestock, from which a reasonable return was expected, another went into the fixed cost of fencing. At least half this expense, he believed, was unnecessary. Moreover, many farm leaders and others joined the attack on the fencing laws. It was argued that the existing policy was oppressive in placing the burden of fence construction and maintainence on the owner of the land while the stockman could let his animals run unattended. In its place, critics advocated enactment of a herd law.

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[33] Kansas Farmer, V (March, 1868), p. 35.

[34] Report of the Commissioner of Agriculture, 1871, p. 497.

The struggle for such a law was bitter.[35] While the immediate issue was whether the cost of protecting growing crops should be borne by the farmer or the stockman, the broader question involved land utilization. The crux of the matter was "should the land be devoted basically to stock-raising or to crop-production"?[36] The stock interests were generally satisfied with the fencing laws since they believed that the best land utilization came from confining crops to small fields rather than stock to small pastures. Otherwise, half the prairie land in Kansas could not be used for stock purposes. The great wealth of the state, they argued, lay in grazing cattle and sheep on the rich prairie grasses and not in bringing the land under cultivation. They believed, moreover, that the greatest inducement for the eastern agriculturalist to move into the state was the prospect of raising stock. Anything that hindered or discouraged this industry was, therefore, prejudicial to the "best and most lucrative branch of agriculture."[37]

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[35]A night herd law was in operation in Johnson County as early as 1860, and one was adopted in Saline County in 1867. At the urging of Saline County residents, the legislature passed a herd law in 1870 which was applicable only in Saline and four other counties. This law prescribed that the owner of stock was liable for damages if he allowed the animals to trespass on the premises of another person. The State Supreme Court held this act unconsititutional, however, on the ground that all general laws should apply uniformly throughout the state.

[36]One is not to assume that the stock-raiser believed there should be no soil tillage or that the farmer believed there should be no stock in the state. However, the range cattle interests did advocate, and there were others who agreed, that the western part of the state was suitable only for grazing purposes and should be set aside for that industry. Otherwise, it was generally accepted that there would be mixed farming in the state. The issue was a relative one-- a question of which interest should be given preference in practice and on the statute books.

[37]Kansas Farmer, II (June, 1865), pp. 84-85.

The case for a diversified agriculture, with emphasis upon soil cultivation, was most ably argued by S. T. Kelsey, the Santa Fe industrial agent, although he was not sure that a herd law was the answer to the problem.[38] While Kansas was unquestionably good stock country, Kelsey believed that cereal grains, fruits, vegetables, and other plants should also be grown. "If we can afford to leave our prairies uncultivated simply to supply grazing range for a few large herds that will sustain but a sparse population," he asserted, "then the present system will do"; but, he continued:

> if we wish to have our country thickly settled by a prosperous people, and our lands improved, we must give the settlers a reasonable chance to make their improvements. . . . Let all who buy lands and make their homes in Kansas have equal chances to use and improve their lands and to produce whatever seems to them most desirable, and then let each business stand or fall on its own merits.[39]

Kelsey's solution to the problem was to have the legislature declare a hedge, properly planted and cared for, a legal fence at the time of planting. This would make the stock owner liable for damages done to crops so enclosed and would, at the same time, protect growing hedges. Within a few years, Kelsey maintained, all cultivated land would be effectively hedged in and wandering stock would no longer be a problem.

After lengthy consideration, the legislature passed a general herd law in 1872. This act directed the county commissioners to determine what animals might run at large in their county and to order a lien against any animals inflicting crop or other damage.[40] The law was later amended to require commissioners, on petition of two-thirds of the

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[38] Ibid., IV (May, 1867), pp. 84-85.

[39] Ibid.

[40] Kansas, Laws (1872), ch. 193, secs. 1-7.

legal voters of a county, to prohibit stock of all kinds from running at large.[41]

Interesting, and somewhat ironic, is the fact that after all the years of controversy over this issue, the herd law was enforced only in those counties where crop-farming activities completely overshadowed the livestock interests. Where stock raising predominated, the law was disregarded, and in those counties where the rival interests were nearly evenly balanced the decision could go either way; in some instances a compromise of sorts was made with the enforcement of a night herd law. In 1875 the law had been adopted in only 40 per cent of the counties, two-thirds of which were newly settled in the central region.[42]

Only seven of the twenty-six eastern counties enforced the herd law. Four of these, Cherokee, Crawford, Labette, and Montgomery, lay in the extreme southeastern part of the state; Doniphan was in the extreme northeastern corner, and Morris and Geary bordered on the ninety-seventh meridian. Crop farming was predominant in each of these counties, although a significant livestock industry existed and opinion on the issue was rather evenly divided.[43] In a few other eastern counties a night herd law was enforced, but only in those townships where crop farming activities prevailed and where public opinion demanded it.[44]

Opposition to the herd law in the eastern portion of the state stemmed from the fact that by 1875 the area was generally settled, the

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[41]Kansas, Laws (1874), ch. 128, secs. 1-4.

[42]Fourth Annual Report of the State Board of Agriculture, Kansas, 1875, pp. 185-437.

[43]Ibid.

[44]Ibid.

land was largely improved, and a substantial diversified farm operation, oriented toward stock raising, existed. Therefore, there was no real need for this legislation from the moment it was enacted. Even farther west, in the central portion of the state, the law was effective and valid only during the very early years of frontier settlement. Several of the central Kansas counties were sufficiently settled and improved by 1880 that there was no longer a public demand for enforcement of the herd law.[45]

The extent of agricultural progress during the decade after the Civil War is clearly revealed by significant increases in the number of farms, land in farms, acres cultivated, and in the crop and livestock production statistics. The number of farms, for example, rose from 10,400 in 1860 to 38,202 in 1870. Nearly all of this increase came after the Civil War.[46] Moreover, 73 per cent of the farms in Kansas in 1870 were situated in the twenty-six easternmost counties. During the next ten years, the number of Kansas farms increased to 138,561.[47] The eastern counties, however, accounted for only about 27 per cent of this rise, and since the central and west-central portions of the state were largely settled after 1875, it is most likely that no more than 35 or 40 per cent of this ten-year increase occurred between 1870 and 1875. This estimate would place the farm count in 1875 at around 75,000.

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[45]This discontinuance was observed especially in such central Kansas counties as Cowley, Butler, Marion, Harvey, Dickinson, McPherson, and others, where livestock interests were substantial by 1880 and opinion of the herd law about evenly divided.

[46]U. S., Census, Twelfth Census (1900), "Agriculture," Pt. 1, p. 688.

[47]Ibid.

Total land in farms grew from 1,778,400 acres in 1860 to 5,656,879 ten years later, and to an estimated 11,000,000 acres in 1875.[48] The per cent of improved land in farms to total land in farms increased during these years from 23 per cent in 1860 to 35 per cent five years later, and to 50 per cent in 1880.[49] Finally, acres under cultivation rose sharply from 1,322,734 in 1870 to 4,749,900 five years later.[50] During these years, the annual increase in the cultivated area averaged nearly 700,000 acres.

Acreage and production figures for the two leading cereal grains, corn and wheat, were equally remarkable for this period. The area devoted to corn increased twelve-fold from 163,463 acres in 1865 to 1,932,861 in 1875, while production rose from slightly less than 7,000,000 bushels to nearly 81,000,000 bushels during the same years.[51]

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[48] U. S., Census, Eighth Census (1860), "Agriculture," pp. 54-57; and U. S., Census, Ninth Census (1870), "Agriculture," pp. 154-55.

[49] Ibid.

[50] Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875, p. 25.

[51] Report of the Kansas State Board of Agriculture, for the Quarter Ending December, 1936 (Topeka, 1937), p. 9. The population and agricultural statistics cited in this work have been taken from the U. S. Census reports where applicable; otherwise, the chief reliance has been on the various publications of the Kansas State Board of Agriculture, which include the results of the state census begun in 1865 and taken every ten years thereafter. While the statistical methods used by the State Board of Agriculture might be deemed inadequate according to present norms and some of the published results questionable, the records gathered and published by it are the only complete source available upon which to base any study of Kansas agriculture, aside from the federal and state census reports mentioned above. Furthermore, from its inception the Board was under the direction of such extremely able men as Franklin G. Adams, Alfred Gray, F. D. Coburn, and Martin Mohler who realized, and on occasion candidly admitted, that their reports contained certain statistical shortcomings. Yet each strove diligently and honestly to search out and publish the true facts regarding the condition of

The average yield per acre ranged from a low of slightly over ten bushels in the dry, grasshopper year of 1874, to a high of nearly forty-nine bushels in 1875. Wheat production increased correspondingly from less than 200,000 bushels in 1865 to over 13,000,000 bushels in 1875, while the average yield per acre varied from a low of nearly twelve bushels in 1872 to a high of slightly over twenty-one bushels in 1866.[53]

Oats, rye, barley, and buckwheat were other important cereal crops grown in the state during these early years. The area planted to oats, for example, jumped from less than 5,000 acres in 1865 to nearly 300,000 acres a decade later.[54] Rye and barley plantings advanced from around 200 acres each in 1865 to 79,000 and 37,000 acres, respectively, in 1875.[55] Finally, buckwheat became an important crop during the early years of settlement, but it later all but disappeared from the scene. Indeed, production reached an all-time high in 1875 when 240,000 bushels were harvested.[56]

Kansas farmers continued to experiment with a number of other crops during this post-war decade. In 1870, for example, no castor beans were

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Kansas agriculture. Indeed, the Kansas publications early became recognized as among the very best in the nation. See James C. Malin, Winter Wheat in the Golden Belt of Kansas (Lawrence, Kansas, 1944), pp. 45-48 for a short critique on this problem.

[52] Ibid., p. 8.

[53] Ibid.

[54] Ibid., p. 10.

[55] U. S., Department of Agriculture, Bureau of Statistics, Bulletin No. 60 (Washington, 1908), p. 31; and U. S., Department of Agriculture, Bureau of Statistics, Bulletin No. 59 (Washington, 1908), p. 32.

[56] U. S., Department of Agriculture, Bureau of Statistics, Bulletin No. 61 (Washington, 1908), p. 23.

grown, less than 3,000 pounds of cotton were picked, 1,500 bushels of flax seed harvested, 76,000 pounds of hemp cut, and 29,000 pounds of tobacco raised.[57] Substantial increases were recorded in each of these crops three years later. Castor bean production reached 60,000 bushels, cotton pickings had jumped to 251,000 pounds, flax seed to 64,000 bushels, hemp to 1,400,000 pounds, and tobacco to 400,000 pounds.[58] None of these crops, however, ever became an important part of Kansas agriculture.

Livestock production also increased greatly during this period of agricultural development. Cattle numbers rose sharply from 200,000 in 1865 to over 700,000 a decade later, while swine and sheep numbers advanced similarly in the same years.[59] Horses increased from more than 32,000 to over 207,000 and mules from nearly 3,000 to 25,000 during this post-war decade.[60] The substantial increase in the numbers of horses and mules is indicative of the rapid growth of Kansas agriculture since they provided the motive power on the farms. The total value of livestock including horses, mules, milk cows, other cattle, sheep, and swine amounted to $29,000,000 on Kansas farms in 1875.[61] Thus, with a luxuriant cover of native grasses, supplemented by thousands of tons of millet and Hungarian, timothy, clover, and prairie meadow, with tens of thousands of

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[57] Fourth Annual Report of the State Board of Agriculture, Kansas, 1875 (Topeka, 1875), pp. 481-82.

[58] Ibid.

[59] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886 (Topeka, 1887), p. 602. The figures for 1865 are found in Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875, p. 32.

[60] Ibid.

[61] Ibid.

acres of prairie pasture and other tame grasses, and with an abundant production of corn and oats, the question of whether Kansas could sustain a profitable stock raising enterprise was resolved in the affirmative.[62]

Two significant developments in Kansas wheat culture occurred during the early 1870's. The first involved a shift from spring wheat to soft winter wheat, and the second was the introduction of a hard winter wheat variety. Until 1870, Kansas farmers had been planting nearly equal amounts of spring and winter wheat. The actual distribution in 1870 was 55 per cent spring wheat and 45 per cent winter wheat.[63] However, farmers were learning through experience that soil and climatic conditions favored the winter varieties over spring plantings, and consequently were more profitable.[64] In 1872, winter wheat production amounted to 2,173,595 bushels compared to only 889,346 bushels of spring wheat, a spread of 71 to 29 per cent; and by 1875, the winter varieties held an even more decisive 76 to 24 per cent edge.[65] As winter wheat became more popular, the spring varieties gave way until eventually they were grown only in some of the extreme northern counties of the state.

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[62]In 1866, 61,541 acres of land were devoted to hay which produced 123,082 tons valued at $614,554. Four years later, 452,136 acres yielded 529,000 tons worth $3,409,533, and in 1875, 711,111 acres produced 960,000 tons worth $2,544,377. See U. S., Department of Agriculture, Bureau of Statistics, Bulletin No. 63 (Washington, 1908), p. 31.

[63]Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875, p. 29. The State Board of Agriculture began keeping winter and spring wheat statistics separately in 1870.

[64]One of the chief drawbacks of spring wheat was its vulnerability to the chinch bug.

[65]Fourth Annual Report of the State Board of Agriculture, Kansas, Centennial Edition, 1875, p. 29.

Although a hard winter wheat variety was introduced into Kansas about 1872 and was grown extensively by the Mennonites thereafter, its full impact was not realized until much later.[66] Indeed, it was not until about 1889 that the flour processors and bakers were able to overcome the difficulties of milling and baking the flour from this new type wheat. However, once the technical problems were solved Kansas wheat culture was revolutionized.[67]

While significant changes were occurring in wheat culture, equally important developments affected corn production. From the beginning, corn had been the leading cereal grain crop. However, it had been grown largely as a money crop, for there never seemed to be sufficient livestock in the state to consume it. This situation resulted in ruinously low prices under the existing freight rate schedules.[68] Then, in 1872 the largest corn crop on record was produced, and an already serious situation turned into disaster as the average market price dropped to between 20 and 25 cents a bushel along the railroad lines, a figure probably below the cost of production.[69] With many farmers on the verge of ruin, the lesson seemed clear. Corn production should be brought into balance with the demand for livestock feed so that it could be marketed in the form of beef and pork rather than as a cash grain crop. Only

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[66]The Mennonites are generally, almost universally, credited with having introduced hard winter wheat into Kansas. However, see Malin Winter Wheat, pp. 162-67, and 250 for a critical appraisal of this question.

[67]This topic will be discussed in more detail in chapter nine.

[68]Malin, Winter Wheat, p. 31.

[69]Second Annual Report of the State Board of Agriculture, Kansas, 1873, pp. 132-33.

in this way could corn bear the cost of transportation to distant markets. To accomplish this aim corn acreages had to be restricted and the excess land diverted to other uses. As a result, greater emphasis was placed on a diversified agriculture, although it should be noted that corn production continued to lead all other crops in acreage, annual product, and value.[70]

The eastern one-third of the state was settled and much of the land improved with buildings and fences by 1875. In those areas where soil conditions and lay of the land were favorable, general farming prevailed. But there was a growing emphasis on dairying and livestock production. Elsewhere, and especially in the lush bluestem pastures of the Flint Hills, stock raising was the main agricultural activity. Farther to the west in central Kansas, where farmers began to settle in large numbers by the mid-1870's, the main concern was to plow the prairie land and plant corn and wheat. The 1872 herd law was thus a boon to the farmers in this region. Although the first settlers in the central part of Kansas relied upon corn as the principal crop, they soon realized that the climate favored wheat production. Furthermore, since conditions there were generally favorable for the livestock industry, the early settlers engaged in dairying, stock raising, swine, and sheep production. The western portion of the state was not penetrated by any significant number of farmers during this period, and it remained open range cattle country.

Thus the experience of farmers and stockmen up to 1875 strongly indicated that Kansas was potentially a great agricultural state, despite the shortcomings of a new and untried land. Settlers during the early

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[70] Ibid.

years had suffered through recurring drouths, hard times, and grasshopper visitations, but the main ingredients for a stable and prosperous agriculture were present; it was simply a matter of time before they would be fully utilized.

CHAPTER V

HARD TIMES IN KANSAS, 1854-1875

The Reverend Johnathan Meeker of the Shawnee Baptist Mission wrote in his journal on the last day of August, 1854:

> The summer is ended--never knew one so dry. There seems to be a general cry throughout the U. S. on account of the prolonged dry season. Corn and potato crops have almost everywhere failed. . . . The weather has been extremely warm for some six weeks, the mer./cury/ rising above blood heat almost every day. Several days it has risen to 106, once to 110. On today it is to 104.[1]

Thus from the beginning, settlers were introduced to the vagaries of weather and climate which were to plague the development of a sound and prosperous agriculture. In its early years the state experienced the pain of war, the pinch of depression, the hardship of drouth conditions, the bite of grasshoppers, and the humiliation of being branded before all as "bleeding" and "drouthy" Kansas. Other western territories and states were also beset with troubles and setbacks, but Kansas seemed to suffer from an unusual number and variety of hardships.

Kansas was yet in its infancy, for instance, when the Panic of 1857 occurred. The settlement and development of the territory was undoubtedly adversely affected by this panic. However, the extent of the damage is difficult to assess since reliable statistics on population, acres

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[1]Martha B. Caldwell, comp., Annals of Shawnee Mission and Indian Manual Labor School (Topeka, 1939), p. 81.

under cultivation, crop production, and livestock numbers do not exist. One historian has concluded that the "destructive effects of the Panic of 1857, with its calamitous decline in prices of wheat and corn, combined with the draining of funds to the East and the poor crops, made the West the most depressing part of the United States; and within the West the territory of Kansas was most seriously affected."[2] In addition to the suffering directly attributable to the panic, the condition of Kansas settlers was further aggravated in the summer of 1858 by a decision of the federal government to place some 8,000,000 acres of Kansas land on the market.[3] This plan of land sale had the effect of forcing many squatters to raise $200 immediately for the purchase of their quarter-section claims at a time when credit was becoming increasingly difficult to secure, and then only at ruinously high interest rates. The alternative was to suffer possible loss of the land and any improvements they had made.

Although Kansas Territory had been afflicted with a series of dry years, sufficient rain fell in the spring and summer of 1859 to mature good crops throughout the settled portions. During the fall of that year, however, precipitation greatly diminished, and the winter months were notably dry. This condition persisted through the spring and summer of 1860, and the only rains of consequence fell late in May and in early June. But this precipitation was local in nature, and it did not meet the needs of thirsting crops. July and August were marked by a series of hot winds and dust storms, which in many areas completely destroyed

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[2]Paul W. Gates, Fifty Million Acres: Conflicts over Kansas Land Policy, 1854-1890 (Ithaca, New York, 1954), p. 82.

[3]Ibid., pp. 78ff.

crops that were already languishing.[4] On July 9 and 30 and again on August 26, terribly hot, scorching winds blew across the state and sent temperatures soaring as high as 106 to 115 degrees Fahrenheit. The effects were devastating, and by late summer many observers realized that the Territory was in serious difficulty. Hundreds of settlers had come into Kansas during the winter of 1859-60, expecting to make a living the first year from sod crops raised on their unimproved claims. But they soon exhausted their limited supply of money and provisions and were totally unprepared to endure crop failure. Those who had lived on their farms for three or four years were able to withstand the dry season reasonably well, certainly better than the newly arrived pioneers.

In the face of economic disaster, the following appeal for help was circulated by the Reverend Daniel Foster of Nemaha County and five other citizens from Shawnee, Douglas, Miami, Riley, and Lyon counties:

> During the year preceding October 1, a terrible drouth has prevailed throughout the interior of Kansas. A narrow strip bordering on the Missouri River has had occasional showers and has yielded a fair crop. Some other small and isolated districts also have had light showers and raised part of a crop. But residing as we do in widely separated localities, we believe that four-fifths of the cultivated land in the Territory has not yielded the smallest crop of any kind except a little corn-fodder. The inhabitants have not had crops on which to rely for bread. Last year's vegetables, of course, are consumed. The wheat was used either for seed or ground for food. Nearly all the old corn has been fed out or was sold last spring for 20 to 25¢ a bushel. Not one farmer in twenty has a peck of old grain. Nor is there money to buy bread. Our people have expended all available means of making improvements. The commercial disaster of 1857 left us stranded. And now comes the loss of our crops and with it goes our hope of returning prosperity. This drouth is an exception in Kansas. To this fact we have the exclusive

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[4]Russell K. Hickman, "The Great Drouth of 1860," Kansas Magazine (1951), p. 19.

testimony of missionaries who have lived here from 15 to 30 years.[5]

The situation in Kansas was perhaps no more severe than in some other western states. The newness of the country, however, together with a lack of crop surpluses caused the disaster to fall with peculiar severity upon Kansas settlers, especially the more recent arrivals. When it became apparent there would be no harvest, an exodus began "back to the wife's folks." Hundreds of impoverished and discouraged Kansans returned East "bearing with them tales of want and woe calculated to stop all future emigration and confirm the early and popular belief that the country was to be, for all time, the Great American Desert; fit only for the abiding-place of Indians and the homes of buffaloes, prairie dogs, snakes, owls, and horned toads."[6] The stream of covered wagons that had poured into Kansas from the East during the winter and early spring was now reversed, and many families required food and clothing even before reaching the eastern border of the territory. Most of the older residents who remained were able to provide for their own needs, but others had to depend upon supplies sent in from the East.

Meetings were held in numerous localities in late summer and early fall to consider the plight of the inhabitants. Then on November 14, a Territorial Relief Convention met at Lawrence to study ways and means of caring for an estimated 30,000 destitute persons.[7] The meeting was well-attended, and a decision was made to appeal for aid from the people

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[5]Topeka Daily Capital, August 25, 1929, p. 218.

[6]A. T. Andreas, History of the State of Kansas (Chicago, 1883), I, 253.

[7]Hickman, "Great Drouth of 1860," p. 21.

of the more prosperous states. To this end, Marcus J. Parrott, Territorial Delegate to Congress, drafted and circulated a plea for aid and assistance. Unfortunately, he couched his address in such exaggerated terms that the name "drouthy Kansas" lingered in the minds of people for many years.[8] Samuel C. Pomeroy was appointed chairman of a central committee to supervise relief activities for the entire Territory. Upon his recommendation, all donations of aid were directed to his office in Atchison, the only point in Kansas then served by a railroad. Thaddeus Hyatt, president of the National Kansas Committee, also played a role in bringing relief to the drouth-stricken settlers. Following a visit to the Territory in September, he published a detailed review of statements collected from the various counties which he styled "The Prayer of Thaddeus Hyatt to James Buchanan, President of the United States in Behalf of Kansas Asking for a Postponement of all the Land Sales in that Territory and for other Relief."[9]

In response to these and other pleas for help, numerous eastern cities contributed large quantities of flour, meal, clothing, seed, grain, other provisions, and some money. At a general meeting of the relief committee held in Atchison on March 6, 1861, a report was made of the receipts and disbursements. This accounting revealed that perhaps as much as 8,000,000 pounds of grain and provisions had been distributed, as well as large quantities of clothing and dry goods. In addition, substantial sums of money had been collected for distribution by the committee.[10]

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[8]Topeka Daily Capital, August 25, 1929, p. 218.

[9]Hickman, "Great Drouth of 1860," p. 21.

[10]Ibid., p. 23. The committee did not give a satisfactory accounting of the use made of the money collected, and charges of fraud and

The seriousness of the 1860 drouth was later discounted by those who feared that the emotional appeals for relief would give Kansas a bad reputation. The editor of the Kansas Farmer, for example, concluded that the "famine year" of 1860 had caused more apprehension than it should have because immigration in that year was large and many of the new settlers had emigrated without resources.[11] When their crop failed, a large proportion of which had been planted late and much of it sod corn, they had neither cattle, hogs, nor other means to sustain life. The editor believed, therefore, that destitution was caused more by the condition of the settlers than by the dryness of the season since the older settlers in the state had raised or had on hand sufficient supplies to see them through the crisis.[12]

Another writer who was sensitive about weather conditions discouraging immigration stressed the fact that all sections of the Union were subject to occasional drouths. In this respect, he said, Kansas probably suffered as little as any other of the nation. "We have not only the experience of the fifteen years' occupancy of the state by whites," he concluded, "but we have also the testimonials of civilized Indians and their missionaries who have occupied the country for a generation, to

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malfeasance were lodged against Pomeroy and others involved in the project. See also Topeka Daily Capital, August 25, 1929, p. 218; Atchison County Clippings, 1885-1915 (Kansas State Historical Library, Topeka), IV,76; Samuel J. Crawford, Kansas in the Sixties (Chicago, 1911), pp. 7-8; and Kansas Relief Clippings, Drouth, 1860-61 (Kansas State Historical Library, Topeka), I. A wealth of material relating to this topic is located in the State Historical Library, Topeka.

[11] Kansas Farmer, II (August, 1865), p. 118.

[12] Ibid.

the same facts."[13]

John Anderson, president of Kansas State Agricultural College, perhaps placed the year 1860 in best perspective when he wrote:

> . . . the misfortunes of Kansas have been greatly exaggerated, and the causes of this exaggeration are easily found. Drouth in Ohio or New York occasions no apprehensions that those states are unsuited to successful farming because the experience of generations has shown that dry seasons are the exception and in spite of them, no business has there paid so well as that of the farmer. But the same drouth occurring in Kansas startled the newcomer by the fear that rain may here be the exception and dry seasons the rule.
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> Again, in the eastern states a man without provisions for at least twelve months . . . would not attempt to settle on a piece of wild soil with the expectation of winning from it a support in the first or even the second year. Both he and his neighbors would realize that his capital could not, in the nature of things, yield so great an interest, yet it is by no means rare for hundreds of toiling men with just enough money to break a few acres in Kansas to expect the sod crop therefrom will not only furnish a year's provisions, but also build houses and buy cattle. When his crop fails, as it sometimes does, these men must suffer and are prone to hold Kansas responsible for the consequences which evidently were the logical results of their lack of sufficient capital.[14]

Although Anderson's appraisal of the situation was essentially correct, the point that really bothered these writers was that many of the people were still thinking of Kansas as a part of the so-called Great American Desert. This idea was not by any means completely dead by 1860, and Kansas feared the drouth would revive and strengthen the desert concept. The apprehensions of Anderson and others were confirmed and Kansas continued to suffer from a reputation of drouth and crop failure.

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[13] Kansas as She is. The Greatest Fruit, Stock and Grain Country in the World (Lawrence, Kansas, 1870), p. 17.

[14] John A. Anderson, "Sketch of Kansas Agriculture," Fourth Annual Report of the State Board of Agriculture, Kansas, 1875 (Topeka, 1875), pp. 72-73.

Nor was this the end of the troubles which plagued the state. The first serious grasshopper invasion occurred in the fall of 1866 when grasshoppers laid waste the vegetation in many localities. One of the first reports of the invasion came from Council Grove, Morris County, where they appeared on September 1:

> They came from the south, completely filling the air as high as one could see, and looking very much like driving snow flakes. In a few minutes the ground and everything green was covered, and in less than two hours the leaves were stripped from trees, bushes, corn, etc. Since then the weather has been cold and wet so they have had no chance to leave, as they only move in hot, dry weather. The oldest inhabitant has not seen the like. They now lie thick over everything; they are eating the ears of corn, cob and all, cutting them off so they lie quite thick on the ground. They even eat the bark of trees.[15]

A few days later they arrived at Osage Mission, but fortunately "most all the crops were saved." They then moved on in a northeasterly direction to Lawrence and finally invaded Leavenworth County. The infestation was so serious that an appeal was made to farmers not to burn their prairie land until spring.[16] The grasshoppers had deposited their eggs, and it was believed that if the grass were burned in the spring after the eggs had hatched but before the insects had grown wings, many if not all would be destroyed.

In the fall of 1868, parts of the state were again invaded by these devastating little pests. This time they struck along the northern border and committed serious depredations upon late corn and other vegetation. Fortunately, most of them veered in a southwesterly direction and beyond the cultivated portion of the state. Although the total

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[15] Kansas Farmer, III (October, 1866), p. 149.

[16] Ibid. See also Fourth Annual Report of the State Board of Agriculture, Kansas, 1875, pp. 46-50.

damage was considerably less than that suffered in 1866, the legislature authorized the governor to spend $15,000 for seed wheat to be distributed among the destitute citizens on the western frontier.[17]

Despite the dry spells and recurring visitations of grasshoppers, the press reflected optimism and confidence. Indeed the Kansas Farmer was exceedingly optimistic. The editor, booster of the state that he was, proclaimed Kansas to be an acknowledged success, saying in 1868:

> Drouths, border wars, bushwacking, jay-hawking, Indian wars, cholera, grasshoppers, and every other real or imagined infliction which answered for dream or bugbear, have passed away. It is demonstrated that no State in the Union has better gardens, more productive fields, or a better growth of fruit. While we write the country luxuriates in ripe berries and raspberries. The peach and other fruit trees stand with their burdens. The oat crop, the wheat crop, the corn, all kinds of field crops, are excellent.
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> The efforts to secure immigration have not been in vain. . . . Kansas newspapers and circulars and immigration letter paper have been sent broadcast, and a human harvest is being gathered, better than that of the fields. Thousands of people and millions of dollars will come this year. Towns are springing up in unexpected localities. All who come send back the story of a state unsurpassed as to soil and climate, and unrivaled as to crops. For every one who comes this year, a dozen may be expected soon to follow. And so we lay the foundations of a great State. Already we have more money invested in school-houses, churches and printing presses than any state ever had, as young as ours. And still we obey the voice which says 'Let my people go forward.'[18]

This unblushing optimism of the Kansas Farmer editor was largely justified as hundreds and thousands of emigrants streamed into the state from 1868 to 1874. Then disaster struck again. The winter of 1873-74 was unusually severe, and it left livestock in poor condition. This situation, however, was only the harbinger of worse to come. For

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[17]Daniel W. Wilder, ed., Annals of Kansas (Topeka, 1886), p. 501.

[18]Kansas Farmer, V (July, 1868), p. 107.

example, the spring season was backward, as there was a shortage of moisture which persisted into the summer. Moreover, the chinch bug infested growing crops in early summer and inflicted heavy damage on spring wheat. The months of July and August saw the temperature soar repeatedly above the 100 degree mark, and the intense heat caused additional damage to field crops, gardens, and pastures.

The ravenous grasshoppers appeared in northern and northwestern Kansas around July 25. Traveling on a broad front in an easterly-southeasterly direction, they enveloped the entire state before the end of August.[19] The air was filled with these swarming, voracious trespassers, and when they alighted, the fields, yards, pastures, trees, and buildings were completely covered. The visitation was so sudden that many became panic-stricken and believed that total destruction of every green thing was imminent. As with the 1860 drouth, this calamity fell with greatest force in the western counties where immigration had been very heavy the past two years and where the new settlers were depending on corn, potatoes, and garden vegetables for their livelihood. Here the invaders left a desolate country behind them. The corn crop was generally damaged and in some localities entirely destroyed. This devastation forced farmers to sell their hogs at ruinous prices and to begin feeding to their livestock what little wheat they had on hand. Starvation or

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[19] Third Annual Report of the State Board of Agriculture, Kansas, 1874 (Topeka, 1874), pp. 13ff. The author has drawn extensively on this Report and various issues of the Kansas Farmer for this account of the 1874 disaster. See also F. W. Giles, Thirty Years in Topeka: A Historical Sketch (Topeka, 1886), for an excellent account of the 1874 grasshopper plague and the relief efforts to aid the farmers; and John Ise, Sod and Stubble, the Story of a Kansas Homestead (New York, 1936), for an intriguing account of the 1874 disaster as it affected his parents on their homestead in Osborne County.

emigration seemed the choice for many Kansas settlers unless aid were forthcoming.

As soon as the extent of the damage and of the suffering of the people was determined, Governor Thomas A. Osborn, at the urging of many influential citizens, called the legislature into the first special session in its history to deal with the problem of relief.[20] Meeting on September 15, 1874, the lawmakers passed two measures providing for the issuance of special relief bonds. The first was general in nature and authorized any county to issue bonds not to exceed one-half of 1 per cent of the assessed valuation of that county.[21] These bonds were to bear 10 per cent interest per annum, and the proceeds were to be used only to provide food, clothing, and fuel to the destitute of the county which issued the securities. The needy settler was required to furnish an affidavit stating that he was in a destitute condition, that he needed "the aid of the necessaries of life," and that he had no other available resource.[22] Furthermore, he might be called upon to perform labor on the public highways, or on other public improvements at a wage not exceeding one dollar per day.

The second law authorized the state to issue twenty-year 10 per cent bonds to raise $73,000 for the relief of destitute citizens on the frontier.[23] These bonds were to be purchased with money in the Permanent School Fund. Moreover, nineteen counties were authorized to issue

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[20]Kansas, Laws (Special Session, 1874), p. 3.

[21]Ibid., ch. 5, secs. 1-13.

[22]Ibid., sec. 7.

[23]Ibid., ch. 6, secs. 1-15.

twenty-year relief bonds bearing 7 per cent interest in stipulated amounts varying from $1,000 to $10,000.[24] The state treasury was to purchase these county bonds with the proceeds of its own issue. The money thus realized was directed to be paid to the several county treasurers to be "held in the respective treasuries as a fund to be designated as a relief fund for the destitute people of the county and . . . for the purpose of furnishing them with the necessary food, clothing, and fuel only."[25]

The State Board of Agriculture later studied the bond issue and discovered that only three of the nineteen counties authorized to vote relief bonds did so.[26] The remaining sixteen counties either did not submit the issue to a vote, or the electorate defeated the proposal. Thus the work of the special session was in vain. Not only were the counties unable to sell their general bonds, except at heavy discounts, but the special relief bonds were approved in only about 15 per cent of the counties. As a result, the only money in the public treasuries available for relief activity were small amounts in the various county poor funds.

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[24] Ibid., sec. 10.

[25] Ibid., sec. 11.

[26] Third Annual Report of the State Board of Agriculture, Kansas, 1874, pp. 40-46. The three counties were Norton, Reno, and Rice. In addition, the legislature appropriated two thousand dollars to Decatur County and five hundred dollars for the relief of settlers in unorganized counties. This money in the state treasury came from surplus funds arising from the sale of state bonds. A number of reasons were given for the defeat of the bond issue in sixteen of the nineteen counties. First, there seemed to be a determination not to incur more county indebtedness, since taxes were already high. Secondly, the electorate in the older-settled communities was either indifferent or opposed to the bonds because they were able to take care of their wants, while those most in need of aid were disfranchised newcomers. Finally, it was not politically expedient to advocate bonded indebtedness.

Meanwhile, a Kansas Central Relief Committee was organized to obtain and distribute aid within the state for the victims of the grasshopper plague.[27] This committee immediately issued an address to the citizens of Kansas and to the "people of the eastern states" which read in part:

> Although the reports, which have been widely circulated over the country, grossly exaggerate the amount of destitution in Kansas . . . information received through the State Board of Agriculture, and from other reliable sources, clearly shows that the winter, which has now fairly set in, finds many people in our State, especially newly-arrived pioneers in the frontier counties, destitute, not only of fuel and suitable clothing for winter use, but also adequate means for the subsistence of man and beast. . . .
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> The destitution is not general, but limited. It is mainly confined to the frontier counties in which the growing crops were destroyed by the grasshoppers in the months of July and August. In the older counties, there is abundance to meet the wants of the people, but if there are deficiencies as to some crops, the people have means to procure needed supplies from abroad. With the exception of the frontier counties, into which the last two or three years have poured an unprecedented tide of enterprising and worthy settlers of very limited means, the proportion of people not able to provide for themselves, is as small in Kansas as it is in any State in the Union. . . .
>
> Even in these frontier counties, the lack of supplies exists chiefly among the immigrants who have come into the State within the last year or so, and who had no dependence for a living but the sod crops which the grasshoppers destroyed. . . . In our judgment, it is the duty of those who live in the older portions of the State to see to it that even the immigrant of yesterday, having pushed on to the border with the honest purpose of making a home for himself and his family, shall not lack the necessaries of life. Such a course is dictated by justice, by charity, and by sound policy.
>
> We are sure that the people in the older and wealthier portions of the State are both able and willing to render assistance to the needy neighbors. One main purpose to the establishment of this committee, is to furnish a channel through which churches and other local organizations and societies in this State may send contributions to those who are entitled to receive them. We earnestly appeal to all our own people to take immediate and efficient measures to furnish help to their fellow citizens who are sufferers, not from any fault of theirs,

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[27] Fourth Annual Report of the State Board of Agriculture, Kansas, 1875 (Topeka, 1876), p. 41.

> but through unavoidable calamity. The needs of the sufferers are pressing, and the early arrival of winter forbids delay in efforts for their relief.[28]

Cognizant of the abuses connected with procuring aid in 1860, the relief committee warned against placing benefactions in the hands of unauthorized, irresponsible, and mercenary parties. Moreover, it declared that anyone engaging in soliciting contributions would first have to be screened by the committee and be recommended to the governor for official endorsement. In this manner, the committee relieved itself of any responsibility for the actions of unauthorized solicitors whose conduct might bring Kansas relief efforts into disrepute.[29]

The governor requested the Board of Agriculture to make a study relating to destitution in the frontier counties and that the information obtained be made available to the relief committee in order to expedite its work.[30] The research revealed that 12,089 destitute citizens were living in twenty-six counties located mainly west of a line drawn north and south through Wichita.[31] It suggested that 50 per cent be added to this figure to care for those needing only clothing and bedding articles. The total needing assistance, therefore, was placed at 18,134 out of a combined population in these counties of 66,104.[32] Items most needed

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[28] Ibid., pp. 41-42.

[29] Ibid.

[30] Third Annual Report of the State Board of Agriculture, Kansas, 1874, p. 48. This report was transmitted to the governor on December 1, 1874.

[31] Ibid.

[32] Ibid. No estimate was made in this study of destitution elsewhere in the state. The eastern counties were able to care for their own needy.

included children's and women's clothing, boots and shoes, bed covering, corn, potatoes, flour, beans, hominy, and fuel.

The study further pointed out that while most of the western counties had raised some wheat, the homesteaders depended largely on corn and vegetables for sustenance. These crops had been destroyed. According to the report, "the failure of corn, principal food for domestic animals in the state, has necessitated the feeding of wheat. In addition to this, there has been a large increase in the acreage of winter wheat sown this fall. These two causes have diminished the supply of breadstuffs, and lessened the ability of those counties to provide for their own sustenance."[33]

With winter fast approaching and with a new legislative session about to convene, the editor of the Kansas Farmer expressed the hope that the lawmakers would appropriate $50,000 for the purchase of seed wheat, corn, oats, rye, potatoes, and vegetable seeds for the frontier settlers.[34] Although steps had been taken to secure a congressional appropriation for the distribution of seed, he felt that the federal government would act too late. Therefore, he urged the state to take prompt and energetic action to care for its own needy. The editor wrote:

> It would have added to the credit and dignity of our state to have gone down into our treasury for a half million dollars rather than have filled the east with traveling mendicants. The exaggerations of the present calamities of drouth and grasshoppers throughout the country will do the state immense harm, which could have been avoided had we grasped the problem,

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[33] Ibid.

[34] Kansas Farmer, XII (December 30, 1874), p. 412.

> cut the red-tape in our legislature, and taken care of our own needy, as we ought to have done.[35]

Shortly before the legislature was to convene, the governor again turned to the State Board of Agriculture for assistance in dealing with the western disaster. He asked for a more detailed statement concerning the extent of destitution, together with an estimate of the amount and probable cost of rations and clothing, seed for spring planting, and feed for work animals, all of which would be required to alleviate suffering and enable farm operations to continue.[36] Late in December the Board secretary sent questionnaires on destitution to legislators, the press, county officials, agricultural organization officers, and many others.[37] A clearer picture of the situation was obtained from this survey, and detailed estimates were compiled and transmitted to the governor who then informed the legislature.

The Board estimated that there were 32,614 destitute people out of a total population of 429,845.[38] This figure amounted to 6 per cent of all Kansans, and the cost of supporting them with rations for 120 days was fixed at $547,916.[39] The destitutes, however, were not evenly distributed throughout the counties. The study revealed that damage caused by the drouth and grasshopper invasion was slight in the eastern counties but that the situation became progressively worse as one traveled westward across the state. In the eastern-most counties, for instance, less

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[35] Ibid.

[36] Fourth Annual Report of the State Board of Agriculture, Kansas, 1875, p. 27.

[37] Ibid.

[38] Ibid., pp. 32-33.

[39] Ibid.

than 1 per cent of the people were destitute, while in the thinly scattered frontier settlements as high as 45 per cent of the population was in need.[40]

With this study to guide them, the lawmakers took up the question of disaster relief. Although several measures were proposed, two issues arose which split members of the legislature along sectional lines so that little more was accomplished than had been achieved at the special session held during the previous September.[41] The first divisive issue concerned distribution of relief funds. Legislators from the western counties reasoned that since the eastern communities were older and more soundly established, they were quite able to provide for the limited destitution among them. They believed, therefore, that the state relief effort should be directed solely toward meeting the needs of the suffering settlers in the western portion of the state. On the other hand, while the eastern representatives were aware of the greater suffering in the

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[40] Ibid. Indeed, the increasing severity of damage and suffering was so clearly defined that the counties fell naturally into five groups, approximating successive north-south tiers. The first group included the three easternmost tiers of counties; group two embraced the next three tiers of counties; group three was the seventh tier of counties west; the fourth group consisted of the eighth tier west; and the fifth group included the remaining western counties. Following is a breakdown of these groups by population, destitution, and the cost of rations for 120 days, rounded to the nearest dollar:

Group	Population	Percent of state population	Destitution	Percent of total destitution	Cost
I	261,534	50	1,805	6	$ 30,324
II	159,481	30	7,927	24	133,174
III	60,089	11	8,015	25	134,652
IV	35,703	6	9,026	27	150,637
V	13,038	3	5,841	18	99,129
Totals	529,845	100	32,614	100	$547,916

[41] Ibid., p. 41.

western area, they nevertheless insisted that there should be an equitable distribution of relief funds to all portions of the state in accordance with reported devastation. Easterners were sensitive about disproportionate relief expenditures in the West because they paid most of the taxes.

The second issue that divided the legislature was whether a bill to appropriate $95,000 for relief purposes should be in the form of a donation or a loan to the counties receiving the aid. Easterners insisted that it should be a loan while the western lawmakers held out for a donation. In the end, sectional differences could not be reconciled and all measures failed. But rather than bear the onus of callous indifference to the suffering of thousands of citizens, the legislature appropriated $6,000 to the State Relief Committee and $5,000 to the State Grange Executive Committee to help pay freight charges on relief goods sent into the state.[42]

In the face of legislative inaction, the main burden of caring for the needs of destitute citizens fell upon the State Central Relief Committee. The extent to which this group met the needs of the sufferers was revealed in its final report published in July, 1875.[43] This statement disclosed that the committee had received and disbursed 265 carloads of supplies valued at $400 each, 11,049 packages worth five dollars each, and $73,863.47 in cash. The aggregate value of the supplies and cash received and distributed thus totaled $245,108.47. In addition, the army furnished clothing valued at $20,000, and Congress released $75,000

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[42]Kansas, Laws (1875), ch. 12, secs. 1-3; and ibid., ch. 13, secs. 1-3.

[43]Wilder, Annals of Kansas, pp. 686-87.

worth of army rations.[44] Finally, many easterners sent an undetermined amount of food and clothing to their relatives and friends in Kansas and they also contributed directly to counties the sum of $7,055.28.[45] An unofficial estimate of the total amount of relief sent to afflicted Kansas was placed at $500,000, a figure very close to the estimate made by the State Board of Agriculture.[46]

Some of the suffering among the destitute settlers in the western counties was alleviated by the salvage and sale of buffalo bones. Indeed, this became quite an important industry, especially during the hard times of the early and middle part of the decade. Hundreds of settlers scoured the prairies for bones that were worth five or six dollars a ton delivered to the railroad yards. The extent of this business can be realized by the fact that in 1874 some 3,160,000 pounds were shipped over the Kansas Pacific and its branches, while shipments over the Santa Fe amounted to 6,914,950 pounds, besides 1,314,300 pounds of buffalo hides and 630,800 pounds of buffalo meat.[47] Fluctuations in the market value of buffalo bones, it has been said, were often of more interest to frontier settlers than the ups and downs of the grain market.[48]

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[44] Ibid. See also Fourth Annual Report of the State Board of Agriculture, Kansas, 1875, p. 43.

[45] Ibid.

[46] Fourth Annual Report of the State Board of Agriculture, Kansas, 1875, p. 33.

[47] Third Annual Report of the State Board of Agriculture, Kansas, 1874, p. 54. Great piles of buffalo bones reportedly could be seen at nearly every frontier railroad depot; they were awaiting shipment to the East where they were made into fertilizer and other products.

[48] Ellsworth (Kansas) Reporter, April 17, 1875, p. 1.

Plagued with repeated grasshopper invasions, the Kansas lawmakers in 1877 sought to legislate control of these pests by passing the "Grasshopper Army Law", a classic among legal documents.[49] This measure empowered the township trustees to order out all able-bodied male citizens between the ages of twelve and sixty-five for the purpose of destroying the invading insects. Township road overseers were to supervise these "armies" and to inform the men as to when and where they were to report, the tools required, and the nature of the work to be performed.[50]

This law also directed the Board of Agriculture to compile a list of the most effective ways of fighting or controlling grasshoppers, and to provide ten copies of it to each township trustee. The secretary responded with a twenty-page pamphlet describing various methods for coping with this destructive invader. Some were credible, others absurd, none successful![51] One suggestion, for example, was to use a heavy roller to crush the newly hatched hoppers. Another advocated digging ditches around fields to trap the young insects before they acquired their wings. Similar in purpose was the use of a fine-woven net made of calico, or other material, and arranged to converge on a pit, or deep hole, into which the grasshoppers would be driven and destroyed. S. T.

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[49]Kansas, Laws (1877), ch. 119, secs. 1-6; and ibid., ch. 120, secs. 1-9.

[50]These "grasshopper armies," mobilized on the request of as few as fifteen legal voters, were authorized to enter upon any threatened land. Although this law was never enforced, it remained in effect until the states' general statutes were revised in 1923.

[51]Kansas State Board of Agriculture, "Compilation by the Secretary, Kansas State Board of Agriculture, of the Manner and Means HeretoforeEmployed for the Extermination of the Grasshopper in Pursuance of Section 5 of an Act Entitled 'An Act to Provide for the Destruction of Grasshoppers, etc.,' Approved March 6, 1877. Together with a Synopsis of County Data and a Recommendation of Special Crops," Circular No. 4, 1877 (Topeka, 1877).

Kelsey believed they could be driven away with smoke pots, while a gentleman from far-away Hamilton, Bermuda, made the ludicrous suggestion that one pound of sulphur burned on charcoal in the center of an infested field would do the job. And not to be outdone by his island neighbor to the East, an enterprising Florida citizen advanced the "concussion theory." His idea, and he petitioned Congress for a grant of money to prove its effectiveness, was simply to discharge a cannon in an infected area. The force of the concussion not only would kill all grasshoppers for miles around, but also would destroy their eggs in the ground! Finally, there was facetiously presented a remedy which was admittedly worse than the evil to be corrected: it was that prairie chickens devour grasshoppers. However, "if we could have the required number of chickens," the author of this suggestion mused, "they would demand their pay for it, and not leave a single grain of all we could raise, and we would be as bad off as ever."[52]

Most of the settlers who had departed during the fall and winter months began returning to their farms early in 1875, as precipitation fell giving the prospect of good crops. Emigrants also began arriving in large numbers. The grasshopper eggs which had been laid the previous season hatched, but while the young hoppers did considerable damage to early spring crops, they departed from the state shortly after winging out. In the summer of 1875, just a year after the twin calamities of drouth and grasshoppers had rung down the curtain of disaster, the Santa Fe sponsored an excursion over its line for some 227 newspaper editors from all parts of the nation.[53] The consensus of these critics, and

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[52] Kansas Farmer, XII (August 19, 1874), p. 259.

[53] Wilder, Annals of Kansas, p. 686.

they were well aware of the motive of their host, was that the Cottonwood and Arkansas river valleys were nothing short of the "garden of the West." A dispatch carried in the Detroit Tribune, reportedly one of the least eulogistic of the editorials, characterized the state as follows:

> A great cry came up from this beautiful Arkansas River Valley last winter: "Help us, or we perish!!" Our own citizens of Detroit gave liberally in response to the call. The occasion was an unusual one, for the fact . . . that the sufferers were newcomers, whose first crop was corn, upon which they relied wholly for subsistence, and that crop the enterprising grasshopper gathered. This year their grain crop is abundant and secure, and a destruction of corn such as they suffered last year might be repeated this year . . . and not bring a ripple upon the affairs of the people of the Arkansas Valley. The people of Detroit, who gave to the Relief Fund last winter . . . may be glad to know that their contributions went to intelligent, refined, and grateful people; to men, women and children who are delighted with the section in which they live, and are proud of its fertility, as shown in the immense crops which, in all directions, stretch away, ripe or ripening, to the horizon.[54]

The recuperative powers of this young state soon relegated the memories of 1874 to the forgotten past. Although Kansans had greatly suffered from drouth and grasshoppers, agricultural growth was not permanently retarded. The last quarter of the nineteenth century was to be a period of unparalleled growth and expansion for Kansas farmers and stockmen.

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[54]Kansas Farmer, XIII (June 30, 1875), p. 204.

CHAPTER VI

WESTWARD EXTENSION, 1875-1881

The unfavorable publicity resulting from the severe drouth and grasshopper invasion of 1874 was largely overcome by a series of bountiful crops in the following years. For those Kansans whose confidence remained unshaken in an hour of trial, vindication was complete; for those who had so soon lost faith in the face of adversity, confidence was as quickly restored. No more than a cursory examination of the facts reveals the mounting fortunes of Kansas agriculture after 1874. The population of the state, for example, increased 76 per cent from 528,437 in 1875 to 931,572 in 1881.[1] Most of this growth was rural. Nearly 9,000,000 acres of Public Domain were either entered under the various land laws, or purchased for cash between 1875 and 1881.[2] The increase in cultivated acres from 5,000,000 in 1875 to 10,000,000 in 1881, of taxable acres from 18,000,000 to 24,000,000, and the assessed valuation of these lands from $72,000,000 to $91,000,000 testify to rapid agricultural expansion.[3] Finally, the growing opulence of Kansas

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[1] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895 (Topeka, 1895), pp. 12-14; and Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882 (Topeka, 1883), pp. 508-09.

[2] Compiled from the figures given in the Annual Report of the Commissioner of the General Land Office, for the years 1875 through 1881.

[3] Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

farmers is indicated by the fact that the aggregate value of all farm products for the years 1875 to 1881, inclusive, amounted to over $500,000,000, averaging nearly $74,000,000 per year compared to less than $5,000,000 in 1860.[4]

Agricultural progress of the state after 1874, however, was based upon more than a succession of unusually good crop seasons, important as these were. Rather, it was a combination of factors which enabled pioneers to establish permanent settlements for the first time in the central and western counties. Among the more important of these were the expansion of railroads, the use of drilled wells and windmills, the improvement of farm implements, the introduction of new crops, and more favorable moisture conditions. Together these forces served to attract thousands of people into Kansas who were seeking better agricultural opportunities, particularly in the form of cheap land.

Additional railroad mileage was among the most important factors contributing to the rapid settlement and development of the state. Construction of rail lines in Kansas proceeded at a brisk pace after 1875 as track mileage increased from 2,117 in that year to 3,046 five years later.[5] On June 30, 1882, seven unorganized and sixty-seven of the eighty-one organized counties were spanned by 3,701 miles; and by 1885 the total had risen to 4,168.[6] Thereafter railroad building reached

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[4] Ibid.; and U. S., Census, Eighth Census (1860), "Agriculture," pp. 54-57.

[5] O. C. Hull, "Railroads in Kansas," Kansas State Historical Society, Collections, XII (Topeka, 1912), pp. 44-46.

[6] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886 (Topeka, 1887), Pt. 2, p. 128.

boom proportions. For example, from November 1, 1886 to December 31, 1888, more railroad companies were chartered and more miles of track were laid in Kansas than in any other state of the Union.[7] At the end of 1888 no fewer than 8,799 miles of track were in operation and only six of the 100 counties remained untouched by one or more lines.[8] Penetration of settlers into the central and western portions of the state would have been much slower without this state-wide system of transportation. In the meantime the land grant railroads had embarked upon extensive advertising campaigns directed toward settling their lands with a permanent population. By September, 1886, all such companies except the Kansas Pacific had disposed of their grants at an average price of slightly less than five dollars an acre.[9]

By providing a dependable water supply for livestock and domestic use, drilled wells and windmills, likewise, played an important role in the successful invasion of the central and western counties of Kansas. Early surveys revealed a seemingly inexhaustable supply of subsurface water in that region.[10] New techniques in well drilling made it possible to reach this water, and the development of a reliable windmill in the

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[7]Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888 (Topeka, 1889), Pt. 2, p. 152.

[8]Ibid.

[9]Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, pp. 126-27.

[10]See O. St. John, "Sketch of the Geology of Kansas," Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 569-99. O. St. John, "Notes of the Geology of Southwestern Kansas," Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, pp. 132-52; and Walter H. Schoewe, "The Geography of Kansas: Part III, Hydro-geography," Kansas Academy of Science Transactions, LIV (September, 1951), pp. 263-329.

1870's permitted the settler to utilize the ever-present wind to lift water to the surface, even from a considerable depth. Thus the farmer was able to supply his livestock and domestic needs. Moreover, he might irrigate a small garden and orchard and thus provide a precious supply of vegetables and fruits quite apart from the vagaries of weather. The establishment of a successful rural economy, particularly in the western reaches of the state, would certainly have been far slower and more difficult, if not impossible, in the absence of the wind-powered water pump.

The improvement and the utilization of farming implements in the 1870's and 1880's also hastened farm settlement in the plains section of Kansas and permitted the farmer literally to plow up the domain of the Cattle King. Although most of the basic machines needed for commercial agriculture were either in use or in the process of being developed by the end of the Civil War, the scarcity of material and labor at that time prohibited their manufacture in sufficient quantities to meet the demand.[11] Therefore, the available machines were generally sold near the manufacturing centers and farmers farther removed were left wanting. With the passing years, however, modern implements for cultivating, drill-planting, harvesting and threshing became available to Kansas farmers.

The use of the steel prairie-breaker and the chilled-iron sulky and gang plows greatly expedited the task of breaking the tough Kansas prairie sod and bringing the land under cultivation. Straight-toothed and disc harrows, field cultivators, listers and check-rowers, and

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[11]For a detailed study of farm machinery see Leo Rogin, Introduction of Farm Machinery in Its Relation to the Productivity of Labor (Berkeley, 1931).

small-grain drills also encouraged extensive farming operations. Similarly, by drastically reducing labor requirements and otherwise lowering production costs, improved harvesting and threshing machinery such as the self-reaper, twine binder, header, and the steam-driven threshing machine, furthered development of large-scale cereal farming in the state in the years after 1875.

As early as 1864, farmers in Doniphan County were paying from $135 to $180 for small-grain reapers and mowers including Kirbys, Buckeyes, Manneys, and McCormicks.[12] In 1872 a Leavenworth farm implement dealer advertised Garden City, Grant, and Moline plows; Skinner breakers and gang plows; Champion and Excelsior reapers and mowers; Marsh harvesters; Vibrator and Massillion threshers; Buckeye grain drills, and an assortment of other farm machines and implements in the Kansas Farmer.[13] By 1881 a combined lister-drill implement, operated by one man and pulled by three horses, was being used in the state for planting corn. A walking plow version could be purchased for as little as $50, while a sulky machine cost upward of $110.[14] Three years later a drill to plant wheat and other small grains had "almost altogether" superseded the broadcast seeder in central Kansas, and by 1891 this type drill was being used almost universally throughout the state.[15]

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[12]Kansas Farmer, I (February 1, 1864), p. 212.

[13]Kansas Farmer, IX (May 15, 1872), p. 163.

[14]Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1881 (Topeka, 1882), pp. 153-54.

[15]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1884 (Topeka, 1884), p. 7; and Report of the Kansas Board of Agriculture for the Quarter Ending September 30, 1891 (Topeka, 1891), pp. 18-27.

Although steam traction engines did not come into widespread use on Kansas farms until the late years of the century, largely because of their cost, they were brought in for demonstration purposes throughout the 1870's and 1880's. In 1884, for example, a fifteen horsepower Eclipse steam traction engine, operated by two men, reportedly pulled a six-bottom Kimmel gang plow "easily and steadily" at Wichita.[16] It plowed a furrow fifteen inches wide and five inches deep for a half mile in thirteen minutes. Steam power for threshing purposes, on the other hand, was in general use on Kansas farms by the end of the 1880's. During the harvest season of 1890, 150 steam threshers were reported at work in Sumner County alone.[17]

Finally, the introduction of new and improved varieties of crops better suited to areas of irregular and often deficient precipitation helped accelerate settlement and agricultural development beyond the ninety-sixth meridian. Rice Corn, for instance, early was taken into the western counties as a substitute for Indian Corn because it required less moisture. Hard winter wheat, a hardy, drouth-resistant plant, was brought into the state in the 1870's and shortly made Kansas one of the most important hard winter wheat producing areas in the world. Grain sorghums and alfalfa also were introduced into the less humid central and western sections where their drouth-resisting, nutritious qualities helped to make a success of general farming. And so new and improved agricultural methods, combined with a transportation system and a series of favorable crop years in the last half of the 1870's brought

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[16] Kansas Farmer, XXII (April 30, 1884), p. 1.

[17] Kirke Mechem, ed., The Annals of Kansas, 1886-1925 (Topeka, n.d.), I. 107.

a degree of prosperity to Kansas farmers and stockmen and caused large numbers of settlers to pour into the central and west-central sections of the state.

Steady and substantial agricultural growth and development occurred in eastern Kansas during the period 1875 to 1881. The total population of the twenty-six counties rose 40 per cent from 311,352 in 1875 to 437,216 in 1881.[18] Although the cities and towns absorbed some of this growth, the construction of over 11,000 new farm dwellings during the three year period 1879-1881 indicate that well over half of the increase was rural.[19] Agricultural expansion is further reflected by the increases in the number of farms, in cultivated acres, and in livestock and dairying activities. The number of farms in the eastern region, for example, increased nearly 77 per cent from 27,715 in 1870 to 48,927 in 1880, advanced substantially from 2,808,711 acres in 1875 to 3,667,219 acres five years later.[20] Livestock interests in the eastern counties also moved steadily forward during this period. Stock cattle increased 42 per cent; swine numbers jumped 229 per cent, and the number of milk cows rose 40 per cent as dairying represented an increasingly important aspect of eastern Kansas agriculture.[21] Butter production, for instance,

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[18]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

[19]Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880 (Topeka, 1881), pp. 258-339; and Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1881, p. 565.

[20]U. S., Census, Ninth Census (1870), "Agriculture," p. 352; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[21]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

increased 54 per cent and cheese output advanced 25 per cent.[22]

In the light of this impressive growth, it is interesting, but not surprising, that the relative importance of agricultural production in the eastern section to total state farm output actually declined during the period under consideration. For example, the number of farms in the eastern counties in relation to total farms in the state dropped from about 73 per cent in 1870 to only 35 per cent a decade later.[23] Furthermore, the percentage of cultivated acres in the eastern region decreased during the period 1875 to 1881 from 59 to 41 per cent of the total, while wheat and corn percentages fell from 41 to 26 and from 67 to 41 per cent respectively.[24] In addition, the number of swine declined from 65 per cent of the state's total in 1875 to 49 per cent in 1880, while the number of cattle dropped from 56 to 50 per cent.[25] Finally, the amount of butter produced in the eastern counties fell from 59 per cent of total production in 1875 to only 37 per cent five years later.[26] The explanation for this relative decline of agricultural production in the eastern counties is simple: land in the central and west-central portions of the state was rapidly being settled and put into agricultural use. By sheer force of numbers--farmers, farms, and cultivated acres, the older-settled counties were being eclipsed by the newer regions to the west.

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[22] Ibid.

[23] U. S., Census, Ninth Census (1870), "Agriculture," p. 352; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[24] Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

[25] Ibid.

[26] Ibid.

Indeed, the most significant development in Kansas agriculture in the years following the 1874 disaster was the westward extension of settlement. The forty counties bounded by a line drawn west from Marshall to Norton along the northern border of the state, then southeasterly to Sumner of the southern border, east to Chautauqua, and north to Marshall each contained over 5,000 inhabitants on March 1, 1881.[27] Furthermore, these counties received no less than 63 per cent of the total state population increase for the period 1875 to 1881, as their population rose 114 per cent from 212,453 to 454,085.[28] That most of this population growth was rural is affirmed by the fact that the number of farms in this region jumped from 10,487 in 1870 to 78,308 ten years later, most of which were established after 1875.[29]

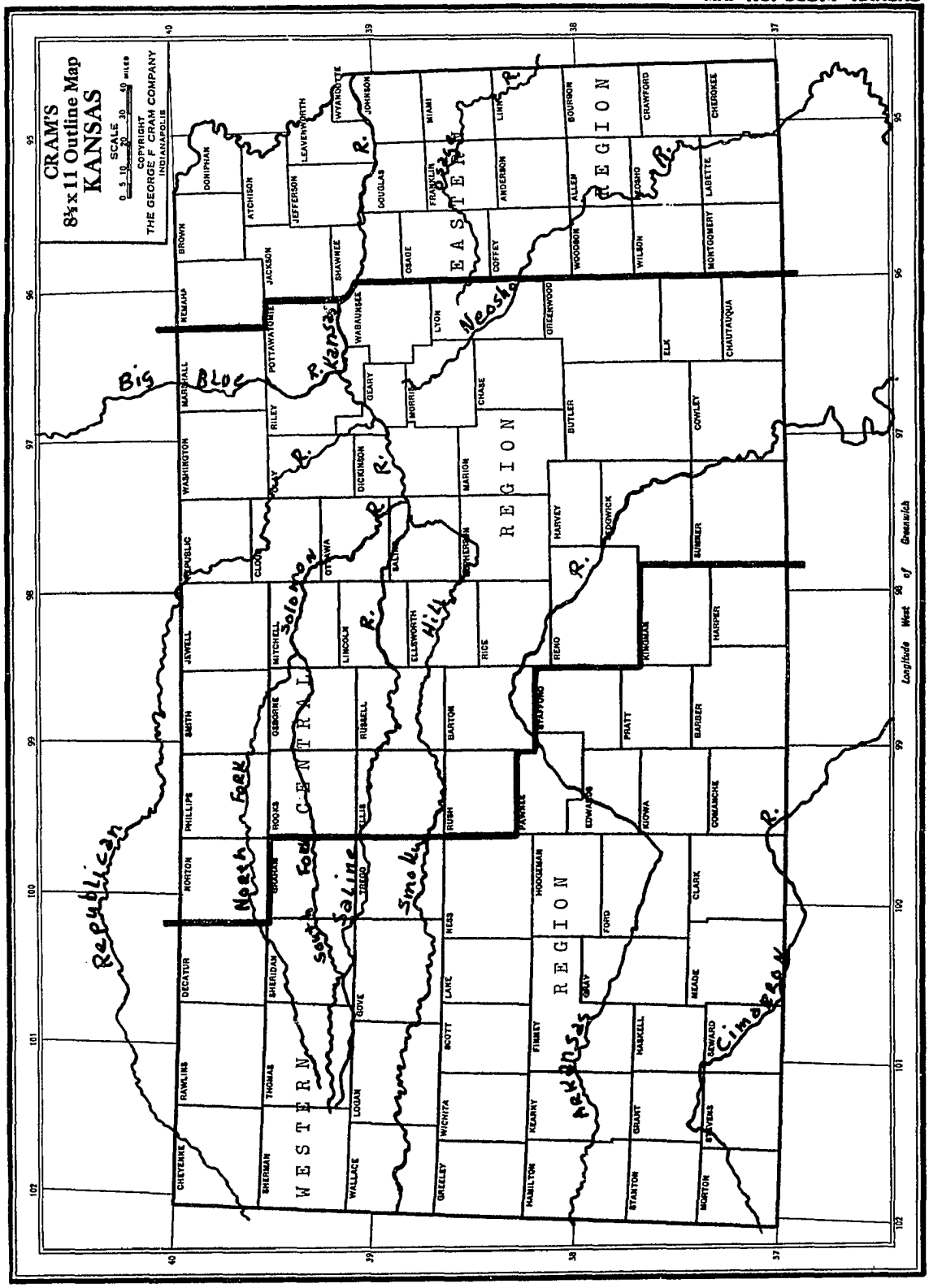
While the spring and summer months of 1874 were exceedingly dry and were accompanied by persistently hot winds, the fall turned wet. This change in weather proved the beginning of a cycle of moist years which, in turn, greatly affected the course of Kansas agricultural history. Precipitation in 1875 was above normal, and a crop as magnificent as the previous one was scanty was produced. The following year was even wetter and again farmers had a fine harvest, although in some areas crops suffered from an excess of moisture. Not quite so much precipitation fell in 1877, but it was generally a good year. The next

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[27] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 508-09.

[28] Ibid.

[29] U. S., Census, Ninth Census (1870), "Agriculture," p. 352; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.


MAP NO. CO814—KANSAS
CRAM'S
8½ x 11 Outline Map
KANSAS
SCALE 30 40 MILES
COPYRIGHT
THE GEORGE F. CRAM COMPANY
INDIANAPOLIS
EASTERN REGION
CENTRAL REGION
WESTERN REGION
Republican
Big Blue
Kansas R.
Neosho
Solomon R.
Saline
Smoky Hill
Arkansas
Cimarron
Longitude West of Greenwich

year, 1878, was a very wet one, and all crops were excellent.[30] Consequently, these years of plentiful moisture and good harvests were directly responsible for luring tens of thousands of settlers into the central and western portions of the state, now generally accessible by railroad facilities.

Barton County, for example, bordered on the 99th meridian and lay mid-way on a line drawn from Sumner to Norton counties which marked the western boundary of the central region. The Arkansas River ran through the southern portion of the county and was paralleled by the Santa Fe which had opened the valley to settlement in 1872. Many of the earlier settlers had come into this area with scanty means and often were without the necessities of life. Moreover, they had suffered through two years of grasshopper scourge and had lost much of their substance as a result. Nonetheless, these hardy, determined pioneers wrote encouraging letters to friends and relatives, describing in glowing terms the natural beauty of the Arkansas Valley and its fertile soil, and emphasizing the bright prospects.[31]

Few of these settlers knew anything about the climate and soil of this western country. But through experimentation and observation they learned the correct way to cultivate the soil, the right seeds to plant, the proper time to plant, and the exact quantities to use. And so the settlers prospered and the population of the county grew. Cities and towns were laid out, churches and school houses built, and mills erected

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[30]Information regarding weather conditions was gained primarily from the Annual and the Biennial Report of the State Board of Agriculture, and from issues of the Kansas Farmer for the appropriate years.

[31]Kansas Farmer, XVI (February, 27, 1878), p. 82.

to replace the forts, stockades, and ranches of an earlier period. The population of the county rose from 2,099 in 1875 to 8,251 three years later, and on March 1, 1879, it stood at 12,333, an increase of 4,082 in a single year.[32] Not surprisingly, 669 new farm dwellings were constructed in 1879, a number exceeded in the entire state only by Osborne and Mitchell counties, which were also located on the west side of the central region.[33]

Acres devoted to field crops in Barton County increased ten-fold between 1875 and 1879, and jumped another 22 per cent in the following year as the number of farms reached 1,962.[34] Winter wheat acreage rose from a mere 3,102 in 1875 to 79,013 five years later, while acres devoted to corn expanded from 6,192 to 52,876.[35] Milk cows and stock cattle increased in numbers from 322 to 2,387 and from 519 to 4,421, respectively, during the same period.[36] By 1880, Barton was well on its way to becoming a heavily-settled, prosperous, and mature agricultural county.

Sumner County, situated in the extreme southwestern corner of the central region, recorded population increases from 4,925 in 1875 to 12,078 in 1878 and to 15,000 in the following year.[37] On March 1, 1880,

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[32]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

[33]Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880, pp. 258-339.

[34]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1880; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[35]Ibid.

[36]Ibid.

[37]Ibid.

its numbers had advanced to 20,812; thus it became the eighth most populous county in the state and was exceeded only by Cowley among the forty central counties.[38] The farmers of Sumner County enjoyed a prosperous year in 1880 as their winter wheat produced a good crop and their corn yielded as high as fifty to seventy bushels per acre.[39] At that time, 47 per cent of the county had been carved into 3,259 farms, and 28 per cent of the land was under cultivation.[40] A correspondent for the Kansas Farmer reported that

> everybody is after hogs and cattle to eat up the corn, as we know it will be cheap. All kinds of stock are doing well, and in demand at good prices. Fat hogs are worth $3.50 to $3.60; stock, $4.; corn, 25¢; and wheat 65¢. We have, or will have soon, 126 miles of railroad in the county.[41]

In the meantime, agricultural activity in Dickinson and Saline counties, located in the middle of the central region, attracted the attention of W. W. Cone, a reporter for the Kansas Farmer.[42] Cone toured these counties on horseback in the fall of 1876 and described some of the farming developments which he observed. He visited two Saline County farms south of Solomon City. The first farm had 700 acres under cultivation, including 228 acres of wheat which had, the past season, yielded sixteen bushels per acre. The owner estimated that he had

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[38] Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880, p. 531.

[39] Ibid., p. 203.

[40] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[41] Kansas Farmer, XVIII (August 4, 1880), p. 248.

[42] W. W. Cone was a traveling agent for the Kansas Farmer during the years 1876-1878. He traveled extensively into all parts of the state and his series of weekly articles was published under the by line "Saddlebag Notes."

invested $6.95 per acre in the wheat crop which included plowing and harrowing the ground, seeding the wheat, and harvesting, threshing, and marketing the crop. Since he had received eighty-five cents per bushel, the wheat land had netted its owner $6.65 an acre.[43]

The second farm operation lay adjacent to the first and was just getting underway. During the past summer the owners had employed forty-four breaking plows in preparing 2,900 acres for fall wheat. At the time of Cone's visit, twelve drills were at work seeding the land.[44] The reporter also visited the wheat farm of Theodore C. Henry which lay just east of Abilene in Dickinson County. Henry was one of the early advocates of raising winter wheat, and he operated a number of farms in Dickinson County which were devoted to that crop. He told Cone that his 1876 winter wheat crop had averaged fourteen bushels an acre and that he was now expanding his operation. Cone observed thirteen gang plows and eight harrows at work getting 4,000 acres of land ready for fall seeding.[45]

Saline County increased in population from 6,360 in 1875 to 12,361 in 1881, while Dickinson County grew from 6,841 to 15,971 in the same period.[46] Likewise, acres devoted to field crops advanced greatly in Saline County, climbing from 65,570 in 1875 to 162,843 five years later while Dickinson County expanded even more rapidly with a jump from 71,011

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[43] Kansas Farmer, XIV (October 4, 1876), p. 337.

[44] Ibid.

[45] Ibid. Of course, Cone probably visited only the more successful farmers. Others undoubtedly were not doing so well.

[46] Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

to 217,198 acres.[47] The number of farms from which this production came increased in Saline County from 662 in 1870 to 1,986 ten years later, while in Dickinson County an even more impressive gain from 358 to 2,308 was registered.[48]

The twelve counties in the northern portion of the state which Franklin G. Adams had labeled the "homestead region" also received an influx of settlers after 1874. The population of these counties increased 119 per cent from 65,976 in 1875 to 114,400 in 1881, compared to a 76 per cent increase for the entire state.[49] The Kirwin (Phillips County) Chief reported in 1877 that:

> the way settlers are coming in this fall surprised the ordinary native. Never was such a rush made for any country in the world as there is into the great Solomon Valley at this time. Ere many months government lands will all be occupied and land will command good prices. . . . The herds of buffalo are gone and domestic cattle are scattered over a 'thousand hills.'[50]

This observation is given credence by the fact that the number of farms in the twelve-county area jumped from 3,216 in 1870 to 27,511 in 1880.[51] The latter figure equaled the number of farms that had existed in the twenty-six eastern counties in 1870.

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[47] Ibid.

[48] U. S., Census, Ninth Census (1870), "Agriculture," p. 352; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[49] Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1881.

[50] Quoted in the Kansas Farmer, XV (November 28, 1877), p. 428.

[51] U. S., Census, Ninth Census (1870), "Agriculture," p. 352; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

Osborne County had recovered quickly from the drouth and grasshopper invasion, and prospered from good harvests in 1875 and 1876. The last tillable land in the county was reportedly filed on in 1878, and the population rose from 3,467 in 1875 to 9,445 in 1879 and to 12,517 in the following year.[52] The Ise family, which had homesteaded in the county in the early 1870's observed that

> day after day, a stream of covered wagons moved westward into Nooks, Phillips, Graham and Norton counties. Almost every night movers built their campfires along the road by the cottonwood grove and came in to get milk or eggs or something. . . .[53]

Mitchell County, which bordered on the east of Osborne, also reported heavy immigration in the fall of 1877 and in the spring of 1878. As a result, the population, which had been 5,370 in 1875, climbed to 8,673 three years later, and then jumped to 14,034 in 1879.[54] The latter figure represented the largest single-year gain for any county in the state during this period. The price of land reflected the influx of settlers as raw prairie sold for three to five dollars per acre, and improved farms brought from eight to twelve dollars.[55] By 1879, homestead land was reported scarce in the county, although there was a large acreage of school land being advertised for sale.[56] Osborne and Mitchell

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[52]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1880; and John Ise, Sod and Stubble, the Story of a Kansas Homestead (New York, 1936), p. 74.

[53]Ise, Sod and Stubble, p. 74.

[54]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1879.

[55]Kansas Farmer, XVI (February 13, 1878), p. 64.

[56]Ibid.

led all counties in the state in the construction of new farm dwellings in 1879 with 831 and 837 units, respectively.[57] And so occupation of the north-central counties proceeded at a rapid pace. By 1881 a uniform line of settlement extended over the entire area from east to west-northwest, much as water spreads over a sloping landscape.

The extent of agricultural development in the central region after 1875 can be seen by comparing it with the growth of the older settled eastern portion of the state. Acres devoted to field crops in the central area, for example, advanced from 41 to 55 per cent of the state total during the period 1875 to 1880, whereas the eastern counties experienced a decline from 59 to 41 per cent. The growing importance of field crops in the central area is particularly revealed in the production of wheat and corn. In 1875 the eastern counties harvested 41 per cent of the state's wheat and 67 per cent of the corn, compared to 59 and 33 per cent, respectively, for the central region. But in 1880, the latter area had increased its lead in wheat acreage to 70 per cent of the state total, while the eastern counties had dropped to only 26 per cent. Furthermore, the central area surpassed the east in corn production by a respectable 56 to 41 per cent margin. Farmers and stockmen in the eastern counties continued to dominate the livestock industry during this period, but by a narrower margin. While they owned 56 per cent of all cattle in the state in 1875, compared to 44 per cent in the central counties, five years later their lead had been reduced to 3 percentage points, 50 to 47.[58]

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[57] Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880, pp. 258-339.

[58] Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1880.

The faster relative growth of the central portion of the state west of the ninety-sixth meridian occurred simply because land was readily available on which to establish new farms. During the five-year period ending March 1, 1880, the central counties increased in population by 284,857 while the twenty-six eastern counties grew by only 135,017.[59] Although some of this increase was urban in both sections, there is no doubt but that a larger percentage of the population growth in the central region was rural than was the case in the eastern region. Finally 78,308 farms, or 56.7 per cent of the state's total, were situated in the central counties in 1880, each of which averaged 165 acres, compared to only 48,927 farms, or 35 per cent, in the eastern area where the average size was only 132 acres.[60]

While the most significant developments in Kansas agriculture were occurring in the central region after 1874, there was some settlement farther west. Indeed, on March 1, 1880, 46,045 settlers, representing a little less than 5 per cent of the total state population, resided in the fourteen organized counties beyond the central region, and an additional 4,753 pioneers were living in all but a few of the twenty-five unorganized counties in the extreme western portion of the state.[61] Most of these settlers had been encouraged to enter this region in 1878 and 1879 by years of above-normal rainfall. The pattern of settlement, however, continued to represent a steady sweep across the state, from east to

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[59] Ibid.

[60] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

[61] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895, pp. 12-14.

west-northwest, that was recognizable in the central region.

Despite the fact that the penetration into the far western counties was limited, it was nonetheless significant. For decades this region had been considered unfit for cultivation and uninhabitable by a people depending upon agriculture for subsistence. This impression was now challenged, if not laid to rest, as hardy pioneers invaded the land, plowed it up, and--with the help of generous rains--harvested some fine crops. The extent of their progress can be seen in the fact that in 1880 these farmers on the edge of settlement planted about 5 per cent of the state's wheat acreage and 2 per cent of the corn; they possessed nearly 3 per cent of the cattle, and erected almost 7 per cent of the new farm dwellings on 8 per cent of the state's farms.[62]

Pioneers began moving into the extreme western portion of the state in increasing numbers after 1875. Those who settled in counties adjacent to the central region engaged, for the most part, in general farming with emphasis on stock raising, while those who moved farther west limited their activities almost wholly to stock grazing. It was not unusual for pioneers to enter western Kansas at this time and break forty or more acres of prairie sod, plant a crop and harvest it all within eight months, a feat that would have taken a lifetime in the timbered regions farther east. Indeed, as early as 1878 settlers around Kinsley, in Edwards County, no longer considered themselves on the edge of civilization, since other farmers had ventured as far as 100 miles to west. Rather, these residents were said to be feeling the "responsibility

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[62]Compiled from the figures given in the Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880; and U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16.

of age." As one expressed it:

> Better buildings grace our farms; better stock feed lazily on our meadows, and better horses draw our plows. Before another half decade passes by the buildings on all our older claims, owned and tilled by thrifty farmers, will be surrounded by little groves of trees, which, but a few years ago, the wise in their own conceit, men said would grow only in the mythical imagination of some idle theorist. The little saplings of two or three years' growth, reaching heavenward at the rate of four to six feet each year, gives abundant proof of the adaptability of this soil and climate to the growth of both forest and fruit trees.
>
> It is but a year or two since the theme of almost every man that came to Kansas was either the grasshopper or drouth, now they are no longer heard except as a faint echo reverberating from the hollow pate of some professional growler.
>
> It is but five years since the buffalo . . . roamed at will where Kinsley now stands; they can yet be found within one hundred miles. We make the prediction that men now in their prime will live to see all western Kansas one vast field of grain.[63]

In the summer of 1878, W. W. Cone, on another tour for the Kansas Farmer, observed that the western counties were inproving rapidly.[64] While Pawnee County, for instance, had harvested less than 6,000 acres of corn and wheat in 1876, two years later her farmers raised over 9,000 acres of corn and nearly 21,000 acres of wheat.[65] The population of the county had grown, in the meantime, from 1,006 in 1875 to 6,114 in 1878.[66] Cone mentioned that, while some people in the eastern counties believed Pawnee lay "beyond the rainbelt," he had begun to doubt there was anywhere in Kansas where there was not enough rainfall to

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[63] Kansas Farmer, XVI (September 18, 1878), p. 329.

[64] Ibid., (August 7, 1878), p. 285.

[65] Ibid.

[66] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895, p. 13; and First Biennial Report of the State Board of Agriculture, Kansas, 1877-1878 (Topeka, 1879), p. 52.

grow crops. He also observed that the settlers were busily engaged in experimenting with various crops. A farmer north of Larned, for example, had discovered, over a period of years, that timothy could be raised profitably in that part of the state. Another farmer in the same neighborhood reportedly had taken a homestead in the fall of 1874, and with $700 in cash he had developed his place into one of the best improved farms in the county. This individual had planted over 4,000 fruit trees and he also had a fifty acre pasture which was fenced with barbed wire, "a very rare sight in that part of Kansas."[67]

Cone also visited Pratt County in the extreme south-central part of the state. He observed that water was very difficult to obtain in the central portion of that county, as many wells were from sixty to seventy-five feet deep. Furthermore, there was no stone and very little wood for miles around. Consequently, most of the houses in the county were built of "native lumber," or sod. "Here, then," he concluded, "is lacking what many people consider the three essentials in a prairie country, wood, water, and stone."[68] But despite these obvious shortcomings, Cone believed Pratt to be a good county, especially for the poor man. To support his contention, he related the story of an individual who, with his wife and seven children, had settled there in the spring of 1877. This settler:

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[66]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895, p. 13; and First Biennial Report of the State Board of Agriculture, Kansas, 1877-1878 (Topeka, 1879), p. 52.

[67]Kansas Farmer, XVI (August 7, 1878), p. 285.

[68]Ibid., (July 17, 1878), p. 257.

> . . . had three horses, sold one to buy lumber for his house, then with his team he would gather up a load of buffalo bones and haul them 50 miles to the railroad; these he sold for $6 per ton, and with the proceeds kept his family in provisions. During the summer he also broke 40 acres of prairie; this he sowed to wheat that fall.
>
> This season [1878] he broke 30 acres more, 10 of it being in sod corn, and 20 in oats. His wheat will average 15 bushels per acre . . . his corn 10 bushels . . . and the oats [40] bushels. The land is a homestead and cost him $14. for the 160 acres.
>
> Now these are facts and while every man cannot sell bones and thereby keep his children from starving, yet he can, if he has any 'grit' about him, make a living in Pratt County, if he can in any part of the United States.[69]

Decatur County, in the extreme northwestern portion of the settled area, grew from an estimated population of 950 in 1878 to 4,180 in 1880.[70] Most of these pioneers had come from other portions of Kansas or from Iowa and Missouri, with a sprinkling of German and Swedish emigrants. Although 95 per cent of the land was cultivable, the settlers mainly grazed cattle, of which there were reported to have been some large herds. Graham County, also in the extreme northwest, rose in population from an estimated 1,500 in 1878 to 4,258 by 1880.[71] These settlers reported 770 milk cows and 5,610 other cattle in the county in 1879.[72]

Favorable weather during the years 1875 to 1878 provided settlers who had ventured into the western part of the state with fine harvests.

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[69] Ibid.

[70] First Biennial Report of the State Board of Agriculture, Kansas, 1877-1878, p. 52; and Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895, p. 12.

[71] Ibid.

[72] Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880, pp. 213-14.

However, dry weather set in in 1879 and lasted for two years, resulting in nearly total crop failures and forcing some to abandon their claims and return to a more hospitable East. In Osborne County, for example, it was so dry that the corn had to be cut for fodder in August, 1879, lest it be a total loss.[73] Furthermore, the fields became too dry to plow and the winter wheat crop could not be seeded. However, this misfortune was not serious enough to cause an exodus of settlers. Indeed, the population of the county actually increased from 9,445 on March 1, 1879, to 12,517 a year later.[74] But when the spring of 1880 was also dry and when crops were very poor for the second year in a row, many residents lost faith and returned to the East. The population of the county declined to 9,335 on March 1, 1881, a loss of 3,182 in a single year.[75] Those who remained either stood firm in their faith in the future of the county or simply resigned themselves to their fate: "when we have rain and crops, we don't want to go, and when there ain't no crops we're too poor to go, so I reckon we'll just stay here till we starve to death."[76]

Beyond Osborne County the drouth was even worse, and the hard-pressed settlers sent out appeals for aid, or simply picked up their belongings and left. "Many of them," an observer noted,

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[73]Ise, Sod and Stubble, p. 112.

[74]Second Biennial Report of the State Board of Agriculture, Kansas, 1879-1880, p. 526.

[75]Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, p. 509.

[76]Ise, Sod and Stubble, p. 112.

> filed application at Washington for leave of absence from their claims, sold their starving cattle for whatever they could get, packed their meager household possessions into wagons and started back to their old homes in the east. All that fall, the discouraged settlers trekked out of the drouth-stricken country. Day after day they passed by, grizzled, dejected and surly men; sick, tired and hopeless women, often with children who were cheerfully unconscious of the tragedy of moving, or even happy in the novelty of their venture.[77]

The plight of the settlers was generally the same throughout the settled western section. A report from Stafford County in the spring of 1880, for instance, mentioned that the weather still continued dry; the wheat had been destroyed, and crops planted that spring had failed to germinate. Many settlers who were unable to suffer through a second dry season put in what crops they could and then left to find whatever work was available in order to earn a living for their families.[78] A dispatcher from Reno County observed that the exodus from the counties west of Stafford seemed to have begun in earnest. "There is now scarcely a day passes," he stated,

> but a number of teams may be seen on the backtrack. This exodus does not require a Congressional committee to solve the cause of the movement. This time it is not the grasshoppers nor does politics enter into the question. . . . No one should attempt to conceal the fact that God in his providence has seen fit to withhold the rain until now. The second seed time is nearly passed and no difference how fine or fertile the country may be, or how much pluck and energy its people may have without rain all agricultural efforts much fail, and there is no alternative left the people but to go.[79]

As the situation became critical, some of the people in the eastern counties charged the western pioneers with imprudence. One person

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[77] Ibid., pp. 126-27.

[78] Kansas Farmer, XVIII (May 19, 1880), p. 153.

[79] Ibid.

observed that the favorable crop year of 1878 had prompted settlers to rush out "each seeming determined to outstrip his neighbor in getting farther west."[80] He wryly added that if 1879 were as favorable, the pioneer would "doubtless cross over the western line of Kansas and put his plow into the adobe soil of Colorado. . . . If the Pacific Ocean was one vast prairie, our impatient pioneers would reach China in two years in search of some better spot in the still untried beyond."[81]

Mindful of 1874, western settlers were sensitive to charges by easterners that they used poor judgment in settling so far west. Rather, they sought to blame their condition on factors other than their own folly. Most believed their trouble lay in the fact that a large number of newcomers had been caught with insufficient means. After suffering two crop failures in a row, these settlers had become discouraged and had temporarily left their claims to find employment so that they could survive the winter. In the meantime, they had planted new crops "hoping for a better return for their labor" the next year.[82]

Others sought to blame bad conditions on the fact that too many "city farmers" had migrated west. "The majority of them," ran the argument, "never had a plow nor sowed a grain before they came here, and the consequences is they don't know anything about farming and they are the ones who are leaving and are ready to curse this country as a failure and not fit for white folks to live in. . . ."[83] A Graham County

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[80] Ibid., (February 25, 1880), p. 64.

[81] Ibid.

[82] Ibid., (August 4, 1880), p. 248.

[83] Ibid., (August 18, 1880), p. 264.

resident, while admitting that "some came here with less money than prudence would seem to dictate," blamed the railroads, real estate agents, and the opinions expressed by contributors of the various Kansas papers for deceiving Eastern emigrants about the true climatic conditions in the West.[84]

"The readers of the Farmer," in intoned,

> need not be told how brilliantly illuminated those pen-pictures are. We know of no one who was so credulous as to believe that wealth would pour in upon him the first year. But after allowing a large margin for exaggeration, it was generally believed that by industry one could raise enough for the necessities of life the first year; and if he provided for that year, he was safe, at least that his bread was secure.
>
> Many came with small capital, bought a team, a cow, and sometimes a pig or two, built a little house and rude outbuildings, then broke and harrowed and put in their seed. Some of the seed failed to germinate, the drouth stunted what did come, and the worms and the slight springling of grasshoppers about finished the rest.
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> Winter came on, and ill-provided with food for stock, fuel scarce and dear, an uncomfortable house, little money and consequently course food, the pioneer family went into winter quarters rather discouraged. . . . The spring days come and the wheat commences to grow. . . . But the weeks advance and no rain. . . . He sees his wheat turn yellow and head out six or eight inches high. . . . With no money, and nothing for the dear ones at home to eat, does any one wonder that he swallows his pride and with downcast head and trembling hand goes to the place of distribution and accepts the aid of the state . . . ? We do not wish it understood that we blame the country, neither does the blame rest on the people. We like our new home, and have no desire to abandon it. We think, that as the country . . . /grows/ . . . older that the unpleasant features will pass away.[85]

While the drouth of 1879-1880 affected all portions of the state in greater or less degree, it was most severe in the extreme western

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[83] Ibid., (August 18, 1880), p. 264.

[84] Ibid., (June 23, 1880), p. 193.

[85] Ibid.

counties, and it became progressively less damaging to the East. For example, the fourteen organized counties beyond the central region lost 11,351 inhabitants, or 25 per cent of their total population during the year ending March 1, 1881. On the other hand, the fifteen counties which lay in the northwestern corner of the central region suffered a loss of 20,928 residents, a number representing only 13.6 per cent of their population, while the next tier of counties east lost 10,125, or 8 per cent of their total number. The population of the next tier of counties to the east fell by 6,043, or 6.4 per cent, and finally, the eleven easternmost counties in the central region declined only 4,630, or 3.7 per cent.[86] By way of comparison, the twenty-five eastern counties lost only 10,520 inhabitants during this census year, or 2.3 per cent of their total population.[87]

Aid for the drouth-stricken farmers in the western area was not as extensive or as well organized as in 1874 because this drouth was more localized and it affected only a relatively small percent of the total population. Furthermore, there was a disquieting difference of opinion among the settlers themselves over the question of whether they were seriously suffering for the necessaries of life. This situation tended to confuse the authorities who might have pushed for a substantial relief program. As one observer remarked, "neighbors come up to the capital and grow red in the face contradicting each other over the reports whether destitution prevails and whether the drouth has really

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[86]Compiled from the figures given in the Second and the Third Biennial Report of the State Board of Agriculture, Kansas, for the years 1879 through 1882.

[87]Ibid.

injured anyone to any considerable extent."[88] He added that while he believed the dry years "had been a most serious cause of suffering to a majority of the new settlers in a dozen or more of the southwestern counties," another dry summer would force those people to "fall back within the line of the more thickly populated and extensively cultivated lands" and thus solve the problem.[89]

Consequently, no major effort was mounted against the suffering of the western settlers. Congress did pass an act in June, 1880, enabling pioneers occupying land west of the Sixth Principal Meridian in Kansas and Nebraska, who had suffered "a loss or failure of crops from unavoidable cause in . . . 1879 or 1880," to leave their land until October 1, 1881, without jeopardizing their homestead or pre-emption rights.[90] The Kansas legislature also passed a measure in February, 1881, known as the Western Kansas Sufferers' Bill, which authorized the governor to appoint a Relief Commissioner to supervise distribution of supplies among the needy.[91] Finally, the railroads aided western farmers to the extent of making seed wheat available and providing a limited number of jobs for hard-pressed farmers. The Kansas Pacific, for example, purchased some 60,000 bushels of seed wheat and distributed it among the farmers on the frontier and took notes payable "after harvest."[92] The Santa Fe, likewise, offered to sell seed wheat at cost and transport it free

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[88] Kansas Farmer, XVIII (February 25, 1880), p. 64.

[89] Ibid.

[90] U. S., Statutes at Large, XXI, 543-44.

[91] Kansas, Laws (1881), ch. 130, sec. 2.

[92] Daniel W. Wilder, ed., Annals of Kansas (Topeka, 1886), p. 900.

to all settlers able to buy, or to loan, at reasonable interest rates, up to twenty-five bushels to those not able to purchase.[93] Aside from an undetermined amount of aid solicited from private sources, this was the extent of aid for the drouth-stricken Westerners.

Despite the hard times suffered by the extreme western settlers beginning in 1879, agricultural growth and development during the years 1875 to 1881 was not seriously hindered. As a matter of fact, the total value of farm products more than doubled in this period, as did the value of livestock on farms and the number of acres under cultivation. The most significant development during these years, however, was that 71 per cent of the state's population increase had settled in the central and western portions, thus pushing the frontier line of settlement nearly to the Colorado border. Although hard times slowed migration after 1879, soon settlers swept on to engulf the rest of Kansas and even eastern Colorado. The westward movement reached boom proportions in the mid-1880's.

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[93] Ibid., p. 897.

CHAPTER VII

EXPANSION AND MATURITY IN EASTERN AND CENTRAL KANSAS, 1881-1887

While substantial progress was made in the agricultural settlement and development of Kansas during the period 1875-1880, the achievements registered during the next seven years were without parallel in the history of the state. The number of Kansans increased 63 per cent from 931,572 on March 1, 1881, to 1,518,522 seven years later.[1] The census enumeration for March 1, 1888, was the highest that the state would register until well into the twentieth century. The population density rose accordingly from 11.3 per square mile to 18.5; and, since many of the newcomers, as well as older residents, had ventured into the west-central and western counties, the population center of the state by 1887 had shifted fifteen miles westward to a point in the northeastern corner of Marion County. Moreover, the influx of settlers into the western portion of Kansas prompted the organization of no less than twenty-six counties.[3]

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[1] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882 (Topeka, 1883), pp. 508-09; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888 (Topeka, 1889), Pt. 2, pp. 3-4.

[2] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 1, p. 539.

[3] Cheyenne, Clark, Comanche, Finney, Garfield (later annexed to Finney), Gove, Grant, Gray, Greeley, Hamilton, Haskell, Kearney, Kiowa, Lane, Logan, Meade, Morton, Rawlins, Scott, Seward, Sherman, Stanton, Stevens, Thomas, Wallace, Wichita. All of these counties, except Clark, Comanche, and Kiowa lay entirely west of the 100th meridian.

Although much of this growth was urban, 61 per cent of those employed in all classes of occupations were engaged in agriculture in 1885.[4]

The remainder of western Kansas was largely settled, agriculture in the central part of the state achieved maturity and stability, and agricultural operations in the eastern counties continued to expand during the years 1881 to 1887. Statistics relating to acreage, production, and valuation of agricultural property reflect these conditions. The total number of farms in the state, for example, rose from 138,561 in 1880 to 166,617 ten years later, while the average size of each farm advanced from 155 acres to 181.[5] The amount of improved farm land to total land in farms increased from 50 per cent in 1880 to 74 per cent in 1890, and the total value of farm land with improvements, including buildings, advanced from $235,000,000 to $560,000,000 in the same period.[6] The average value per farm increased from $1,697 to $3,359 while the average value per acre rose from $10.98 to $18.53.[7] The area under cultivation expanded from 9,800,000 acres in 1881 to 15,500,000 in 1887, and it returned products worth nearly $1 billion to Kansas farmers and stockmen.[8] This yield amounted to an average of $141,000,000 per year, compared to the less than $74,000,000 annual average for the previous

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[4]Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886 (Topeka, 1887), Pt. 1, pp. 34-35.

[5]U. S., Census, Eleventh Census (1890), "Agriculture," p. 100.

[6]Ibid.

[7]U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 1, p. 697.

[8]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1888.

seven-year period.[9] Finally, livestock owned by farmers and stockmen advanced in value from $63,000,000 in 1880 to $128,000,000 ten years later, thus increasing the average value of livestock per farm from $453 to $769.[10]

Governor John Martin no doubt had this remarkable progress in mind when he stated in an address before a quarter-century celebration of Kansas statehood at Topeka in January, 1886:

> The youth of 1875 has grown to the full stature and strength of manhood. The people have forgotten to talk of drouths, which are no more incident to Kansas than to Ohio or Illinois. They no longer watch the clouds when rain has not fallen for two weeks. The newspapers no longer chronicle rains as if they were uncommon visitations. A great many things besides the saloons have gone, and gone to stay. The bonehunter and buffalo hunter, the Indian and his reservations, the jay-hawkers and the Wild Bills, the Texas steer and cowboy, the buffalo grass and the dug-outs, the loneliness and immensity of the unpeopled prairies, the onstretching of plains, unbroken by tree or shrub, by fence or house--all these have vanished, or are rapidly vanishing. In their stead has come an aggressive, energetic, cultured, sober, law-respecting civilization. Labor-saving machines sweep majestically through fields of golden wheat or sprouting corn, blooded stock lazily feed in meadows of blue stem, timothy or clover, comfortable houses dot every hill-top and valley, forests, orchards and hedge rows diversify the loveliness of the landscape, and where isolation and wildness brooded, the majestic lyric of prosperous industry is echoing over 81,000 square miles of the loveliest and most fertile country that the sun lights and warms. The voiceless sphynx of thirty years ago has become the whispering gallery of the continent. The oppressed Territory of 1855, the beggared State of 1874 has become a prince, ruling the markets of the world with opulent harvests.[11]

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[9] Ibid.

[10] U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 1, pp. 700-01.

[11] Kansas State Historical Society, Transactions, III (Topeka, 1886), p. 376.

Although the governor's claim that Kansas was "ruling the markets of the world with opulent harvests" was a bit extravagant, these were, indeed, years of immense progress in the eastern and central sections of the state. The three eastern tiers of counties, for example, continued to gain both in population and in agricultural productivity during each of these years. The total population in that section of the state rose 38 per cent from 437,000 in 1881 to 603,000 seven years later, a gain of 166,000 compared to the increase of 126,000 for the years 1875 to 1880.[12] Although many of the larger cities of the state were situated in this region, over 58 per cent of the gainfully employed persons in the eastern counties were engaged in agriculture in 1885.[13] Indeed, eleven of the twelve counties in Kansas having more than twenty-five persons engaged in agriculture to each square mile of territory were situated in this region.

The success attending farming operations in the eastern counties is further revealed by the figures on the number of farms, improved acreage, total value of farms, crops, and livestock. The number of farms in eastern Kansas rose from 48,927 in 1880 to 54,255 a decade later,[14] and included 7,800,000 acres, or 84 per cent of the total area in eastern Kansas in 1890, compared to 6,500,000 acres, or 69 per cent of the area,

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[12]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1888.

[13]Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, pp. 34-35.

[14]U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

ten years earlier.[15] The total number of acres of improved farm land likewise advanced from 4,500,000 in 1880 to 6,400,000 in 1890. Thus in the latter year, 82 per cent of the land in farms was improved compared to 70 per cent a decade earlier.[16] As a result of this expansion, the value of farms, including land, fences and buildings, rose steadily from $105,000,000 in 1880 to $210,000,000 in 1890, accounting, in the latter year, for nearly 38 per cent of the total farm value for the entire state.[17]

Moreover, crop and livestock production kept pace with the expanding farm area as the eastern farmers and stockmen increased their crop acreage from 4,000,000 in 1881 to 4,600,000 in 1887. Altogether, farmers and stockmen harvested a grand total of nearly 34,000,000 acres of crops during these years. The average annual value of these crops was over $37,000,000 which amounted to an average annual return of $7.66 for each acre harvested.[18] In addition, the value of livestock on eastern Kansas farms advanced significantly from $25,800,000 in 1880 to $43,200,000 a decade later, with much of the increase invested in quality cattle.[19] The total value of all farm production for the years 1885 through 1887

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[15] Ibid.

[16] Ibid.

[17] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, pp. 3-7; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

[18] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1888.

[19] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09 and 287-88.

was $9.55 per acre of land farmed.[20]

Much of the agricultural expansion in the eastern counties during the 1880's was financed with borrowed money. Rising land values caused many of the earlier settlers to seek new farming opportunities on cheaper lands in the west. Their land was purchased either by neighbors who expanded their operation or rented out the land, or by the more affluent and cautious emigrants from the East who preferred to secure an improved farm in a settled area rather than endure the hardships of frontier farming.[21] In either case, the new owner usually had to borrow some money to finance his purchase. Largely as a result of this situation, over 116,000 farm land mortgages, covering some 12,000,000 acres and totaling in excess of $108,000,000 were negotiated in the eastern counties during the decade.[22] The average mortgage, therefore, amounted to $925, covered 105 acres, and represented a debt of $8.94 per acre.[23] The average value of farm land in eastern Kansas in 1890 was $27 per acre.

In addition to the farm mortgage, municipal bonded indebtedness played an important role in financing railroad expansion which in turn encouraged commercial agriculture. As early as 1878, over half the

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[20]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1885 through 1888.

[21]Raymond C. Miller, "The Background of Populism in Kansas," Mississippi Valley Historical Review, XI (March, 1925), p. 479. See also Glenn H. Miller, Jr., "Financing the Boom in Kansas, 1879-1888, with Special Reference to Municipal Indebtedness and Real Estate Mortgages," Master's Thesis, University of Kansas, 1954, p. 75.

[22]Compiled from the figures given in the U. S., Census, Eleventh Census (1890), XII, 437-51.

[23]Ibid.

bonds issued by cities in eastern Kansas had been used to subsidize railroad construction, while 61 per cent of the total bonded indebtedness represented aid to railroad companies during the 1880's.[24] This support helped to finance the building of hundreds of miles of railroad in the eastern counties. In addition, other municipal bond issues helped to subsidize manufacturing enterprises which, like the railroads, directly or indirectly served to advance the agricultural interest of that section of the state.

Some shifting in farm size and in land utilization occurred in the eastern counties during the 1880's. The average size of each farm, for instance, increased slightly from 132 acres in 1880 to 143 a decade later, compared to the average state increase of from 155 acres to 181.[25] An analysis of farm size indicates that some of the eastern counties, such as Anderson, Brown, and Coffey registered gains of from 6 to 9 per cent in the 100-499 acre class, while losing from 1 to 5 per cent in the 50-99 acre category.[26] Other counties, such as Cherokee, Crawford, Labette, and Neosho, lost from 5 to 11 per cent of their 100-499 acre farms while gaining similar percentages in the 50-99 acre group.[27] As would be expected, the average size of each farm in these counties reflected these shifts. The first three-mentioned counties gained up to

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[24]Compiled from the figures given in the Biennial Report of the Auditor of the State of Kansas, for the years 1877 through 1890.

[25]U. S., Census, Tenth Census (1880), "Agriculture," pp. 52-54; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 142-44.

[26]Ibid.

[27]Ibid.

twenty-six acres per farm, while farms in the last-mentioned counties lost as much as ten acres.[28] Farm size did not vary much in the rest of the eastern counties.

Corn, prairie grass under fence, winter wheat, the forage grasses, and oats were the leading crops in the eastern counties in 1881. Six years later winter wheat had dropped to fifth place as the acreage devoted to it fell sharply in most of the eastern counties, while the area given over to the other crops increased substantially with prairie grass and oats showing the most marked advances.[29] The number of acres of winter wheat declined from 550,000 in 1881 to 217,000 in 1887.[30] Prairie grass and oats increased from 592,000 to 1,300,000 acres and from 158,000 to 539,000 acres respectively during the same period.[31] The diversion of land from winter wheat as a cash crop to corn, prairie grass, oats, and the forage grasses points out the fact that farmers and stockmen in eastern Kansas were relying ever more heavily upon livestock in their agricultural operations. Further evidence of this trend was revealed by the increases in the value of slaughter animals from $9,000,000 in 1881 to $11,000,000 in 1887, and in the value of live stock on farms and ranches from $31,000,000 to $42,000,000 during the same years.[32]

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[28] Ibid.

[29] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 510-55; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 6-45.

[30] Ibid.

[31] Ibid.

[32] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 121-506 and 558-63; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 54-55 and 46-50.

A closer look at two of the eastern counties, however, will serve to point out that while the trend in this region was toward the production of more feed grain and forage crops for livestock consumption and less winter wheat as a cash grain crop, there remained rather significant differences within the region. Osage County, for example, is situated in the third tier of counties west and nearly midway between the northern and southern borders of the state. The area of winter wheat harvested in this county dropped sharply from 16,000 acres in 1881 to 1,700 acres in 1887, while the corn acreage harvested declined from 70,000 in 1881 to 54,000 in 1887. Prairie grass under fence jumped from 21,000 acres in 1881 to 82,000 in 1887, and the forage grasses and oats rose from 7,000 to 26,000 acres and from 3,400 to 28,000 acres respectively in the same years. The value of animals slaughtered or sold for slaughter increased from $417,000 to $924,000 during the same period. Other livestock products gained from $68,000 to $74,000, and the value of livestock on farms advanced from $1,300,000 to $2,200,000. Thus the total value of livestock and livestock products increased from $1,800,000 to $3,200,000, and by 1887 these products represented nearly 74 per cent of the value of all farm commodities compared to 51 per cent six years before. The value of all other farm produce in Osage County declined from $1,700,000 to $1,100,000 in the same period.[33] The trends revealed in this county are also apparent in the other eastern counties of Anderson, Coffey, Miami, Nemaha, and Wilson.

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[33]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881-1882 and 1887-1888. Although corn acreage showed a decline in 1887 over 1881, it must be pointed out that 1887 was a bad corn year in Osage County with a reduced acreage and a fifteen bushel yield. In the following year, 109,600 acres were harvested which produced 4,384,000 bushels for a forty-bushel average.

Cherokee County, which is situated in the extreme southeastern corner of the state, exhibited, on the other hand, a somewhat different crop-livestock pattern. Although winter wheat dropped from 42,000 acres in 1881 to 13,000 acres in 1887, it still remained a significant cash grain crop. Corn acreage grew from 68,000 acres in 1881 to 93,000 in 1887, but prairie grass under fence increased only slightly from 32,000 to 35,000 acres. The forage grasses and oats rose from 6,000 and 9,000 acres in 1881 to 22,000 and 38,000 acres respectively in 1887. The value of slaughter animals remained steady at about $200,000 while the value of livestock on farms increased only moderately from $1,100,000 in 1881 to $1,500,000 in 1887.[34] Livestock, then, did not play as large a role in the economy of Cherokee County, and in such other counties as Jefferson, Crawford, Labette, and Neosho where the same trends are evident, as it did in other parts of the eastern region.

Although agriculture advanced substantially in the eastern counties during the period 1881 to 1887, the rate of growth was relatively smaller than that which occurred farther west. For example, while the population in the eastern counties increased 38 per cent in these years, they received only slightly more than 28 per cent of the total state population gain, as compared to the nearly 31 per cent they had registered during the previous six-year period. Furthermore, this region's portion of the total number of acres in Kansas farms declined from 30 per cent in 1880 to 26 per cent in 1890, while the area of improved farm land fell from 42 to 27 per cent during the same period. The area devoted to crops in the eastern region also dropped from 42 per cent of the state total in 1881 to 38 per cent six years later. Finally, these same downward trends

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[34] Ibid.

are evident in livestock. For example, the eastern farmers and stockmen possessed 50 per cent of both milk cows and other cattle in the state in 1880, but only 38 per cent of the milk cows and 32 per cent of other cattle in 1885.

The explanation for this smaller rate of growth lies in the fact that the eastern section of the state had already achieved a mature, stable agricultural economy with relatively little new land available and hence not much additional room for expansion. It is to be noted, however, that the average value of each eastern farm rose from $2,150 to $3,870 during the 1880's.[35] Furthermore, by 1886 farmers and stockmen in this region had fenced 87 per cent of their cultivated acreage, including prairie land, which accounted for nearly half of all the fenced land in the state.[36] Thus it appears that the gains made by farmers and stockmen in eastern Kansas during the years 1881 to 1887 were of an intensive, rather than extensive, nature. That is to say, these agriculturalists were busy improving their farming operations by constructing more buildings and fences, improving their livestock herds, purchasing equipment and implements, and indulging in more of the amenities of life.

The state's central counties, meanwhile, received a heavy influx of settlers which swelled their population from 454,000 in 1881 to 713,000 in 1888.[37] This large increase accounted for slightly more than 44 per

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[35] Compiled from the figures given in the U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

[36] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, pp. 3-4.

[37] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 508-09; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 3-4.

cent of the total state population gain for these years. A closer examination of the population trends in this area reveals that the twenty-five counties lying adjacent to the three eastern tiers of counties, and situated neatly between the ninety-sixth and ninety-eighth meridians, attracted 71 per cent of the population gain made by the entire central region, while the remaining fifteen counties, which made up the north-western part of the central region, increased only 29 per cent.

Sedgwick and Sumner counties, which are situated between the ninety-seventh and ninety-eighth meridians in the south-central part of Kansas, registered the largest population growth of any counties in the state during this period. Sedgwick, organized in 1870 with a population of 1,100, rose steadily to 18,000 in 1881, and to 52,198 on March 1, 1888.[38] Although much of this increase was absorbed by Wichita, which grew from a city of 5,300 inhabitants in 1881 to a population of 34,000 in 1888, those engaged in agriculture in 1885 accounted for 45 per cent of the gainfully occupied people in the county.[39] Sumner County was organized in 1871 with barely sufficient population to meet the legal requirements. However, like Sedgwick, it rose quickly in numbers to 17,300 in 1881 and to 36,692 on March 1, 1887.[40] Sixty-three per cent of the

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[38] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895 (Topeka, 1895), p. 14; First Biennial Report of the State Board of Agriculture, Kansas, 1877-1878 (Topeka, 1879), p. 52; Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, p. 508; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, p. 4.

[39] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, p. 35.

[40] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895, p. 14; First Biennial Report of the State Board of Agriculture, Kansas, 1877-1878, p. 52; Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, p. 508; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, p. 4.

gainfully occupied people in this county in 1885 were engaged in agriculture.[41]

Increases in the number of farms, improved acreages, total value of farms, and crop and livestock production figures indicate the rapid advances made by farmers and stockmen in the central counties during the 1880's. The number of farms, for instance, rose from 78,308 to 84,314, while the average size of each farm jumped from 165 acres to 200.[42] The total number of acres in farms thus increased from 13,000,000 in 1880 to 16,000,000 a decade later which meant that in 1890 nearly 74 per cent of the entire central region was carved into farms compared to only 59 per cent in 1880. Furthermore, slightly over 78 per cent of the land in farms had been improved by 1890, whereas a decade earlier only 45 per cent was improved.[43] In addition, farmers and stockmen in these central counties had fenced 43 per cent of their cultivated acreage by 1886.[44] Because of the expansion in the farming area and the improvements made on the land, the total value of farms and ranches, including land, fences, and buildings, jumped from $123,000,000 in 1880 to $296,000,000 ten years later.[45] This rise in value represented an

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[41] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, p. 35.

[42] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

[43] Ibid.

[44] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, pp. 3-4.

[45] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, pp. 3-7; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

increase in the average value of each farm from $1,574 to $3,510.[46]

The central counties not only exceeded the eastern region in population growth during these years, but they surpassed the eastern and western regions combined in the utilization of land for agricultural purposes, including livestock and livestock products. For example, more than half of the leading counties in the state in cultivated acres were eastern counties in 1874. A decade later Sumner, McPherson, Sedgwick, Pottawatomie, Butler, and Dickinson counties, in order of rank, led the entire state in the number of cultivated acres, while Cowley ranked ninth.[47] Two years later, ten of the thirteen top-ranked counties classed according to cultivated acreage were in the central region, while in 1887 twelve of the fourteen leading counties were situated there.[48] Furthermore, the seventeen top-ranked counties in wheat acreage and twelve of the fourteen highest-ranking counties in corn production in 1887 were central Kansas counties.[49] In 1887, farmers and stockmen cropped nearly a million acres more than were harvested in all the other counties in the state.[50] The county rankings for livestock in 1886 reveal the same story: eleven of the top twelve in numbers of horses and mules, eleven of the top thirteen in cattle, nine of the top

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[46] Ibid.

[47] Fourth Biennial Report of the State Board of Agriculture, Kansas, 1883-1884, p. 476.

[48] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 1, pp. 9-537.

[49] Ibid.

[50] Ibid.

ten in swine, and seven of the top ten counties in sheep numbers were central Kansas counties.[51]

The number of acres devoted to crops in the central part of the state varied from 5,300,000 in 1881 to a high of 7,600,000 in 1886. Altogether, a grand total of over 46,000,000 acres were harvested in the central counties during the years 1881 through 1887, which produced $356,000,000, for an average annual value per acre of $7.66.[52] Although crop farming was the main source of income for agriculturalists in this part of Kansas, accounting for 61 per cent of the value of all farm products for the years 1885 through 1887, livestock certainly played an important role in the farming operations. The value of livestock on farms and ranches increased from $35,000,000 in 1881 to $72,000,000 in 1887.[53] The value of all farm products in the central region amounted to an average of $72,000,000 for each of the years 1885 through 1887.[54] This figure represented an average annual return of $10.05 per acre of land harvested, compared to $9.55 per acre for the eastern counties.[55]

As in the eastern counties, much of the agricultural expansion in central Kansas during the 1880's was financed with borrowed money.

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[51] Ibid.

[52] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1888.

[53] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 558-63; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 46-50.

[54] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1885 through 1888.

[55] Ibid.

Rising land values in the East, together with a series of good crop years which yielded high grain and livestock returns, encouraged thousands of settlers to move westward where land was cheaper. As the central portion of the state was settled, however, good land there became scarce and land values rose. This, in turn, prompted newcomers and older residents alike to borrow money to purchase new farms or to expand and improve existing units. Since it was easy to borrow money using land as security, these people did not hesitate to encumber their farms in order to bolster productivity. As a result, 228,239 farm mortgages were negotiated in the central counties during the 1880's which covered nearly 31,000,000 acres and amounted to $196,000,000.[56] This represented an average mortgage debt in 1890 of $6.30 an acre on land that was worth $17.50. The peak year for farm mortgaging in central Kansas was 1886 when 51 per cent of all mortgages in the state were concluded there.[57]

Some shifting in the size of farms and in land utilization occurred in the central counties during the 1880's. An analysis of farm size shows that the general trend in central Kansas was toward fewer farms under 100 acres, slightly more farms in the 100-499 acre class, and a significant increase in those above 500 acres. As a result of this trend, the average-size farm increased thirty-five acres in the central counties, compared to an average increase of only twenty-six acres for all Kansas farms.[58] Chase County exhibited the most pronounced shift in central

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[56]Compiled from the figures given in the U. S., Census, Eleventh Census (1890), XII, 437-51.

[57]Ibid.

[58]U. S., Census, Tenth Census (1880), "Agriculture," pp. 52-54; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 142-44.

Kansas during this period. In 1880, 40 per cent of its farms were under 100 acres, 57 per cent were in the 100-499 acre class, and less than 3 per cent were larger than 500 acres. Ten years later, only 26 per cent of its farms were under 100 acres, while 63 per cent were in the 100-499 acre group, and slightly over 10 per cent were larger than 500 acres.[59] However, it should be noted that, aside from the fact that Chase County was well-suited for large scale livestock operations, the shift toward large farms and ranches was largely the result of peculiar circumstances. Nearly a quarter of its lands had been ceded by the federal government to land grant railroads, chiefly the Santa Fe. Because of the high price of these lands, homesteaders who arrived in the 1860's and 1870's chose to settle on the less costly public lands. Then, in the early 1880's, the railroad lands were sold in large blocks to investors who began large scale cattle operations.[60]

Washington County, on the other hand, represented a different trend in central Kansas during the 1880's. While 26 per cent of the farms in this county had less than 100 acres in 1880, one-third were in that category ten years later. Furthermore, the number of farms in the 100-499 acre class declined from three-fourths in 1880 to two-thirds in 1890, while the 500 acre class of farms increased only slightly.[61] The trends

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[59] Ibid.

[60] Walter M. Kollmorgen and David S. Simonett, "Grazing Operations in the Flint Hills-Bluestem Pastures of Chase County, Kansas," Annals of the Association of American Geographers, LV (June, 1965), p. 265. See also H. F. Hilton, "The Bluestem Limestone Pastures of Kansas," Twenty-Sixth Biennial Report of the State Board of Agriculture, Kansas, 1927-1928 (Topeka, 1929), p. 189; and James C. Malin, "An Introduction to the History of the Bluestem-Pasture Region of Kansas," Kansas Historical Quarterly, XI (February, 1942), pp. 3-28.

[61] U. S., Census, Tenth Census (1880), "Agriculture," pp. 52-54; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 142-44.

in Washington County are evident in some other of the central counties, although as noted, the general trend followed the Chase pattern, but with not quite as much exaggeration.

Generally speaking, the crop-livestock trends were similar throughout the forty-county central Kansas region during the period 1881 to 1887. Winter wheat acreage declined rather sharply in most instances, while the area devoted to corn, oats, the forage grasses, and prairie grass increased substantially. Furthermore, the value of animals slaughtered or sold for slaughter, and the value of livestock on farms and ranches increased markedly. There were significant differences, however, in the crop-livestock pattern within certain areas of central Kansas. These variations can perhaps best be noted by dividing the area into four sub-regions: the twelve counties that largely encompass the blue stem region of the Flint Hills, the five northern border counties from Marshall westward to Smith, the ten counties that lay adjacent to the Flint Hills and between the ninety-seventh and ninety-eighth meridians, and finally, the thirteen counties that lay west of the ninety-eighth meridian in the northwestern corner of central Kansas.

The leading crops in the blue stem counties in 1881 were corn, winter wheat, prairie grass under fence, the forage grasses, and oats. In the following years, however, the prairie grass area advanced nearly five-fold, while the corn acreage increased by one-third, oats nearly four-fold, and the forage grasses by one-fourth, so that by 1887 the cropping pattern had become prairie grass, corn, oats, the forage grasses, and winter wheat.[62] The area devoted to winter wheat fell by nearly 80

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[62] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 510-55; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 6-45.

per cent during these years, and that crop all but ceased to play an important role in the blue stem region.[63] The value of animals slaughtered or sold for slaughter, on the other hand, increased 82 per cent, while the value of livestock on farms and ranches rose 55 per cent.[64] The growing importance of livestock is revealed by a closer analysis of Butler and Chase counties, which were representative of the twelve-county area. In Butler County, the total value of livestock and the products of livestock in 1881 represented 46 per cent of the total farm production, whereas in 1887 the relative importance of livestock in its economy had risen to 69 per cent.[65] This trend is even more pronounced in Chase County where livestock accounted for 69 per cent of the value of total farm production in 1881, and 79 per cent in 1887.[66] Although the number of swine in this twelve-county area increased 42 per cent during these years to become an important phase of agriculture, the major livestock interest of blue stem farmers and ranchers continued to be neat cattle.

The crop-livestock pattern of farming in the northern tier counties of Marshall, Washington, Republic, Jewell, and Smith was quite different from that noted above. In 1881 the leading crops were corn, spring wheat, prairie grass, winter wheat, the forage grasses, and oats. Six

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[63]Winter wheat acreage dropped from 196,683 acres in 1881 to 45,501 acres in 1887. Slightly over half the 1887 crop was harvested in Cowley County where this crop continued to be an important part of farming.

[64]Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 121-506 and 558-63; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 54-55 and 46-50.

[65]Ibid.

[66]Ibid.

years later, the order was corn, prairie grass, oats, the forage grasses, winter wheat and spring wheat.[67] The area devoted to spring wheat and to winter wheat dropped 80 and 61 per cent respectively and, although the greatly reduced acreages continued to supply some cash income, these crops ceased to be of major importance in the farming system. Corn, on the other hand, increased by 31 per cent, while prairie grass, oats, and the forage grasses rose 275, 332, and 113 per cent respectively.[68]

Farmers and stockmen in this northern sub-region converted this increased production of feed grains and forage crops into livestock and livestock products as evidenced by the fact that the value of animals slaughtered or sold for slaughter jumped by 163 per cent during this period, and the value of livestock on farms and ranches rose by 86 per cent.[69] Furthermore, these counties represented the main swine-growing area in the state. The county average increased from 32,000 swine in 1881 to 50,000 six years later.[70] Using Washington County as representative of the area, the relative importance of livestock and its products rose from 48 per cent of the value of all farm production in 1881 to 62 per cent in 1887.[71]

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[67] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 510-55; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 6-45.

[68] Ibid.

[69] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 121-506 and 558-63; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 54-55 and 46-50.

[70] Ibid.

[71] Ibid.

The ten counties lying adjacent to the blue stem region and south of the northern tier area exhibit still a different pattern of farming. The order of rank of crops in 1881 was corn, winter wheat, prairie grass, oats, and the forage grasses. Virtually no spring wheat was grown in this area. In 1887, corn retained its rank and had increased in acreage by 48 per cent. Prairie grass became the second ranking crop in 1887 with a rise of 242 per cent, while oats ranked third. Winter wheat dropped to fourth, falling by 74 per cent, but it still remained an important source of cash income. The forage grasses ranked last.[72]

The most significant shift in the farming pattern in these counties was the sharp rise in livestock. Slaughter animals increased in value by 195 per cent and the value of livestock on farms rose 137 per cent.[73] The number of swine doubled in these counties during this period and this aspect of livestock raising became an important factor in the farm economy. Dickinson and Sumner counties represent the growing relative importance of livestock in the farming operation of these central counties. Between 1881 and 1887, livestock and its products rose in importance from 42 to 71 per cent in Dickinson County, and from 34 to 74 per cent in Sumner County.[74] However, it should be noted that the drouth of 1887 caused low crop yields that exaggerated the importance of livestock in that year. Livestock and its products accounted for around

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[72] Ibid., pp. 510-55; and pp. 6-45.

[73] Ibid., pp. 121-506 and 558-63; and pp. 54-55 and 46-50.

[74] Ibid.

60 per cent of the total farm production in both counties in 1886 and in 1888.[75]

Finally, the scale of farming in the thirteen counties in the extreme northwestern part of the central region during the period 1881 through 1887 was very small when compared to that of the areas farther east. Indeed, the level of development achieved in these counties by 1887, as measured by crop acreages and livestock on farms or slaughtered or sold for slaughter, reached only where the ten counties adjacent to the east had been in 1881, with these differences. The ten counties had harvested five times as many acres of winter wheat, and two and one-half times as many acres of corn in 1881 as the thirteen western counties produced in 1887.

The leading crops in the thirteen-county area in 1881 were corn, winter wheat, the forage grasses, prairie grass, spring wheat, and oats. Six years later, prairie grass was on top, followed by corn, winter wheat, oats, the forage grasses, and spring wheat.[76] Furthermore, the value of livestock and livestock products had increased significantly during this period. Barton County, which borders on the ninety-ninth meridian on the west, is representative of the changing crop-livestock pattern of farmers in this area. In 1881, the relative importance of

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[75] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, pp. 181-82 and 552-53; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 1, pp. 118-19 and 491-92.

[76] Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882, pp. 510-55; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 6-45.

livestock to total farm production was only 27 per cent; it had risen to 66 per cent six years later.[77]

The shift in the crop-livestock pattern in this section of Kansas is fairly typical of the changes that occured repeatedly as new regions in the state were opened to settlement. The first settlers broke as much prairie sod as they were able and planted a crop of sod corn. They also had brought with them a milk cow or two and perhaps a few head of swine. As the years passed, they continued to increase their cultivated area, to improve their farms with buildings and fences, and particularly to build up their livestock numbers. As the region matured, farming shifted from a subsistence to a commercial basis with more emphasis upon feed production and livestock raising. This provided a better balance and generally more successful operations.

One of the keys to the expansion and commercialization of agriculture in central Kansas during these years was the increased use of machinery. A shortage of farm labor together with increased demand for more food and fiber during the Civil War had stimulated the mechanization of farm production in the North and West. This trend continued in the post-war years when the central and western portions of Kansas were being opened to settlement. As a result, implements such as the steel prairie breaker, the chilled-iron plow sulky, and gang plows, the lister, spring tooth and disc harrows, cultivators, planters, and seeders were well-known on Kansas farms by the late 1870's.[78] Furthermore, such

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[77] Ibid., pp. 121-506 and 558-63; and 54-55 and 46-50.

[78] For a detailed study of farm machinery see Leo Rogin, Introduction of Farm Machinery in Its Relation to the Productivity of Labor (Berkeley, 1931). See also chapter seventeen in James C. Malin, Winter Wheat in the Golden Belt of Kansas (Lawrence, Kansas, 1944) for a discussion of tillage, planting and harvesting machinery for winter wheat.

animal-powered small grain harvesting machines as reapers, mowers, headers, harvesters, and threshers were also in general use in the state by 1880.[79]

The only significant addition to farm machinery used by Kansas farmers during the 1880's was the perfection and widespread adoption of the twine binder. Although a few of these machines were sold in the late 1870's, they came into more general use in the 1880's.[80] Such was the success of this harvesting machine that by 1890 it had completely replaced the wire binder and the harvesters that required men to tie the bundles of grain. Most manufacturers of harvesting machines obtained the right to use the patented binding mechanism so that production of twine binders soared to 250,000 within a few years and this machine became commonplace on Kansas farms.[81] At the end of the 1880's, Kansas farmers owned machinery and equipment valued at $19,000,000, which represented an average investment per farm of $113, compared to the national average of $108.[82] The widespread use of machinery made Kansas farmers more efficient and hence contributed largely to the rapid expansion of farming operations in central Kansas. It also stimulated the growing commercialization and specialization of Kansas agriculture.

Finally, during the 1880's and 1890's the subject of farming methods commanded the attention of agriculturalists and others who were interested

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[79] Ibid.

[80] Rogin, Introduction of Farm Machinery, p. 115.

[81] Ibid., p. 118.

[82] U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 1, pp. 698-99.

in improving the efficiency and productivity of farmers in the eastern and central portions of Kansas. Farmers and stockmen during these years sought answers to such questions as how deep and how often the soil should be plowed, what was the best method to prepare a seed bed, when, what kind, and how much seed should be planted, should the seed be drilled into the ground, or sown broadcast and harrowed in, what companies produced superior machinery, what was the cost of producing an acre of winter wheat--or an acre of corn, would it pay stockmen to improve the quality of their herds, should the wheat farmer harvest his grain with a header or would it be better to bind it so that it could cure in the shock before threshing?

Answers to these and a host of other queries came from various sources. For example, the results of extensive testing and experimentation with seed grains, animals, winter pasturing of wheat, cultivation techniques, weed and insect control, and the like by staff members at Kansas State College were readily available to Kansas farmers. In addition Farmer's Institute meetings in many parts of the state afforded interested farmers an opportunity to hear specialists discuss topics of interest and to exchange their own ideas. Speeches delivered at the annual meetings of the State Board of Agriculture, together with papers and reports printed in the pages of the Monthly, Quarterly, and Biennial Reports of the State Board of Agriculture were a constant source of information for the curious and receptive farmer. Finally, the newspapers and farm magazines, particularly the Kansas Farmer, constituted a continuing public forum for an exchange of farming views and ideas that reached into hundreds of farm homes and unquestionably affected the

farming practices, and no doubt even the fortunes, of countless agriculturalists around the state.[83]

Although farmers and stockmen in eastern and central Kansas did not find answers to all their many problems by the end of the 1880's, they did generally understand the limitations of the soil and climate in their particular locality, and, with the exception of the need for some adjustments in the crop-livestock pattern in the northwestern part of the central region, they had adjusted themselves and their system of farming to the limits of the environment.[84]

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[83]It would be impossible even to attempt to list what might be considered the most important pamphlets, speeches, articles and reports that were published during these years which were concerned with agricultural methods. The changed role of the Kansas State Board of Agriculture, however, is worth noting. In his letter transmitting the Fifth Biennial Report to the legislature in 1886, Secretary Wm. Sims wrote that "questions relating directly to the farm, such as the kinds of crops best adapted to our soil and climate, and the better methods of cultivating the same; the general management of livestock . . ." were among the more prominent causes which prompted the organization of this board. . . ." Two years later, Secretary Martin Mohler noted that "in the early history of this Board and until a recent period, the chief object aimed at was, to place before the world the advantages of Kansas as an agricultural State. . . . But the high agricultural rank of Kansas, and the superior advantages she offered to those seeking for new homes, having become known in all civilized countries, there has not existed for some years the necessity of special efforts in the way of advertising the State." Mohler emphasized that the "study and investigation of methods of agriculture in Kansas are the more necessary because the soil and climate of the State differ materially from that of Eastern States. Much of the failure in farming in the State is justly attributed to a want of knowledge in regard to proper methods, and the kinds of crops to be grown." Finally, in his letter transmitting the Tenth Biennial Report in 1896, Secretary F. D. Coburn wrote that "probably more than any of its predecessors it is planned to be an 'agricultural' volume instead of an immigration document. It is intended to be helpful in promoting the prosperity and advancement of the population the state already has. . . ."

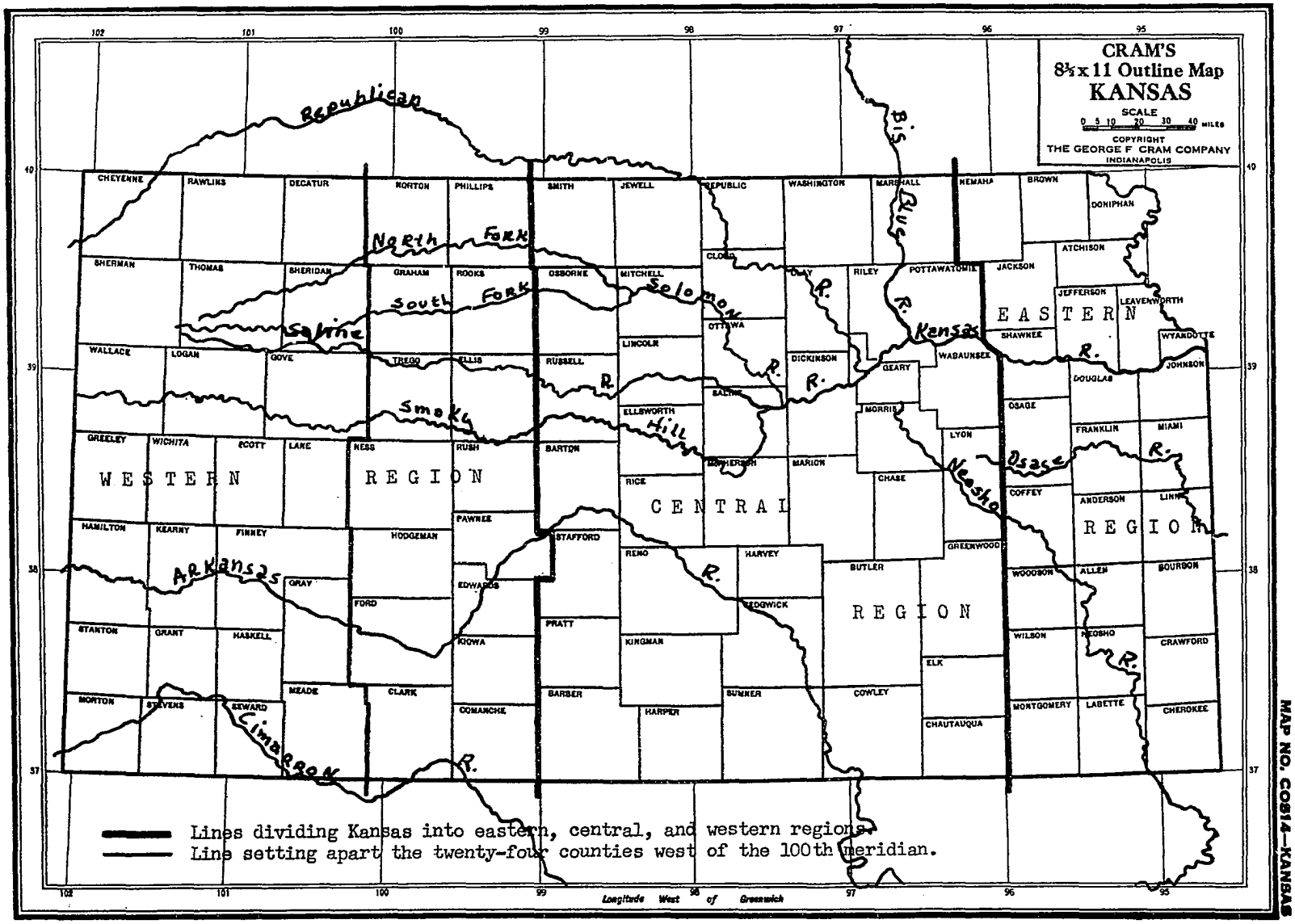
[84]See Kansas Farmer, XXII (May 7, 1884), pp. 1-4, for an interesting article written by Martin Mohler. The author had resided in Osborne County since 1872 and presents some acute observations regarding adaptation. See also James C. Malin, "The Adaptation of the Agricultural System to Sub-Humid Environment," Agricultural History, X (July, 1936), pp. 118-41.

CHAPTER VIII

BOOM CONDITIONS IN WESTERN KANSAS, 1885-1888

While the most significant development in Kansas agriculture during the period 1881 through 1887 was the emergence of the central region as the foremost agricultural section, the most dramatic event was the extension of settlement to the Colorado border. By 1880, the frontier had reached the 100th meridian, and settlers were pressing steadily westward. Indeed, a few settlers had moved into some of the extreme western counties much earlier. Hamilton County, for example, had been occupied by a few families in 1873, and Graham County had received its first settlers shortly thereafter. However, severe drouth conditions and the grasshopper invasion in 1874 forced most of these people to leave.

A few years later favorable weather conditions again attracted settlers into the western counties. But drouth conditions and hard times returned in the late 1870's and early 1880's and many departed. For those who remained, the crop seasons of 1881 through 1883 were discouraging, if not disastrous, as dry spells, cold winters, and hot summer winds generally ruined crops. The severe winter of 1882-83, for example, killed much of the wheat. What was harvested scarcely paid for seed and labor. Corn suffered from lack of summer moisture and hot winds so that settlers harvested poor yields. Farmers in Sheridan County suffered



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a total failure, and pioneers in such other west-central counties as Ellis, Graham, Hodgeman, Ness, and Trego hardly recovered the cost of the seed. Most of the corn was cut for fodder around the first of August.[1] As a result of unfavorable weather conditions, population growth in the western counties was slow, increasing only from 40,471 in 1881 to 59,664 in 1884.[2]

Actually, these early pioneers did not engage extensively in general agriculture as it was believed that much of the area was unsuited for crop farming. Instead, they devoted their attention principally to stock raising. A report from Thomas County in 1882, for example, noted that that county was well-supplied with water courses and was valuable grazing country.[3] "But little attention is paid to agriculture," the report stated, "the inhabitants devoting themselves almost exclusively to stock raising, cattle and sheep predominating. But a very small part of the county is settled."[4] Elsewhere, it was reported that the few hundred inhabitants in Wallace County were engaged "almost exclusively in stock raising," while a number of large cattle ranches had been established in Wichita County during 1882.[5]

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[1]Fourth Biennial Report of the State Board of Agriculture, Kansas, 1883-1884 (Topeka, 1885), pp. 5-6 and 132-421. The 1883 corn crop in the counties mentioned yielded only one to two bushels per acre. Hodgeman County farmers harvested only 519 acres which yielded six bushels per acre. The wheat yield was from six to fourteen bushels.

[2]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1884.

[3]Third Biennial Report of the State Board of Agriculture, Kansas, 1881-1882 (Topeka, 1883), pp. 477-78.

[4]Ibid.

[5]Ibid., pp. 486 and 491-92.

The crop season of 1884, however, marked a turning point in the history of western Kansas. Unusually heavy rainfall in the western half of the state during the fall of 1883 laid the basis for an excellent harvest. Wheat sown in the autumn developed a strong root system for the ensuing winter, and timely and copious spring rains enhanced wheat prospects for the western area beyond anything before experienced. Corn, sorghum, oats, and other spring crops also did well. As a result, emigrants coming into western Kansas mistakenly believed that cultivation of the soil and the planting of trees were causing the so-called "rainbelt" to move ever westward.[6] This condition, together with the availability of large quantities of government and railroad land, and a seemingly inexhaustible supply of eastern capital, created a boom atmosphere in the mid-1880's which drew settlers into the western counties in large numbers.

By March 1, 1885, the population of the counties west of the ninety-ninth meridian had risen to 87,348, and during the following two years, when the boom reached its climax, 120,646 additional emigrants moved into these counties to swell the population to 207,994.[7] This gain in numbers accounted for nearly 28 per cent of the total population growth of the state, while the central counties absorbed the remaining

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[6]The question of what effect, if any, cultivating the soil and planting trees had on climatic conditions was widely discussed in the press from the moment settlers began moving onto the treeless prairies. The Kansas Farmer carried a series of such articles which illustrate this matter in its February, March, and April, 1874 issues. See also Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886 (Topeka, 1887), pp. 176-180.

[7]Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1885 through 1888.

44 per cent. People came to western Kansas from all parts of the state as well as from eastern states and Europe, "hoping to share in the profits of a boom similar to the one which had already brought wealth to the early settlers in the eastern and central portions of the state."[8]

The influx of settlers into western Kansas in the mid-1880's produced warnings from different quarters about the risks of extending crop farming onto the High Plains. Alfred Gray, secretary of the State Board of Agriculture, for example, mindful of the limited but ill-fated penetration of some of the extreme western Kansas counties in the late 1870's, warned settlers against locating there:

> for the purpose of engaging in all phases of farming. . . . They make no mistake, however, if they seek these locations for stock-raising purposes, for the world does not possess better grazing lands or a section better adapted to the raising of stock than that region of territory between the 100th meridian and the Rockies. For general farming purposes they must keep within the limits of the settlement area as it moves westward.[9]

Stockmen also tried in vain to convince incoming settlers that the western counties were fit only for grazing purposes. Nor would these farmers be dissuaded by still others who claimed that the weather and climate were hostile to general agricultural pursuits. For instance, Edward Russell, an early Kansas pioneer and one who was familiar with all sections of the state, spoke out after observing numerous families leave Dodge City for their claims on the high plains to the north. He recalled the unfortunate experience of those who had filed upon land

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[8]Raymond C. Miller, "The Background of Populism in Kansas," Mississippi Valley Historical Review, XI (March, 1925), p. 486.

[9]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1879 (Topeka, 1879), p. 40.

in Hodgeman, Ford, Ness, Comanche, Meade, and Finney counties and who had been forced to abandon their homesteads in the wake of the 1879-80 drouth. And he wondered if the newcomers were any better informed as to the soil and climatic conditions.[10]

Russell regarded the area west of the 100th meridian to be unfit for general farming purposes, and he harbored considerable doubt about the counties lying between the ninety-ninth and the 100th meridians. Although wheat had been grown in Ellis, Rooks, and Phillips counties, which were west of the ninety-ninth meridian, he believed that neither wheat, oats, nor corn was a sure crop west of Dodge City. "The soil is good," he noted, "but the trouble comes from lack of rain. The great productiveness of the soil around Garden City, about fifty miles west of Dodge City, where the lands are irrigated, shows that the only serious defect in that country is shortness of rainfall."[11] Russell did believe, however, that the area west of the 100th meridian was an excellent stock country, for while there was not sufficient moisture for corn or wheat or such grasses as clover and timothy, excellent livestock feeds like sorghum, rye, and millet did well. Thus by making stock raising the chief part of one's business, western Kansas not only would "pay the investor" but would contain, within the next fifty years, "as good farms" as there were then in the eastern part of the state.[12]

As Russell pointed out, precipitation was, indeed, the most "serious defect" to agricultural settlement in western Kansas. The average

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[10]Kansas Farmer, XXIII (June 10, 1885), p. 9.

[11]Ibid.

[12]Ibid.

annual rainfall in this area ranges from sixteen inches along the western border to twenty inches at about the 100th meridian, and twenty-four inches along the ninety-ninth.[13] This places the western one-third of the state in the semiarid category and very close to the critical point at which wheat production is possible. Moreover, the lower the average annual precipitation the greater is its variability from season to season and even during a given season. With this relatively low annual rainfall, the western area experiences roughly half the years above average precipitation and half below average.

Wet and dry years, however, do not come in a regular and predictable pattern, although they frequently occur in series. There may be a single wet or dry year, for example, or two, three or even four years of excessive moisture followed by an equal period when the rainfall is below average. This variability of precipitation is an important cause of the agricultural instability in western Kansas, as indeed it is in the Great Plains generally. Wide fluctuations in annual precipitation have been major contributors to the ups and downs of the area's economy, being partly responsible for the boom period of the 1880's and the bust period of the 1890's, while small fluctuations in seasonal precipitation may mean the difference between harvesting good or poor crops.

Whether precipitation is sufficient or insufficient, timely or too late, successful farming in a given area depends upon a number of conditions such as the amount and nature of the moisture, its seasonal

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[13]Data on precipitation and other climatic factors are from A. B. Cardwell and S. D. Flora, "Kansas Weather and Climate," Kansas Agricultural Experiment Station, Bulletin 302 (Topeka, 1942); and S. D. Flora, "Climate of Kansas," Report of the Kansas State Board of Agriculture, LXVII (June, 1948).

distribution, wind and temperature patterns, humidity, and the capacity of the soil to retain moisture. If the precipitation is snow, the amount that falls, its moisture content, and the effect of wind upon the fall are of crucial importance to the farmer. Hail, on the other hand, is not a welcome form of precipitation, but the possibility of its occurrence is a constant source of worry to the western Kansas farmer since it can damage or totally destroy crops in a matter of minutes.

Most of the precipitation that falls in western Kansas is in the form of rain. However, in an area of low precipitation the amount that falls is not necessarily the most critical factor. Of equal or even greater importance to the agriculturalist is how and when it falls. For example, a slow, gentle, general rainfall over a period of several hours, or even days, is much more beneficial for agricultural purposes than a sudden downpour. It is of interest to the farmer, therefore, that a higher proportion of the rainfall in western Kansas comes as light rains which may not penetrate to the root zone of plants rather than as heavy downpours which cause damage from runoff.

Although average annual precipitation is lighter in Kansas than in most states farther east, from 70 to 77 per cent of the annual fall of moisture occurs during the growing season of April to September. The western one-third of the state has an average rainfall of fifteen inches during this period, compared to twenty inches in the central one-third. However, the drier air and higher wind velocity in the west causes a more rapid evaporation from both plant and ground surfaces which intensify the effect of low rainfall. Fortunately, the soil in the western region retains moisture well and thus helps to offset the rapid rate of evaporation.

Because of these marginal conditions, it was imperative that settlers understand the weather and climatic factors so that they could adjust their system of farming to the true conditions, and not be misled by the years of unusually excessive precipitation which had largely given birth to extensive western settlement. But this knowledge did not come easily, and many western Kansas farmers learned only through bitter experience how to make the most of their environment.

Like Russell, Commissioner of Agriculture Norman J. Colman also took note of the great rush of pioneers who were filing homestead and preemption claims in the extreme western part of the state. While conceding that the unproductive character of a part of the region west of the 100th meridian, including western Kansas, had been greatly exaggerated, he warned in 1886 that recent successes were due to favorable seasons and that sufficient time had not elapsed in order to determine the probable success of general agriculture in that area.[14] The Commissioner did not doubt, however, that the country was eminently suited to pastoral purposes and that cultivation of the soil and a selection of suitable kinds of grasses would double its capability for stock raising and dairying.

Whether or not western farmers could profitably engage in general agriculture became an academic question in the wake of the 1884 season. The years 1885 through 1887 proved to be ones of feverish activity in the entire western region as the unusually wet years made settlers believe that they had moved into a veritable agricultural paradise. An

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[14] Annual Report of the Commissioner of Agriculture, 1886 (Washington, 1887), pp. 26-27.

observer noted in 1885, for example, that the rapidity with which the tidal wave of settlement was marching westward had never had a parallel in Kansas history.[15] The abundant rains of 1885, together with those of the past season assured continuance of settlement for at least another year, and unless Congress repealed the Timber Culture and Preemption Laws, he believed that every desirable quarter-section would be occupied in southwestern Kansas by the following year.[16]

Another witness expressed a similar view in the autumn of 1886. He commented that, compared to the conditions of two years before, when the western one-third of the state was for the most part occupied by scattered stock ranches and agricultural enterprise limited to a few valleys in the eastern and northern sections of the area, the state of affairs was:

> without parallel in the settlement of any extent of territory. Where previously the ranchmen attended the thousand herds of cattle that fattened on a nutritious native herbage which densely clothes the plains of western Kansas, today thousands of farms and comparatively comfortable homes exist, and scores of thriving villages have sprung up in every direction, transforming as if by magic the appearance of the country.[17]

A circuit-rider reported in 1885 that within a two-hour period he had met seventeen immigrant wagons bound for Clark, Ford, and Hodgeman counties while he was traveling along the Kingman-to-Dodge City road.[18]

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[15] Kansas Farmer, XXIII (August 19, 1885), p. 4.

[16] Ibid.

[17] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, p. 132.

[18] Louise Barry, ed., "Circuit-Riding in Southwest Kansas in 1885 and 1886: The Letters of Jeremiah Evarts Platt," Kansas Historical Quarterly, XII (November, 1943), p. 387.

A resident along the same road reported having seen as many as fifty pioneer families pass in a day, many of whom were going to homesteads on which they had filed several months previously.[19] The western towns were marvels of growth and activity. Garden City, for instance, was depicted as one of the newest and liveliest towns on the frontier, while Syracuse, which had only recently been laid out, was a "pandemonium of saw and hatchet racket."[20] The first building was constructed in Meade Center on May 20, 1885, and two months later there were eighty-eight houses standing.[21] Before the end of August the town had some 139 buildings and nearly 500 inhabitants.[22] Leoti City was laid out in August, 1885, on a half-section tract, and a year later reportedly consisted of 325 buildings with business lots selling for $100 to $800 and residential lots going for $20 to $100.[23]

The Kinsley (Edwards County) Graphic reported early in 1885 that "a continued stream of wagons rolls southward each day, regardless of wind or weather," and the (Kinsley) Mercury late in March counted 150 passengers from one train.[24] Before the end of April, one Kinsley firm had received its third carload of breaking plows, and by the close of the immigration season of 1886, the small farmer had occupied

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[19] Ibid.

[20] Kansas Farmer, XXIII (August 19, 1885), p. 4.

[21] Barry, "Circuit-Riding in Southwest Kansas," p. 384.

[22] Ibid.

[23] Kansas Farmer, XXIV (October 27, 1886), p. 4.

[24] As quoted in James C. Malin, "The Kinsley Boom of the Late Eighties," Kansas Historical Quarterly, IV (February, 1935), p. 23.

practically all available land south to the breaks of the Medicine River, and northward to the hills along the Smoky Hill River.[25]

The first settlers arrived in Haskell County in 1885, and by the end of the second year of settlement nearly all the public land had been occupied.[26] Dugouts and sod houses dotted the plains and mushroom towns had sprung up in anticipation of a dense farm population. Meanwhile, the undeveloped portions of northwestern Kansas received an unusually large immigration during the summer of 1885 and the spring of 1886. The trails were reportedly lined with prairie schooners filled with people from the eastern states seeking land and homes for their families in western Kansas, largely drawn to this region "by highly colored and purposely overdrawn pen pictures and advertisements sent East by railroad companies, land agents, and county seat boomers in the West."[27]

In their eagerness for land, new arrivals in western Kansas sometimes forced those already situated literally to guard their property at all times. A Comanche County homesteader, for instance, related that when he had settled there in August, 1884:

> a stake would hold a claim for thirty days. By September, a stake would not do; he must, at least, plow a furrow around it; by October, he must have a piece of ground broken; by November, if he did not have a house on it, some man would jump it. As early as February, the tide of immigration began to come so that he must not only have a house, but be in it; by March, his family must be there, if he has one; and by April, he must sit in his

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[25] Ibid., p. 24.

[26] A. D. Edwards, "Influence of Drought and Depression on a Rural Community: A Case Study in Haskell County, Kansas," Social Research Report No. 7 (January, 1939), p. 5.

[27] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1891 (Topeka, 1891), Pt. 2, p. 21.

> door with a double-barrel shot gun, and threatened to shoot every man in a covered wagon that did not keep off his claim.[28]

With this unusually heavy influx of settlers into western Kansas, special attention was given in the press to the subject of general agriculture. The editor of the Kansas Farmer, for example, noted in 1886 that "every paper that comes to our table from the new counties has more of less to say about it, and they all aim to impress upon the minds of their readers the importance of considering facts already established as to the growth of different varieties of grain."[29] One point made was that so little had actually been done in the way of general farming in the extreme western counties that "it may be said as to a great many localities the first attempts at agriculture will be made this year."[30] Even in Ford County, which had been opened by the Santa Fe in 1872, the settlers were just beginning to devote their attention to farming. The Dodge City Globe was quoted as saying:

> With this year Ford County begins anew and this time as a farming country. . . . Heretofore the raising of crops has not been what the county or the towns in the county depended on for support and prosperity. What made us in years gone by has in a measure disappeared, and the new enterprises and hopes have sprung up that have to be considered with a view not only of making an existence possible, but to secure a competence that will equal the business of other localities.[31]

Similar conditions existed in other western Kansas counties. Most of the thousands of newcomers who had gone into that part of the state

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[28]Barry, "Circuit-Riding in Southwest Kansas," p. 382.

[29]Kansas Farmer, XXIV (April 21, 1886), p. 8.

[30]Ibid.

[31]Ibid.

to open up farms and make homes expected to practice the same farming methods that they had known in the more humid regions. The Dodge City Globe warned, however, that what was good farming in Pennsylvania, Ohio, Iowa, or even eastern Kansas was not necessarily suitable in western Kansas.[32] Whereas wheat and corn were standard crops in the East, they were not always reliable in the semi-arid West, even though good crops of both had on occasion been raised. Rather, the farmer needed to rely upon feed and forage crops such as rye, Egyptian rice corn, sorghum, and millet. Some commentators, the Globe noted, saw no difficulty in raising sufficient quantities of feed and forage to sustain livestock and to assure family supplies as well. On the basis of these reports, the Dodge City paper advocated making stock raising the principal industry in that region. "It is a positive certainty," the Globe concluded,

> that the man who depends on the corn and wheat crop in this country will eventually fail, while the man who raises in addition to corn and wheat, oats, rye, and millet, with a big garden comprising every vegetable that can be raised in a garden, will always have a comfortable living, and he who adds to his farm chickens, ducks and turkeys; raises horses, mules, cattle or sheep, no matter if in small numbers, is not only sure to make a good living, but is sure of being able to say he is a free, independent man, dependent upon none but consumers.[33]

In April, 1887, the Kansas Farmer published the result of an exhaustive study of crop, stock, and weather conditions throughout the state; the study was based upon the observations of scores of special correspondents and selected farmers in all counties.[34] The sense of

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[32] Ibid.

[33] Ibid.

[34] Ibid., XXV (April 7, 1887), p. 1.

the report was that the state was in good condition and that the ceaseless tide of immigration continued to pour in beyond all precedent. While the immigrants were going mostly to the western counties, however, a great many "well-conditioned newcomers" were reported scattering over the older-settled counties, buying improved farms or going into business in the towns.[35]

Because of the tide of settlement into western Kansas, most of the public lands had been filed upon by 1886. Indeed, during the peak settlement years of 1885-1887 over 12,000,000 acres of Public Domain were entered in Kansas; they included nearly 7,000,000 acres under the Homestead Law and about 4,000,000 under the Timber-Culture Act.[36] Of this amount, nearly 11,000,000 acres, or 86 per cent of the total, were entered at the Garden City, Wakeeney, and Oberlin land offices.[37] On June 30, 1888, only 217,000 acres of public lands remained for filing in those districts.[38] In addition, at the end of 1887 only 192,000 acres of vacant school land were available in the western region. Much of this land, although listed as vacant, was actually settled upon and improved.[39] Altogether, then, there were fewer than 500,000 acres of

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[35] Ibid.

[36] Compiled from the figures given in the Annual Report of the Commissioner of the General Land Office, for the years 1885 through 1887.

[37] Ibid.

[38] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888 (Topeka, 1889), Pt. 2, pp. 209-10.

[39] Ibid. In addition to the public lands, the Kansas Division of the Union Pacific held 553,616 acres of its federal land grant for sale in the western counties on October 1, 1888. Most of this land was situated in Logan, Wallace, and Thomas counties and was priced at three to eight dollars an acre. See Ibid., p. 211.

land not in private hands at the end of 1888.

The events that unfolded during the mid-1880's in Finney County perhaps best examplify the boom conditions and are more or less typical of the excesses of the boom in almost any town and county in the western part of the state. Finney County was organized in October, 1884, with an unusually large area of 2,808 square miles.[40] It was easily accessible over the Santa Fe Railroad, and the broad river bottom and large expanse of prairie land made it susceptible to both general agriculture and stock raising. The Arkansas River flows in a southeasterly direction through the middle of the county and its valley, which is four to six miles in width, is paralleled on the north by the Santa Fe. The population of the county grew from 1,569 at the time of organization to 13,662 on March 1, 1886, a gain which represented the largest annual increase of any county in the state.[41] However, the state legislature reduced Finney County to 864 square miles in 1887, which took away nearly 5,000 inhabitants. On March 1, 1887, the population was estimated at 8,084.[42]

Garden City, the county seat situated on the Santa Fe, early became the center of settlement in the area. A reporter for the Kansas Farmer

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[40] Fourth Biennial Report of the State Board of Agriculture, Kansas, 1883-1884, p. 139.

[41] Ibid.; and Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, p. 220. The 13,662 figure for March 1, 1886, obviously is in error. Ivanhoe township is credited with 7,160 population whereas in 1885 it had none, and in 1888 only 332. More than likely, the correct count for 1886 was 160, making the population total long by 7,000. This would represent a growth for the county of from 1,569 at the time of organization to 6,662 in 1886.

[42] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, p. 3.

characterized it as "a sort of general headquarters for the real estate business of southwest Kansas,"[43] In 1883 a United States land office with jurisdiction over most of the southwestern portion of the state was located there. The population of the town grew slowly, however, until the heavy influx of settlers commenced in the spring of 1885. By March 1, 1886, Garden City numbered 2,462 inhabitants; two years later it had grown to 2,819.[44]

The registrar of the land office at Garden City observed in 1885 that:

> the rush for land in this section of Kansas in unprecedented. Every train brings in a crowd of land seekers. For more than an hour before the land office opens a mass of humanity throngs the doorway and it is a remarkable sight to see the press and excitement. There are fifty or more land agents or attorneys who . . . facilitate this rush.[45]

In March, 1886, for example, a colony of forty families from Berlin, Ontario, arrived at Garden City, and the land office, understandably, was reported to be "packed with new settlers."[46] Later, in July, 1887, officials reported a great immigration into western Kansas, many coming from Nebraska.[47]

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[43] Kansas Farmer, XXV (June 16, 1887), p. 1.

[44] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 1, p. 220; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 1, p. 153.

[45] As quoted in Annual Report of the Commissioner of the General Land Office, 1885 (Washington, 1886), p. 79.

[46] Kirke Mechem, ed., The Annals of Kansas, 1886-1925 (Topeka, n. d.), I, 5.

[47] Ibid., p. 39.

Settlement activity at Garden City was graphically described by a newspaper reporter in the following words:

> The depot at Garden City is a small one, and is scarcely enabled to keep its head above the hurricane of household effects. Here everything may be seen in the direst confusion, from a fire shovel . . . to pianos . . . and settees. The population is as incongruous as are the articles upon the platform. Almost all races, sexes and conditions of life are represented, from the pale-faced accountant to the thick-set, burly Westerner and cowboy; from the man with money to the man without money. The past year's experience of this country has been satisfactory to most of the settlers, sufficient rain having fallen for the nourishment of most of the crops. . . . Hammers may be heard from daylight until long after it has faded. Boxes, trunks and household furniture may be seen piled out in the middle of the prairie with no sign of a shelter over them, while the owner nervously hammers away on his 8 x 12 house, or uses his spade to complete his dugout. Lumber, stone and plaster litters and obstructs every street. Hotels and land offices are plenty and flourishing. Many of the newcomers have barely enough money to get them here and they immediately go to work at good prices, scarcely losing a day after their arrival. . . . Parties come and camp near the city, form themselves into large clubs, and elect one of their number cook, thus getting along quite cheaply, their expenses not amounting to more than $1.50 per week. South of the town, near the river, dugouts, wagons, tents and other domiciles hard to name, may be counted by the hundred all of them filled with settlers' household goods and dirt, with rather more than a judicious sprinkling of the latter.[48]

At the height of the boom, the Garden City Board of Trade and the Garden City Sentinel, one of five city newspapers, sponsored an excursion for newsmen over the Santa Fe from Kansas City to Garden City.[49] The time, June, 1887, was propitious for this promotional scheme since abundant spring rains had put crops in excellent condition and farmers in a buoyant mood. The sponsors of the tour were not disappointed by the widespread publicity given the county if the copy dispatched by the

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[48]Kansas Farmer, XXIII (December 9, 1885), p. 1.

[49]Ibid., XXV (June 16, 1887), p. 1.

observer for the Kansas Farmer was typical of press reaction. This correspondent appeared convinced that western Kansas had an almost unlimited potential for stock raising because of the "immense and magnificent prairies" and the capability of the soil to produce forage and feed grain crops with which to sustain and mature livestock for market.[50] He also noted a disposition among stockmen in the region to improve the quality of cattle. Furthermore, he observed that while abundant rainfall had made irrigation unnecessary during the past two or three years, the area subject to irrigation had been increased and would make the land independent of an occasional dry season, in addition to insuring gardens, orchards, and groves.[51] Although this writer admitted to some prior reservations about the agricultural possibilities of the extreme western portion of the state, and other parts as well, he now seemed confident that "every county and every township in the State of Kansas is valuable for the varied purposes of agriculture, and only a few years more are needed to verify it in every particular. . . . Every part of the state is developing in a substantial and permanent way."[52]

Good crops raised in 1885 and 1886 and extensive railroad building in 1887 and 1888 helped to keep the boom going, and many in the western counties became imbued with the spirit of speculation. Farmers, it seemed, were not content with a quarter-section, but took all the laws allowed and craved more.[53] They mortgaged their farms to branch out

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[50] Ibid.

[51] Ibid.

[52] Ibid.

[53] Platt wrote from Pratt County in November, 1885, that there had been a "good deal of change of the settlers of these counties during the last six months. Many young men, and some men with families have proved

more extensively in farming and stock raising, or to buy more land and equipment. Moreover, towns sprang up as if by magic, each hoping to become the county seat and to be situated along the line of at least one railroad.[54] In his swing through southwestern Kansas in 1885 and

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up their pre-emption claims, obtained their certificates and gone back farther east to obtain some employment. Others have proved up here, and have pushed on farther west to take tree claims and homesteads, that they might be the owners of more land." And from Wichita County in August, 1886, he observed that "there are so many tree claims in this county, and so many bachelors that are like the Irishman's flea, holding claims, and so many families that are holding five or six claims, and so many homesteads taken upon which the families have not yet come, that there are comparatively few places where it is practicable to organize Sunday schools." Bary, "Circuit-Riding in Southwest Kansas," pp. 387-89.

[54]To illustrate, Platt, in the summer of 1885, came upon fifteen men from McPherson who were trying to build a town in the middle of Stevens County "which they hoped would soon become a great city, the county seat of Stevens County." They had three small box houses and a tent and were digging a well. In the meantime, they had to haul their water from the nearest habitation which was fifteen miles away. "There is no stream of water in the whole county," Platt continued, "except where the south fork of the Cimarron river crosses the very northwest township. There is not a tree in the county and only three families of actual settlers, yet a large portion of the best claims are filed on, either as tree claims, homesteads, or pre-emptions, and people seem to think the county will be full of settlers within a year, and that the land ere many years will be worth twenty to fifty dollars an acre." Barry, "Circuit-Riding in Southwest Kansas," pp. 385-86. Farther north, in Lane County, the city of Dighton was booming and awaiting "the advent of three railroads, one of which, the ATSF, will be completed to the east line of the county before next May. . . ." Kansas Farmer, XXIV (November 24, 1886), p. 4. Finally, a small town in south-central Kansas, "with a population in 1886 of not over 1000 was in that year the general headquarters for one road, was on the main route for another, was voting bonds for a third, was negotiating with a fourth to change its projected route so as to include this town, and had one of three standing committees of its Board of Trade on constant look-out for still other railroads." Miller, "Background of Populism in Kansas," p. 471. Finally, in looking over his exchanges, the editor of the Great Bend Tribune "discovered" that every town in Kansas would have "two or three railroads this year"; there were 150 "Queen Cities"; 600 towns would double in population; in 450 towns it was impossible to keep up with construction; 285 would become great distributing centers; 585 papers announced that their towns would soon be in the midst of the greatest boom ever known, and all towns reported heavy investments by Eastern capitalists. Great Bend Tribune, May 6, 1887, p. 1.

1886, Jeremiah Platt noted that "one of the things which attracts the attention of a traveler is the rapidity with which some of these new towns are pushed forward."[55] In addition to the founding of towns, school districts were organized and bonded to build school houses, and counties and townships were bonded to secure railroads, water works, and other modern improvements.

The needs of western Kansas settlers for capital to buy additional land, make improvements, equip their farms, and even to purchase necessities of life, were met by mortgaging their land to companies supplied with funds from wealthy individuals and institutions in the East who were seeking new investment opportunities. This flow of eastern money into the western land mortgage market reached flood crest during 1886 and 1887 as the boom reached the stage of a veritable craze. Companies competed strenously for agents to represent them and to obtain as much of the business as possible. As early as 1880, J. B. Watkins, head of one of the leading land mortgage companies, estimated that there were at least forty major agencies lending funds in Kansas.[56] By that date his firm was operating as far west as Edwards County which lies between the ninety-ninth and the 100th meridians. However, he withdrew to the counties east of the ninety-eighth meridian after drouth conditions had forced him to foreclose large amounts of land along the western fringe of his lending field.[57] When Western settlement picked up

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[55]Barry, "Circuit-Riding in Southwest Kansas," pp. 383-84.

[56]Allan G. Bogue, Money at Interest: The Farm Mortgage on the Middle Border (Ithaca, N. Y., 1955), p. 117. See also Glenn H. Miller, Jr., "Financing the Boom in Kansas, 1879-1888, with Special Reference to Municipal Indebtedness and Real Estate Mortgages," Master's Thesis, University of Kansas, 1954.

[57]Ibid., p. 140.

again after 1884, the Watkins company investigated conditions in extreme southwestern Kansas and in 1886 it resumed lending west of the ninety-eighth meridian. By the end of 1887, Watkins was doing business on the Colorado border and was experiencing sharp competition from his rivals.[58]

Land mortgages in the western one-third of Kansas reached a peak in 1887, which was a year later than the high point of mortgage credit in the central and eastern regions. But while western Kansas was a relative latecomer to this aspect of the boom, it rapidly made up for lost time. For the three years beginning in 1886, there were more farm mortgages, covering more acres and involving more money in the western than in the eastern part of the state, and in the most active year it surpassed even central Kansas in the number of acres placed under mortgage. Indeed, the amount of money invested in farm mortgages in western Kansas during the years 1886 to 1888 represented no less than 20 per cent of the total amount invested for that purpose in the entire state.[59]

While most of the early settlers in western Kansas undoubtedly were people of limited means who had come to better their economic condition, there were some who entered claims for no other purpose than to obtain title to land and then dispose of it for a quick profit. Indeed, the Census Bureau inquired into the motives of mortgage borrowers in 1890 and concluded that "the mortgage debt . . . has to a great extent had an origin in speculation."[60] Furthermore, other studies indicate

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[58] Ibid., p. 141.

[59] Compiled from the figures given in the U. S., Census, Eleventh Census (1890), XII, 437-51. This compared with slightly over 7 per cent of the total amount of mortgage money placed on town lots in the thirty-nine western counties, and 10 per cent of the total amount of money invested in western municipal bonds, which were used for promoting railroad construction, manufacturing enterprises, and for making city improvements.

[60] Ibid., p. 88.

that there was little difference in the rate of turnover of farm population between periods of relative prosperity and periods of economic distress. Had the settlers been dominated solely by their desire to establish a home for themselves, the exodus of farm operators from pioneer townships should have been greatest in periods of economic depression. But this was not always the case. Rather, some settlers seized the opportunity in good times to turn their homestead into cash and to realize a profit from rising land values.[61] "In many cases," it has been noted,

> Uncle Sam furnished the land, the settler contributed time and labor, and a mortgage company supplied operating capital from the funds of some eastern investor, church group, savings institution, or university. If drought came or the funds were exhausted before the settler found a purchaser, the mortgage company discovered that it had not made a loan but rather purchased a farm.[62]

Despite the optimism espoused by newspaper reporters, town lot boomers, railroad promoters, land agents, and the settlers themselves, drouth conditions beginning in 1887 and the bursting of the speculative bubble brought a sudden end to settlement and agricultural development in western Kansas. The influx of settlers ceased almost immediately and the population of the region declined sharply after 1888. Although agricultural operations were not checked entirely by the collapse of the boom, they were curbed severely. Nonetheless, farm development in the west had been impressive. The number of farms in the thirty-nine counties, for example, had increased from 11,208 in 1880 to 27,845 a decade later, while the number of acres of land in farms rose from 2,100,000

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[61]See James C. Malin, "The Turnover of Farm Population in Kansas," Kansas Historical Quarterly, IV (November, 1935), pp. 339-59.

[62]Bogue, Money at Interest, p. 143.

to 6,300,000 for the same period.[63] This meant that nearly 29 per cent of the western region had been carved into farms by 1890, compared to less than 10 per cent a decade earlier.

Furthermore, the total value of farms in the west, including land, fences, and buildings, grew from $6,900,000 to $53,500,000 during the 1880's. This rise in value represented an increase in the average value of each farm from $614 to $1919.[64] Western Kansas farmers harvested a grand total of 4,500,000 acres during the period 1881 to 1887, which produced crops valued at $39,000,000, or an average of $8.65 per acre.[65] Significantly, field crops accounted for two-thirds of the value of all farm products for the years 1885 through 1887, indicating that dirt farming was more prevalent than ranching in that semi-arid region. The total value of all farm production for each of those three years amounted to an average of $11,544,396.[66]

The pattern of farm operations in the western counties during the boom years was much the same that had existed during the pioneering stage of the counties farther east. Most farmers on the frontier had the traditional quarter-section of land, but the area actually devoted to cultivation of crops was relatively small. Moreover, they generally established the same farming practices that they had known farther east. They:

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[63] U. S., Census, Tenth Census (1880), "Agriculture," pp. 115-16; and U. S., Eleventh Census (1890), "Agriculture," pp. 208-09.

[64] Ibid.

[65] Ibid.

[66] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1881 through 1888.

> raised a few acres of corn or wheat, or both, owned a few head of livestock, and sold meager quantities of dairy and poultry products. Farmers were by no means self-sufficient, but their production of salable crops and livestock was usually so small during the initial years of settlement that they were only in the beginning stage of commercial operation.[67]

As in most pioneer communities in the Great Plains, the first settlers in western Kansas endured many hardships and privations. For one thing, the pattern of settlement, dictated by the homestead law, was one of isolated family farmsteads surrounding scattered small villages. In addition, water was scarce, markets were far away, and drouths, hail and hot winds, blizzards and plagues of grasshoppers were sources of constant irritation. Furthermore, most of the earliest settlers knew little or nothing about farming or other work incidental to the development of a new land in a semi-arid region. Consequently, for the first year or so they put out a few acres of sod crops and then depended for a living on odd jobs, such as freighting, railroad construction, and breaking prairie for non-residents.

Because of these conditions, the pioneers lacked many comforts to which they had been accustomed in their previous homes. Thus when they reached western Kansas with their meager stores of savings, livestock, implements and household furniture, they had to adapt their ways to the exigencies of frontier life. Since the self-sufficiency of their agricultural economy could provide them with only the barest necessities, they endured dugouts and sodhouses and other hardships because of their eagerness to obtain free land. When crops failed, however, and their

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67Gilbert C. Fite, The Farmers' Frontier, 1865-1900 (New York, 1966), p. 123.

scanty resources were exhausted many departed, leaving abandoned lands and ghost towns in their wake.[68]

So long as easy credit remained available and favorable weather conditions prevailed in western Kansas, settlers continued to pour into the region, blissfully unaware that climatic and geographic conditions were fundamentally different from those they had known farther east. Later, however, drouth drove many settlers out of the west and forced those who survived to adapt their farming practices to the environment.

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[68]Very few studies have been made of rural social and cultural life in the West during the late nineteenth century. See Everett Dick, The Sod-House Frontier, 1854-1890 (New York, 1937); Fite, The Farmers' Frontier; and Edwards, "Influence of Drought and Depression on a Rural Community."

CHAPTER IX

A DECADE OF DEPRESSION, DEBT, AND DISCOURAGEMENT, 1888-1897

Kansas agriculture had experienced a rapid and apparently healthy growth during the decade ending with 1885. Land had been readily available and accessible, and farmers generally had been blessed with bountiful crops and favorable prices. As a result, settlers had poured into the state in large numbers occupying much of the broad prairies in the central and west-central portions of the state. Ample credit had also been available throughout this period of settlement, and became even more abundant in the mid-1880's as Western real estate mortgage companies with almost unlimited amounts of Eastern capital at their command appeared on the scene. Since their income appeared not only safe but destined inevitably to go higher, farmers did not hesitate to borrow on the security of their holdings in order to expand and equip their farms, and sometimes to speculate. Farm loans were usually contracted for a term of from three to five years and ranged in sums of from $300 to $700 for a quarter-section of land.[1] The average loaned on such tracts was about $500. In some of the western counties, loans were secured for an amount greater than the land was actually worth.

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[1] T. E. Bowman, Some Facts About the Western Mortgage Business: Its History and Its Outlook (Topeka, 1892), pp. 8-9. See also Allan G. Bogue, Money at Interest: The Farm Mortgage on the Middle Border (Ithaca, New York, 1955), for a detailed study of farm mortgage credit in Kansas.

Because of these conditions--easy money, available land, good crops and prices, the pace of settlement quickened to such an extent during the mid-1880's that Kansas no longer had on its hands a healthy, vigorous growth, but rather a boom of the first order. This boom reached its peak during the years 1886 and 1887 as the frontier line of settlement swept to the Colorado border. Then it suddenly collapsed. The abrupt ending surprised and shocked settler and speculator alike. The inflated price structure collapsed and land and property values depreciated as speculators, boomers, and loan companies "beheld with dismay their embryonic fortunes drifting swiftly and surely away."[2]

"The immediate cause of the slump," it has been suggested, "was the lack of rainfall during the season of 1887. . . . The summer of 1887, giving evidence of impending crop failure, called a halt to the boom."[3] As the hot weeks of summer wore on, popular confidence was shaken and farm land and town lot prices began to decline. Meanwhile, "eastern investors, learning of the turn of events in the West, no longer clamored for western securities; while countless numbers of real estate men, mortgage vendors, railway promoters, and bankers went out of business altogether, many of them hopelessly bankrupt."[4] Under these circumstances, neither the bona-fide settler nor the speculator had the desire or the means to pursue his expansive activities.

For whatever reasons the boom collapsed, the consequences were

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[2]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1891 (Topeka, 1891), Pt. 2, p. 21.

[3]John D. Hicks, The Populist Revolt: A History of the Farmers' Alliance and the People's Party (Minneapolis, 1931), p. 31.

[4]Ibid.

both immediate and grave for Kansas farmers, especially for those in the west. The large amounts of money spent to pay for construction of new railroad lines, for example, was suddenly cut off. Moreover, eastern investors became more wary in lending upon any kind of western security, and the westerners found it increasingly more difficult to borrow on their land. By 1889 new loans amounted only to one-half those negotiated in 1887, and there was "no way of knowing what share of those classed as new mortgages were in fact only a renewal given by the creditor in preference to the alternative of foreclosure."[5] This constriction of credit hurt farmers who had borrowed heavily to improve or to expand their farming operations in the expectation that prosperous conditions would continue. Back debts and unpaid interest became an almost unbearable burden when Eastern capital all but ceased to flow into the West. Thus even the farmer who had been fairly solvent experienced financial difficulties. For the settler who had been operating on a thin margin under pioneer conditions, this turn of events often spelled disaster as "hard times settled down upon the whole frontier not to be shaken off for a decade."[6]

Kansas farmers, as a class, had gone heavily into debt in the 1880's, and especially during the years 1885-1887. Over 203,000 farm mortgages

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[5]Raymond C. Miller, "The Background of Populism in Kansas," Mississippi Valley Historical Review, XI (March, 1925), p. 488. Early in 1891 Watkins discussed with one of his officials the possibility of again commencing an active lending business in Kansas. However, they decided that the time was not yet at hand. For one thing, the widespread failures among the lending agencies had given Kansas securities a bad name, and also the fact that agrarian radicals had aroused an uneasiness in the minds of eastern investors helped decide them against reopening their activities. See Bogue, Money at Interest, p. 151.

[6]Hicks, The Populist Revolt, p. 31.

were in force in 1890 which covered nearly 27,000,000 acres and which totaled $175,000,000.[7] The latter figure amounted to an average of $6.57 for each acre mortgaged; $1,050 for every farm in the state; and a per capita debt of $170, one of the highest in the nation.

This farm mortgage debt, however, was not evenly distributed among the farm population. The eastern counties, for instance, had been comparatively well-settled before 1881 when land prices were relatively low. As the population of this region grew, land values appreciated so that many established farmers and stockmen, and newcomers too, borrowed money to buy new farms or to finance their expanded operations. Because of the stability that agricultural operations had achieved, the farm mortgage debt did not threaten the economic security of farmers in the eastern part of the state. In fact, only about one-half of the eastern Kansas farms occupied by their owners in 1890 were encumbered with mortgages.[8] Thus while most of the eastern farmers were inconvenienced by low farm prices and high taxes, and were disappointed with the decline in land values that followed the collapse of the boom, they were not in serious economic trouble.

Agriculturalists in the central portion of the state, on the other hand, were more seriously affected by the sudden ending of the boom. Settlers who had entered this region during the late 1870's and early 1880's had secured valuable and productive lands for very low prices.

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[7]U. S., Census, Eleventh Census (1890), "Report on Real Estate Mortgages," XII, 729.

[8]Ibid., pp. 436-51; and U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

However, land values rose rapidly in response to increased demand as the population of the central counties nearly doubled during the years 1881-1887. But higher land prices and the fact that the area had not achieved agricultural maturity did not deter the inhabitants from using their credit to the limit to expand and improve their holdings or to purchase new farms.

Consequently, in most of the central Kansas counties at least 60 per cent of the farms occupied by their owners were mortgaged in 1890, while in some counties as high as 75 per cent of such farms were encumbered.[9] The average mortgage debt per farm in 1890 varied from $1,200 to $1,400 in such central counties as Dickinson, Sumner, McPherson, and Greenwood, while the encumberance in Washington, Jewell, and Barton counties ranged from $771 to $980.[10] These figures compare with a range of from $477 to $767 in such eastern counties as Doniphan, Anderson, and Cherokee. Many settlers in the central and west-central portions of the state were less well-established than were those who had entered eastern Kansas earlier. They were less able, therefore, to shoulder the mortgaged indebtedness with its high interest rate, and thus many had to struggle to save their homes from foreclosure.[11]

Nearly all of the settlers who lived in western Kansas when the

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[9] Ibid.

[10] Ibid.

[11] Miller concludes that while a majority of farms in the central section of Kansas were mortgaged, the "actual emigration of farmers who had made a sincere attempt to adjust themselves to their situation seems to have been small . . . . certainly not 10%, and compares very favorably with the standing of men in other businesses."

boom collapsed had immigrated during 1886 and 1887.[12] These pioneers had been able to obtain government land, or to purchase either railroad or state school land at from $3. to $3.50 an acre. It is significant to note, however, that while land was relatively cheap, a huge mortgage debt accumulated generally throughout the western counties. Undoubtedly many of these settlers were petty speculators who had hoped to obtain title to tracts of land with a minimum of work and investment, and then to sell their holdings when pressure of settlement had caused land values to rise. However, when the boom burst and a series of dry years exhausted their resources, they had no compunction about "selling" their land to the mortgage agency and leaving the area.

Mention of such petty speculation occurred frequently in the frontier press and, undoubtedly, it swelled the foreclosure totals. Although it is impossible to determine the number of such borrowers, an official of the Watkins Company estimated that nine out of ten loans which had been made west of Edwards County were ending either in foreclosure or by the mortgagor deeding his land to the company.[13] Moreover, he blamed the exodus of borrowers from western Kansas during the late 1880's and early 1890's almost entirely on the "character of the settlers."[14]

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[12]The population of the forty counties west of the ninety-ninth meridian increased from 76,309 in 1885 to 146,083 in 1886 and to 198,857 in 1887.

[13]Bogue, Money at Interest, p. 145.

[14]Ibid. The secretary of the state Board of Agriculture charged in 1890 that "the western one-third of Kansas which was settled during the 'boom' period, among other serious matters was afflicted with speculators. Many young men and others went there with no other purpose than to pre-empt a quarter-section of land, at the end of six months get a loan on it (usually about $500), and leave. This and successive crop failures have reduced the aggregate population of thirty-one counties in that

Scott County is more or less typical of western Kansas during the boom period. Situated in the geographic center of the western thirty-two counties, this county had only ninety-one inhabitants in 1885. When it was organized in June, 1886, however, its population had swelled to 2,675, and it increased to 2,848 in 1888.[15] During these three years, 1,587 farm mortgages covering 208,202 acres and involving $686,865 were negotiated.[16] The collapse of the boom and a series of crop failures beginning in 1887, however, caused the population to fall to 1,260 in 1890.[17] Furthermore, the number of farms in the county dropped to 279.[18] Yet 1,762 farm mortgages covering 275,427 acres and involving $768,024 were being carried on the records in 1890.[19] These figures represented an average indebtedness per capita of $530 and an average encumbrance of $2,400 for each farm, although many who had incurred these debts were no longer around.

As a rule, the counties in the southern half of the thirty-two county area were more heavily encumbered than those counties in the northern half. Climatic differences, the fact that the tide of settlement had swept into the northern area before the worst period of

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portion of the State from 133,433 to 98,763, being a loss in population of 34,660 during the years 1889 and 1890." See Seventh Biennial Report of the State Board of Agriculture, Kansas, 1889-1890 (Topeka, 1891), vii-viii.

[15]Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886 (Topeka, 1887), p. 507; and Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888 (Topeka, 1889), p. 440.

[16]U. S., Census, Eleventh Census (1890), "Report on Real Estate Mortgages," XII, 449.

[17]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1895 (Topeka, 1895), p. 14.

[18]U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09.

[19]U. S., Census, Eleventh Census (1890), "Report on Real Estate Mortgages," XII, 449.

speculation had occurred, and the fact that drouth and crop failure struck harder in the extreme southwestern corner of the state, largely accounted for this situation. By way of comparison, the average mortgage indebtedness per farm in such northwestern counties as Decatur, Cheyenne, Norton, Sherman, Thomas, and Logan, ranged from $551 to $746, while the per capita debt burden varied from $113 to $168.[20]

While tight credit and the prospect of having to meet high interest payments on their debts posed serious problems, other calamities such as widely fluctuating farm commodity prices and some poor crop years brought disaster to many Kansas farmers and exceedingly hard times for others. Farm commodity prices fluctuated considerably during this period. Heavy crop yields inevitably brought a corresponding decline in prices, while years of scarcity had the opposite effect. The excellent crop year of 1884, for example, saw wheat prices drop sharply from an average value of seventy-four cents in the previous year to forty-three cents, while a series of good corn years caused the average price of that cereal to skid from fifty-six cents in 1881 to twenty-one cents in 1884. During the following eight years, crop prices generally rose with wheat ranging from a low of fifty-five cents in 1892 to a high of eighty-one cents in 1890. Corn, during the same period, varied from nineteen cents in 1889 to forty-two cents in the following year.[21]

Actually, the price of corn sagged to an all-time low of ten cents in the early months of 1890. In McPherson County, for example, much of the 1889 bumper crop went to waste as cribs, pens, and old buildings

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[20] Ibid., pp. 438-50.

[21] Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1936 (Topeka, 1937), pp. 8-9.

were filled, and immense piles lay uncovered on the ground.[22] Some farmers preferred to burn it for fuel rather than sell it like the Leavenworth County farmer who reported that he had received "just two drinks and a lunch" for a load of corn.[23] While many farmers marketed some or all of their corn as grain, most converted it into meat and poultry products on their farms, thus gaining a greater price for the crop. The value of cattle, however, began a general decline in 1885 that lasted until 1896 and thus narrowed the extra margin of profit for the farmer-stockman. Whereas cattle had sold for $27.12 in 1884, they brought only $22.31 in 1887; $18.26 in 1889; and around $16. during the next six years.[24]

Poor crop yields also plagued Kansas farmers during these years, especially in the west-central and western portions of the state where annual precipitation diminished to the point at which crops could not be grown with certainty. It was not unusual for large areas of Kansas west of the ninety-ninth meridian to be affected by weather conditions so adverse that crop yields were severely curtailed. On occasion the entire region suffered total crop failure. While the central and eastern portions of the state harvested some very lean crops, those regions were not prone to total failure. Farmers and stockmen in the eastern counties, in particular, never failed to harvest at least a partial corn crop during this period, and their grasses were always sufficient to

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[22]Kirke Mechem, ed., The Annals of Kansas: 1886-1925 (Topeka, n. d.), I, 92.

[23]Ibid., p. 93.

[24]These figures are farm value prices as of January 1 of the years indicated. Compiled from the figures given in U. S., Department of Agriculture, Bureau of Statistics, Bulletin 64 (Washington, 1908), p. 123.

carry their livestock through the year. Lean crop years adversely affected agricultural operations in eastern and central Kansas but they did not bring disaster.

One of the most unfavorable crop seasons known to Kansas agriculture occurred in 1887. The previous winter had been especially harsh and it was followed by a dry spring which gave way to a very dry and hot summer. As a result, crops of all kinds were reduced to the lowest yields known for many years.[25] Another hard winter followed, particularly on the frontier where many settlers were inadequately housed and their livestock largely unsheltered. Temperatures reached thirty below zero in January, 1888, and livestock was lost from the cold weather and from starvations.[26]

The crop season of 1888, however, was good. Wheat turned out to be the best since 1884. A high percentage of the seeded acreage matured, and farmers harvested an average of fifteen bushels per acre.[27] The corn crop was the largest ever planted, but unfavorable weather in the central and western portions of the state caused the loss of one-fifth of the seeded acreage. Still, the yield in many areas was heavy and the crop averaged twenty-four bushels per acre.[28] Oats yielded a fine crop and sorghum, milo maize, kafir corn, millet, alfalfa, and grasses of all

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[25] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, p. 6.

[26] John Ise, Sod and Stubble, the Story of a Kansas Homestead (New York, 1936), p. 194.

[27] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 9-10.

[28] Ibid., pp. 12-14.

kinds yielded bountifully.[29] As a result, Kansas generally was in excellent agricultural condition after the 1887 failure, and farmers and stockmen were in a bouyant mood.[30]

Although sections of western Kansas suffered from dry weather during the fall and early winter, seeding conditions for winter wheat in 1888 were generally favorable. A mild winter with moisture in the form of snow, together with abundant rains in March, brought out the winter wheat in splendid shape and put the ground in top condition for planting and seeding spring crops. The spring growing season was exceptional, except for a few counties in extreme southwestern Kansas. But even there rain fell at a propitious time so that fair crops were raised in all but Grant County.[31] Farmers and stockmen thus harvested bumper crops of wheat, corn, oats, and nearly all other crops and grasses. The wheat yield was the second highest in state history, exceeded only by the 1882 crop, while corn averaged over forty bushels an acre and entered the record as the premier Kansas corn crop.[32]

But while 1889 was a year of plenty with overflowing granaries and a surplus production so immense that the railroads reportedly were taxed to move it to market, the following year was one of scarcity and lean granaries. Although the summer of 1890 was the driest and hottest

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[29] Ibid., pp. 14ff.

[30] Kansas Farmer, XXVI (July 5, 1888), p. 3.

[31] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1889 (Topeka, 1889), p. 3; and Kansas Farmer, XXVII (June 6, 1889), pp. 6-7; and Ibid., (September 4, 1889), pp. 1-4.

[32] Seventh Biennial Report of the State Board of Agriculture, Kansas, 1889-1890, Pt. 2, pp. 5ff. Over 6,800,000 acres of corn produced 273,888,321 bushels. This record yield was not broken prior to 1936.

in twenty years, those crops which were not obliged to run the gauntlet of July and August did fairly well. Wheat, oats, and flax, for the most part, were good. In fact, about 90 per cent of the seeded acreage of winter wheat was harvested and the crop averaged fourteen bushels an acre.[33]

While corn was reported to be in excellent condition on the last of June, it was devastated by hot, dry weather in July just when it was in the critical stage of fertilization and ear formation. All sections of the state suffered the effects of this adverse weather, but that portion embraced between the ninety-seventh and 100th meridians suffered most seriously. Such counties as Clay, Cloud, Dickinson, Jewell, Phillips, Republic, Sumner, and Washington, which were heavy corn producers, lost up to 90 per cent of their planted acreage, and what was harvested yielded little more than ten bushels an acre. The crop in the extreme western counties was almost a total failure. The corn crop for 1890 averaged only nine bushels an acre, which made it one of the worst in state history.[34]

Fortunately, the winter of 1890-91 was generally mild so that livestock, although thin due to the scarcity of forage, emerged in the spring in a fairly healthy condition. Nonetheless, the number of livestock in the state fell sharply during the year ending March 1, 1891, as farmers reacted to the feed shortage. Cattle numbers decreased 18 per cent and

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[33] Ibid., Pt. 1, vi; and Pt. 2, pp. 5-6.

[34] Report of the Kansas State Board of Agriculture for the Month Ending July 31, 1890 (Topeka, 1890), p. 3; and Seventh Biennial Report of the State Board of Agriculture, Kansas, 1889-1890, Pt. 2, pp. 8-9.

hogs declined 40 per cent.[35] Otherwise, rain and snow during late winter greatly strengthened the winter wheat plant and furnished an abundance of moisture to start a vigorous growth of all spring crops and grasses. Of particular significance was the 60 per cent increase in the seeded acreage of winter wheat. Weather conditions continued excellent for this crop and in June, with harvesting operations already completed in the southern counties but still in the process in the northern portion of the state, it became evident that a bumper wheat crop was being gathered.[36] When the returns were in, Kansas wheat farmers had produced the largest crop in the young state's history--58,500,000 bushels.[37]

The corn crop suffered again from adverse weather conditions in some sections, but it still produced nearly 140,000,000 bushels for an average yield of twenty-seven bushels an acre.[38] Thus 1891 was recorded as one of the most prosperous years, in a general way, in the history of Kansas agriculture.[39] Although peculiar weather conditions had shortened the corn crop and some of the lesser crops in certain sections, the state as a whole registered a higher aggregate value of farm products than in any other year in its history. Some previous years had given larger corn yields and others larger wheat yields, and still others had

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[35]Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1891, p. 5.

[36]Report of the Kansas State Board of Agriculture for the Month of June, 1891 (Topeka, 1891), p. 3.

[37]Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892 (Topeka, 1893), Pt. 2, pp. 6-9.

[38]Ibid., pp. 9-11.

[39]Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1891 (Topeka, 1892), p. 3.

witnessed higher prices for the staple crops than were realized in 1891, but "never before had the product multiplied by prices received shown so largely an income for the farmers of Kansas. . . ."[40]

The area seeded to winter wheat in the fall of 1891 was nearly as large as that of the previous year. Again good growing conditions prevailed and the crop was remarkably successful throughout the state, especially in western Kansas where yields of from thirty-eight to forty-two bushels per acre were reported.[41] From the standpoints of quantity and quality, the 1892 crop surpassed even the great crop of the previous year. Corn and nearly every other crop grown on Kansas farms produced from good to excellent yields. Corn, for example, was almost a repeat of the previous year with a twenty-five bushel average yield and a product of nearly 139,000,000 bushels.[42] Of particular interest is the fact that the yield in the western counties was within two bushels of that in the central and eastern regions. Only a very small part of the crop was raised in the extreme western counties, however, with less than 360,000 acres harvested in that year.[43]

Despite some unfavorable circumstances, the growth and expansion of agriculture moved steadily forward during the five years after the collapse of the boom. The area under cultivation, for instance, rose

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[40] Kansas Farmer, XXX (January 6, 1892), p. 11.

[41] Report of the Kansas State Board of Agriculture for the Month of March, 1892 (Topeka, 1892), p. 3; and Report of the Kansas State Board of Agriculture for the Month of November, 1892 (Topeka, 1892, p. 8.

[42] Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892, Pt. 2, pp. 9-11.

[43] Report of the Kansas State Board of Agriculture for the Month of November, 1892, p. 3.

nearly 18 per cent from 15,600,000 acres in 1888 to 18,400,000 in 1892.[44] This increase was largely due to the expansion of the winter wheat area in the central and west-central portions of the state. In like manner, there occurred a steady and corresponding increase in the aggregate value of farm products in the state from $275,000,000 during the biennial period 1887-1888 to $334,460,327 for the 1891-1892 period.[45] These figures compare with $268,000,000 for the 1885-1886 biennium.[46] The aggregate values for the years after 1887 would have been substantially higher had it not been for the depression in cattle prices which fell from an average of $24.38 for the 1885-1886 biennium to an average of only $18.54 during the following three biennial periods.[47]

Not only did agricultural operations advance markedly during the post-boom period, but farmers and stockmen in the eastern and central portions of the state made substantial progress in liquidating their mortgage indebtedness. As early as July, 1889, for example, Kingman County farmers were reportedly paying off their mortgages.[48] Since most of the farm mortgages in this west-central county had been made in the 1885-1887 period, the indication is that they were being paid off on or ahead of schedule. Farther north, in Osborne County, the Ise family sold enough hogs and cattle and the corn that had been left from the

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[44]Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892, viii-ix.

[45]Ibid.

[46]Ibid.

[47]Compiled from the figures given in U. S., Department of Agriculture, Bureau of Statistics, Bulletin 64, p. 123.

[48]Mechem, ed., Annals of Kansas, I, 70.

1889 crop "to pay off the mortgage and to buy shoes and school books for the children"[49] The father used the $1.50 he had left to buy his wife "one of the new fascinators which were so fashionable at the time."[50] This family would long remember what a blessed relief it was:

> to be rid of the mortgage that had hung like a pall over the spirits of all, even the children. All the uncertainties of the weather, crops and prices that had to be borne with heavier weight because, no matter how crops or prices were, no matter what income there was from the farm, the inexorable interest had to be paid. As long as the mortgage stood against the farm, Henry and Rosie had never been free to indulge a single whim or extravagance, had felt that every possible penny had to be saved, lest some unforseen event or misfortune would prevent them from meeting the payments when they came due. On the day when Henry made the last payment and came home with the release in his pocket, there was more happiness and festivity in the home than there had been for many a day.[51]

The strained financial condition of Kansas farmers was to a very great extent relieved following the abundant harvest of 1891 when farmers generally were set back on their feet "and the song of the farmer . . . suddenly changed from the minor to the major key. Instead of the mournful strains which like a funeral dirge saddened our hearts a year or two ago, we now have a song of joy and hope and a glorified future."[52] Reports circulated that many Kansas farms produced enough wheat in 1891 to pay for the land at current prices.[53] In late summer, 1891, a Bradstreet agent toured forty Kansas counties and "reported that banks were

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[49] Ise, Sod and Stubble, p. 220.

[50] Ibid.

[51] Ibid., pp. 220-21.

[52] Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1891, p. 3.

[53] Mecham, ed., Annals of Kansas, I, 121.

in good condition, farmers were paying off mortgages and buying land, and irrigation was proving successful."[54] For the Ise family, their great wheat crop "meant new comforts and conveniences, not only clothes and shoes, but a new cultivator and a cart. . . . Before winter was over hogs had almost doubled in price, and Henry sold a load for enough to buy a two-seated surry and to pay for music lessons for Laura."[55]

In addition to curbing agricultural credit and creating a farm mortgage debt, the collapse of the boom also was largely responsible for causing the state's population to drop nearly 12 per cent from 1,518,552 on March 1, 1888, to 1,338,811 three years later.[56] It should be noted, however, that much of this population loss occurred in the cities which had, almost without exception, gone through the characteristic boom development and in 1887 were at the height of their growth. Speculation in town lots had run riot during the peak years of the boom. Moreover, construction of public buildings and the fostering of commercial enterprises and railroads through municipal bond issues far exceeded the needs of this municipal growth, the sudden collapse of the boom was especially severe. The drying up of outside capital sources halted town lot speculation, stopped commercial enterprises, and brought railroad construction to a virtual standstill.[57]

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[54] Ibid., p. 123.

[55] Ise, Sod and Stubble, p. 224.

[56] Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, Pt. 2, pp. 3-4; and Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892, Pt. 2, pp. 3-4.

[57] See Miller, "Background of Populism," pp. 472ff.; Hicks, The Populist Revolt, pp. 25ff.; and Gilbert C. Fite, The Farmers' Frontier: 1865-1900 (New York, 1966), p. 123.

Those who had been attracted by the boom to the urban settlements were less permanently situated than rural settlers, and when the collapse came most of them simply left. During the first two years after 1888, sixteen cities in the eastern half of the state lost over 45,000 inhabitants.[58] Most of the population decrease, however, occurred in the central and western portions of the state. The forty counties lying between the ninety-sixth and ninety-ninth meridians, for example, declined 12 per cent, while the forty counties west of the ninety-ninth meridian lost 40 per cent of their numbers.[59] The particular section of the state that suffered the heaviest decline was the nineteen-county area in the southwestern corner where 48 per cent of the population had departed by 1891.[60] Such southwestern counties as Stanton, Meade, Haskell, Garfield, and Morton lost from 60 to 73 per cent of their numbers.[61]

This heavy loss of population in the western portion of the state, however, was due as much, if not more, to adverse weather conditions as to urban speculative activities. Years of unusually heavy rainfall were followed, after 1886, by a series of abnormally dry crop seasons. Because the western settlers had nearly all arrived after 1885, they were not prepared for crop failures and many promptly abandoned their lands. The population of the twenty-five counties lying west of the 100th meridian, for example, decreased from 95,431 in 1888 to only 56,444 in 1891.[62]

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[58] Seventh Biennial Report of the State Board of Agriculture, Kansas, 1889-1890, vii.

[59] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1887 through 1892.

[60] Ibid.

[61] Ibid.

[62] Ibid.

The plight of those who remained was made more difficult by the exceedingly low agricultural productivity of this area. The highest aggregate value of all farm products for the entire twenty-five counties was reached in 1892 when it totaled slightly less than $11,000,000.[63] By way of comparison, the three south-central Kansas counties of Sedgwick, Sumner, and Cowley, exceeded this figure by $1,300,000 in that year.[64] In several of the western counties during this period, the corn and wheat crops were general failures.

Because of the effects of the boom and the lean crop years, settlers in the western counties found themselves in serious difficulty. Farms could not be made to support families living on them and hundreds were unable to hold out until better times returned. Many trekked back to their "wives' folks." Others moved on to join the Oklahoma run in 1889.[65] On a trip through Clark, Meade, Seward, Stevens, Morton, Stanton, Grant, and Gray counties in the summer of 1892, an official of the Watkins Land Company reported that there were not enough settlers in the country to farm the land which had been put in cultivation during the boom.[66]

The experience of Haskell County residents is perhaps typical of the hard times endured by these western pioneers. Settlers there had been in trouble almost from the beginning, and especially following the

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[63] Ibid.

[64] Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892, pp. 48, 231, and 255.

[65] Bogue, Money at Interest, p. 179.

[66] Ibid.

total crop failure in 1887. During the first half of 1888, nearly $1,000 was paid to paupers by township trustees.[67] Less than 12,000 acres of crops were harvested in 1888, which grossed only $74,000. Since the population was reported to be 2,666, crop production amounted to less than $28. per capita.[68] Clearly, more extensive relief and assistance would be needed if the settlers were to remain on their farms and put in crops for the coming season. Consequently, 346 resident taxpayers petitioned their county commissioners in January, 1889, to pay actual settlers $1. for each acre of sod broken in the county between January 15 and June 30 of that year.[69]

The state legislature subsequently authorized such payment, but limited the amount of sod that could be broken to forty acres per family.[70] Furthermore, the lawmakers provided that when roads were built on section lines each owner of a quarter-section of land would be paid $25. and those who had homesteads and tree claims would receive $20.[71] Finally, the county offered a $10. grocery order to each needy family, and issued scrip for the purchase of seed grain.[72] These actions greatly relieved the suffering of these pioneer settlers.

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[67]A. D. Edwards, "Influence of Drought and Depression on a Rural Community: A Case Study in Haskell County, Kansas," Social Research Report No. 7 (January, 1939), p. 81.

[68]Sixth Biennial Report of the State Board of Agriculture, Kansas, 1887-1888, p. 213.

[69]Ibid., p. 82.

[70]Kansas, Laws (1889), ch. 154, secs. 1-6. The Board of County Commissioners was authorized to issue up to $10,000 in County bonds to pay $1. per acre for sod broken prior to October 1, 1889.

[71]Ibid. (1889), chs. 185-88.

[72]Edwards, "Influence of Drought and Depression on a Rural Community," p. 82.

Meanwhile, the Stevens County commissioners voted a bounty of five cents for rabbit scalps to aid their destitute settlers.[73] Grant County also authorized this bounty and by fall of 1889 reportedly had paid over $2,300 for rabbit scalps.[74] This prompted a wag to remark that "happiness in western Kansas was a good greyhound and a jackrabbit."[75] By the end of the year, most of the western counties had authorized extraordinary bounties on wolf, rabbit, and gopher scalps as a means of aiding the destitute. In addition, the railroads carried free of charge "a reasonable amount of grain and seed" to needy western Kansas settlers, and state agents solicited aid in several central and eastern Kansas cities for drouth-stricken settlers.[76]

When the full effects of the failure in 1890 were felt, the legislature authorized free distribution of penitentiary coal to destitute settlers in western Kansas, and later also provided $60,000 for free seed grain for needy farmers.[77] By the end of July more than $94,000 had been expended for aid which included $56,000 for seed grain, $4,000 for coal, $12,000 in private contributions, and transportation valued at $20,000 furnished by the railroads.[78] Although the 1891 and 1892 crops in the west were generally good, it was only by exercising rigid economy that those who remained were able to survive and to make some

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[73]Mechem, ed., Annals of Kansas, I, 76.

[74]Ibid., p. 81.

[75]Ibid., p. 82.

[76]Ibid., p. 59.

[77]Kansas, Laws (1891), ch. 129, secs. 1-11.

[78]Mechem, ed., Annals of Kansas, I, 122.

progress toward liquidating their debts. Thus while farmers in the eastern and central portions of the state had largely recovered from the ill effects of the boom and the crop failure of 1890, conditions on the western frontier remained extremely difficult.

The misfortunes that had plagued Kansas farmers beginning in 1887 were not over. Disaster struck again in 1893 to mark the start of a five-year period of drouth, short crops, depression, and the lowest farm prices in the history of the state. Unfavorable weather conditions for wheat persisted in nearly all portions of Kansas throughout the 1893 growing season, but especially in the northern half. As a result, farmers in the northeastern counties lost nearly half of their seeded acreage, while the north-central counties lost slightly over half, and the northwestern counties nearly 80 per cent of the crop. Losses due to adverse weather conditions in the southern half of the state ranged from 10 per cent in the southeast to 59 per cent in the southwest.[79] Of the nearly 4,000,000 acres of winter wheat seeded in the fall of 1892, 40 per cent was lost and the remainder yielded an average of only 9.5 bushels per acre.[80]

Corn, on the other hand, returned a fair crop in the eastern region in 1893, with averages ranging from forty-five bushels in the extreme northeastern counties downward to seventeen bushels in the southeastern counties. The central counties ranged from seventeen to eight bushels from north to south, while farther west the crop was a total failure.

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[79] Report of the Kansas State Board of Agriculture for the Month of May, 1893 (Topeka, 1893), p. 1.

[80] Report of the Kansas State Board of Agriculture for the Month of September, 1893 (Topeka, 1893), p. 3.

The lesser cereal grains were recorded as failures with oats averaging only sixteen bushels, rye five, and barley only two bushels per acre.[81]

The winter of 1893 was unusually mild and dry and the lack of seasonal rainfall the following spring caused another short crop in 1894. Only 57 per cent of the winter wheat seeded was harvested for a state average of six bushels.[82] Corn generally failed in the eastern and central counties, and failed completely west of the ninety-ninth meridian.[83] Only the drouthy, grasshopper year of 1874 had been worse. The lesser cereal grains, likewise, were almost complete failures throughout the state.

Although the crop seasons of 1895 and 1896 were somewhat better than the two previous years, the 1895 wheat crop yielded less than four bushels per acre, while the average in 1896 was slightly over eight bushels.[84] Thus the years 1893 to 1896 represented the longest period of poor wheat crops in Kansas history.[85] Corn, on the other hand, fared

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[81] Report of the Kansas State Board of Agriculture for the Month of July, 1893 (Topeka, 1893), p. 3; and Ninth Biennial Report of the State Board of Agriculture, Kansas, 1893-1894 (Topeka, 1895), pp. 243ff.

[82] Report of the Kansas State Board of Agriculture for the Quarter Ending September 30, 1894 (Topeka, 1894), p. 3.

[83] Ninth Biennial Report of the State Board of Agriculture, Kansas, 1893-1894, pp. 243ff.

[84] Tenth Biennial Report of the State Board of Agriculture, Kansas, 1895-1896 (Topeka, 1897), pp. 770-71.

[85] The years 1893 to 1896 are unique in Kansas wheat culture history in that the unprecedented low yields were matched by equally unprecedented low prices. The average yield per acre and the average value per bushel for these years are as follows: 1893 - 4.85 bu. and 44.4 cents
1894 - 5.82 " " 40.1 "
1895 - 3.84 " " 46.6 "
1896 - 8.27 " " 44.2 ".

much better during this biennium. Nearly 8,400,000 acres were planted in 1895, with much of this acreage diverted to corn after the wheat had failed. The yield was a good twenty-four bushels per acre.[86] A somewhat smaller area was planted the following year but the yield was four bushels per acre higher which made the 1896 crop the second largest, exceeded only by the bumper harvest in 1889.[87] Oats, rye, and barley all produced better during this two-year period than they had in 1893 and 1894, although the yields were a little below average.[88]

The region west of the ninety-ninth meridian suffered through corn and wheat failures again in 1895 and 1896, thus climaxing a long series of lean years. The renewed drouth period that began in 1893, and which lasted for five years, coincided with the Panic of 1893 and the resulting depression. Together, these calamities caused a further loss of population in the western counties. For those who stayed, pleas for aid rang out once more. One of the most pressing needs in the summer of 1893 was to secure seed grain. The Railroad Commissioners let it be known that they would again distribute seed wheat donations to needy counties, and by the end of November over 43,000 bushels of wheat had been transported free of charge to western Kansas settlers.[89]

Meanwhile, the governor was confronted with conflicting stories regarding conditions of the West. In November, 1893, for instance, the

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[86] Tenth Biennial Report of the State Board of Agriculture, Kansas, 1895-1896, pp. 773-74.

[87] Ibid.

[88] Ibid., pp. 775ff.

[89] Mechem, ed., Annals of Kansas, I, 158.

Scott County commissioners told him that state aid was essential if settlers there were to survive the winter.[90] The state representative from Rush County, however, insisted that stories of extreme hardship in western Kansas were a "malicious fabrication." The people were poor, he said, but in no danger of starving.[91] As a result, the governor refused to call the legislature into special session to consider aid for the west.

As the drouth continued into 1894, causing almost total crop failure for a second year in a row, more families left. The population of the forty counties west of the ninety-ninth meridian declined from 143,432 in 1893 to 116,823 in 1897.[92] Some of the extreme southwestern counties such as Grant, Greeley, Haskell, Lane, Morton, Seward, Stanton, and Stevens were nearly depopulated during this period.[93] Other western counties adjacent to the ninety-ninth meridian, and those in the northern half of the western region lost substantially less of their inhabitants during this trying period.

Both private and public aid began arriving in the west early in 1895. A carload of provisions from Jefferson and Leavenworth counties, for instance, was distributed at Colby, Thomas County, to about 125 families in February.[94] Citizens in Rossville and Lawrence, and Kansas University students and faculty also sent clothing and provisions, while

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[90] Ibid.

[91] Ibid., p. 159.

[92] Compiled from the figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1893 through 1898.

[93] Ibid.

[94] Mechem, ed., Annals of Kansas, I, p. 189.

the Kansas Society of Santa Anna, California dispatched three carloads of provisions to relieve the suffering.[95] As severe storms and zero temperatures increased suffering among the destitute, the penitentiary mines began shipping five carloads of coal daily into the western counties.[96] In addition, the state legislature provided $100,000 with which to buy seed grain, and it also authorized several counties to sell bonds for relief purposes.[97] By May the Western Kansas Relief Commission had consigned ninety-nine carloads of provisions to drouth-stricken farmers, plus a sizeable amount of cash.[98] Despite the hardships and suffering endured by these people, many remained steadfast in their belief that this was a good country and that times would get better. A newspaper editor in one of the extreme western counties put it this way: "we have had no rain for two years, the prairie dogs have left the country and none but fools remain. Yet, if we said so, there are fifty men waiting to 'do us' for telling the truth."[99]

Perhaps the two most important developments that occurred in Kansas agriculture during this period of hard times, drouth, and depression were the realization by western farmers that their crops and methods of farming must be adapted to climatic conditions, and the emergence in the central counties of a hard red winter wheat belt. The first event was almost wholly due to the adverse weather conditions that prevailed

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[95] Ibid.

[96] Ibid.

[97] Kansas, Laws (1895), ch. 242, secs. 1-9.

[98] Mechem, ed., Annals of Kansas, I, 194.

[99] Ibid., p. 193.

from 1887 until 1897, while the second development was only indirectly related to drouth conditions but was, nonetheless, an example of adaptation to the drier and less certain climatic conditions in central Kansas.

In a paper read before the seventeenth annual meeting of the State Board of Agriculture in 1888, Secretary Martin Mohler, who had farmed for many years in Osborne County, stated categorically that:

> the rapid and unparalleled progress of Kansas in agriculture, in the broad sense of that term, is due largely to that climatic change which has been brought about and is continually being brought about by the settlement and improvement of the country. That the climate of Kansas has been changing and is continually changing for the better by the breaking up and cultivation of the soil, planting of trees, etc., is an established fact known and understood by intelligent people everywhere.[100]

While in Pennsylvania the past winter, for example, the Secretary had been surprised to hear people talk about the change in climate, the better distribution of rainfall throughout the growing season, and the generally improved climatic conditions in Kansas for agricultural purposes. Mohler believed that talk of this sort had been responsible for bringing thousands of people to the state every year and for prompting them to push agricultural settlement to the Colorado border.[101]

Mohler was convinced that the only "practical way" to secure moisture in the west was to "break up the prairie, plow up the soil deep and thus make a reservoir in which to store water. . . . As a larger area of prairie is broken up and cultivated and as trees are more extensively grown, the more uniform is the distribution of rainfall and the

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[100] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1888 (Topeka, 1888), p. 9.

[101] Ibid.

more reliable the crops become."[102] Like the Secretary, most of the settlers in west-central and western Kansas had come from the more humid regions to the east and they refused to recognize the fact that climatic conditions were different and that crops and systems of farming that had proved successful in regions of thirty-two or more inches of annual rainfall could be adapted to a section which was watered with twenty-four or less inches of annual precipitation. Unfortunately, this misapprehension was strengthened by the agricultural successes during the unusually wet years of 1882 to 1886 when the western portions of the state had been largely settled.

There were those, however, who did not accept as "established fact" the idea that climatic conditions in the western portions of the state were improving. Among them was Professor Edward M. Shelton at Kansas State College.[103] Shelton noted in 1889 that the efforts to settle western Kansas during the previous decade "do not make a cheerful chapter in the history of the state. The scores of abandoned farms with their ruined 'dugouts' and other small improvements, seen in all these recently settled western counties, all speak of the brave efforts ending in futility."[104] Shelton observed, however, that, great and far-reaching

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[102] Ibid., pp. 11-13.

[103] Edward M. Shelton served as a Professor of Agriculture and Superintendent of the College Farm at Kansas State Agricultural College from 1874 until 1890. Experimental work was carried on under the college organization until passage of the federal aid act of 1887, after which it became the Agricultural Experiment Station. Shelton's Kansas interests were directed especially to the problems of mixed farming. Livestock and tame grasses claimed most of his attention, but wheat experiments were a part of his program. See James C. Malin, Winter Wheat in the Golden Belt of Kansas: A Study in Adaption to Subhumid Geographical Environment (Lawrence, Kansas, 1944), pp. 179ff.

[104] Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1889 (Topeka, 1890), p. 79.

as the disasters of the years 1887 to 1889 had been to the plains farmer, there were many exceptions to the rule of failure. "Here and there in almost every community," he said, "may be found cultivators who have been reasonably successful--farmers who have made steady, if not rapid headway in freeing themselves from debt and improving their stock and home surroundings."[105] It seemed reasonable, therefore, that out of all the experience that had accumulated in the west, there surely were some conclusions about the region that could be brought to the attention of inexperienced settlers to help assure successful occupation of western Kansas.

With that thought in mind, the college regents directed Professor Shelton to study western Kansas at first-hand.[106] During October, 1889, therefore, he visited Ellis, Trego, and Wallace counties along the Union Pacific, and then extended his inquiry into Ford and Finney counties on the Santa Fe. Based upon his first-hand study and his deep understanding of the field of agriculture, Shelton submitted a report that contained the following salient points: that climatic conditions, which were radically different in western Kansas, do not change; that a general system of irrigation was not possible in western Kansas; and that success in that region would not come until crops and systems of farming were adapted to the environment.[107]

Although the intensity of the seasons varied from year to year, Shelton stressed the fact that the two ends of the state were "radically

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[105] Ibid.

[106] Ibid.

[107] Ibid., pp. 80-82.

and fundamentally" different in elevation, character of soil, rainfall, and natural products. Furthermore, "what the climate of any section in the state has been in the past twenty-five years," he asserted, "that it will be during the next quarter century."[108] There was no warrant in history or local experience, he concluded:

> for the well-nigh universal belief that 'deep plowing,' foresting, turning under the buffalo grass, building reservoirs will each or all ever change the agricultural conditions which the settler of any section finds when he begins these and other improvements. The common notion that a change of climate will come as a result of growing more trees and cultivating plants seems to me wholly due to a false logic. Vegetation is due to climate and not climate to vegetation.[109]

Having thus demolished the long-held notion of a changing climate, Shelton, with equal deftness, dismissed the idea that irrigation was the panacea for the ills of western Kansas agriculture. With the exception of some limited tracts of land flanking the Arkansas River, he believed that "no general system of irrigation is possible in western Kansas."[110] While the Smoky Hill, Cimarron, Beaver, and Solomon rivers, together with their larger affluents, might furnish water for small-scale irrigation, the quantity of water available during the times when it was most needed was sure to be too small. On the other hand, Shelton thought it possible to practice irrigation in the lower valleys on a considerable scale by using powerful pumps to life water from shallow wells. But the cost of equipment and fuel, plus the considerable amount of time and money needed to maintain the system of dams, ditches, laterals, and all the apparatus involved in irrigation so that the system would be ready

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[108] Ibid., p. 83.

[109] Ibid. It is of interest to note that Secretary Mohler candidly retracted his misapprehensions about this matter in a paper he read bebefore the Agricultural Congress at the World's Fair in Chicago in 1893. See Kansas Farmer, XXXI (November 29, 1893), p. 3.

[110] Ibid., p. 81.

for immediate use, would put irrigation completely beyond the reach of the average settler.[111]

Shelton's arguments against a general system of irrigation, however, were in vain as the dry years of the late 1880's and the early 1890's created a renewed interest in the issue of irrigation in western Kansas. Indeed, "irrigation became one of the most lively topics of the day as farmers, agricultural journalists, politicians, and newspaper editors sought a way to insure good crops on the semiarid plains."[112] Actually, the first attempt at irrigation in western Kansas had been made a decade earlier, following the poor crop year in 1879, when the Garden City Irrigation Company was organized and a four-mile canal completed in 1880.[113] The success of this system created a stir of excitement and plans were quickly made for several other canals. By the fall of 1882, four ditch systems were either under construction or in operation along the Arkansas River in Kearny and Finney counties.[114]

The most spectacular development in irrigation came in 1883 when Asa T. Soule of Rochester, New York, organized the Eureka Irrigating

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[111] Ibid.

[112] Fite, Farmer' Frontier, pp. 132-33.

[113] A. Bower Sageser, "Editor Bristow and the Great Plains Irrigation Revival of the 1890's," Journal of the West, III (January, 1964), p. 78.

[114] Richard Pfister, "Water Resources and Irrigation," Economic Development in Southwestern Kansas, Part IV, Bureau of Business Research, University of Kansas, Lawrence (March, 1955), p. 50. See also Walter H. Schoewe, "The Geography of Kansas," Kansas Academy of Science, Transactions, LVI (June, 1953), p. 177; and Franklin G. Adams, "Irrigation in Kansas," Kansas Academy of Science, Transactions, VII (1879-1880), p. 79.

Canal Company.[115] Soule undertook to construct a canal forty-eight feet wide and six feet deep at the head gate and ninety-six miles long, running from the Arkansas River just west of Ingalls in Gray County to a point near Kinsley in Edwards County. The project was designed to irrigate 400,000 acres, mostly upland soil. Construction began in 1884. By early 1887, ninety-three miles of main canal and fifty miles of lateral extensions had been completed. At this point water was deliberately diverted into the canal at a flood stage of the river so that farmers would be encouraged to buy water rights at two dollars an acre. With this apparent show of success, Soule sold out to an English syndicate for $1,000,000.[116]

Meanwhile, above-normal rainfall in the years 1883 to 1886 abruptly halted the feverish pace of canal construction. The existing ditch systems fell into disuse and were allowed to deteriorate. Although there had been a great deal of activity in building irrigation works during the 1880's, most of the undertakings were financial failures, and very little land had actually been watered. Indeed, less than 3 per cent of the 800,000 acres of cereals raised in 1889 in the thirty-two counties west of a line drawn along the western boundaries of Phillips and Comanche counties, had been irrigated.[117]

Many in western Kansas began to realize by 1890 that the Arkansas River was not a dependable source of water for irrigation purposes during the summer months because most of the flow was drained off by several

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[115] Ibid.

[116] Ibid., p. 52.

[117] U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 2, pp. 868-69.

large irrigation enterprises in Colorado. Attention turned, therefore, to the possibility of sinking irrigation wells and of utilizing the "underflow" of the Arkansas and other rivers. Because of continuing drouth and crop failure, the irrigation movement took on the characteristics of a crusade in the early 1890's. Several well-attended meetings were held in various parts of the state, for example, and Kansas representatives attended a number of regional and national irrigation meetings. Moreover, a number of newspaper editors in the state began pushing the irrigation theme, as did the Kansas Farmer and the State Board of Agriculture.[118] Finally, several irrigation journals appeared as boosters of western Kansas irrigation. One of the most effective disciples of the irrigation movement in Kansas was Joseph L. Bristow, who served as secretary of both the Interstate and the Kansas Irrigation Associations and who also published a small monthly journal, The Irrigation Farmer.[119]

In addition, the state legislature established the Kansas Board of Irrigation, Survey and Experiment in 1895.[120] This board was to map the boundaries and determine the quantity of underflow water, measure the amount of water in streams, and collect general information on

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[118]Sageser, "Editor Bristow," pp. 80-81. An irrigation convention was held at Great Bend, Kansas, August 7, 1893. A resolution was adopted that an interstate irrigation convention be held at Salina on September 28. See Kansas Farmer, XXXI (August 16, 1893), p. 3. The convention met as scheduled and organized the Interstate Irrigation Association. See Kansas Farmer, XXXI (October 4, 1893), p. 8. Another meeting of the Kansas Irrigation Association was held at Wichita, November 22 and 23. The editor of the Kansas Farmer called this "one of the most important meetings ever held in this state . . ." See Kansas Farmer, XXXI (November 29, 1893), p. 8.

[119]Ibid., pp. 75-76. Bristow published The Irrigation Farmer from February, 1894 until November, 1896.

[120]Kansas, Laws (1895), ch. 162, secs. 1, 14.

irrigation. It was also directed to supervise construction of twenty experimental irrigation wells west of the ninety-eighth meridian. But the return of favorable crop seasons, together with an upturn in cereal grain and livestock prices after 1896, deflated the irrigation boom. The work of the Irrigation Board was transferred to a new Department of Forestry and Irrigation in 1897, and irrigation activities in western Kansas generally faded away.[121]

The futility of farming by irrigation in the western counties is clearly revealed by the fact that in 1899, less than 24,000 acres had been irrigated by 107 ditches and 599 wells.[122] In other words, the increase in irrigated acreage during the decade ending in 1899 was less than 3,000 acres. Certainly, as Professor Shelton had argued in 1889, irrigation was not the answer to the puzzle of successful agriculture on the High Plains. Rather, the first condition for successful farming operations in the west was for the farmer to accept the region for what it was and not what he hoped or dreamed it would become. Having done this, he could adapt his crops and system of agriculture to the environment.

The system of farming envisioned by Shelton was a stock raising operation on the order of 640 to 1,000 acres. Native grasses, supplemented with rye and wheat pasturage, sorghum, corn fodder, and millet hay would keep a herd of cattle or a flock of sheep of sufficient size to turn a profit. Only the best land would be cultivated and seeded to such hardy, drouth-resisting crops as sorghum, kafir corn, and milo

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[121] Ibid. (1897), ch. 21, secs. 1-5.

[122] U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 2, pp. 868-69.

maize, sufficient to supply fodder for cattle and grain for horses, swine, and poultry. In addition, such cereals as wheat, rye, and oats, which get the benefit of spring rains without having to run the risks from the hot, dry spells that accompany July and August, could be grown to insure valuable pasturage and, with favorable seasons, to produce significant amounts of grain for cash sale.[123] Shelton believed that this plan for the settlement and permanent occupation of western Kansas would not encourage booms and real estate speculation, nor was it likely to bring about a rapid settlement of the country. Rather, it would "do better for the people than all of these combined if . . . it enables actual farmers to get a real foothold in the soil."[124]

Despite the soundness of Shelton's views, adaptation to environmental conditions came only gradually in western Kansas. The principal crop raised during the early years was corn. Year after year, however, adverse weather conditions during the critical months of July and August brought only failure, except in the two northern tiers of counties. More out of desperation than from any real understanding of conditions, farmers turned to crops that were more resistant to the drouthy conditions. Rice corn, Jerusalem corn, kafir corn, milo maize, and winter wheat all were tried. Rice corn and Jerusalem corn were early introduced but did not find favor with farmers because of the meager foliage and even less grain. The sorghums were introduced into the west-central and western portions in the late 1880's. These drouth-resisting crops produced forage for livestock, and sometimes grain--even during years of

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[123] Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1889, pp. 83-84.

[124] Ibid., p. 84.

extreme dryness. Thus they were suited to conditions in the west, and they became established as part of western agriculture by 1895.

Winter wheat was first grown in Grant County in 1887, and in Haskell County three years later.[125] Because it was a hardy plant that could withstand extended periods of dry weather, and since it matured before the hot blasts of dry air came in mid-summer, it soon replaced corn as the principal crop in most of the western counties. Farmers in Finney County, for instance, planted 4,800 acres of corn in 1890 and 1,400 acres of wheat. Five years later only 2,000 acres of corn were planted but 27,000 acres of wheat were grown. This trend is indicative of what happened in all the extreme western counties except some of the northern counties where corn remained the principal crop. For example, Cheyenne County grew 35,000 acres of corn and 29,000 acres of wheat in 1890, but five years later the acreages were 104,000 and 14,000. In other extreme northwestern counties the two crops were grown in about equal acreages. In Sherman County, for instance, 31,000 acres of corn were planted in 1890 and 22,000 acres of wheat, while five years later the figures were 36,000 and 37,000 acres. Total acreages for the twenty-five counties lying west of the 100th meridian were 327,590 acres of corn and 308,146 acres of wheat in 1890, and 448,332 acres of corn and 425,992 acres of wheat in 1895. However, these figures, showing corn to be the leading crop, are misleading. With the exception of Cheyenne, Decatur, and Rawlins counties, where large acreages of corn were planted each year, the extreme western counties had shifted to wheat as

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[125] R. R. Wilson, and Ethel M. Sears, History of Grant County, Kansas (Wichita, 1950), p. 176; and Edwards, "Influence of Drought and Depression on a Rural Community," p. 30.

the principal crop by 1895.[126]

The rapid spread of alfalfa, especially throughout the central and western portions of the state, also began to attract attention in the late 1880's. This plant proved to be an exceedingly valuable forage crop, as well as a soil builder, and marked "another great accession to the wealth of western Kansas, and gives further assurance that in time it will become a successful agricultural country."[127] Alfalfa acreage jumped from 34,384 acres in 1891, when statistics were first gathered separately by county assessors, to 171,334 acres in 1897.[128] Finney County was the leading producer of this crop.

Livestock also played an increasing role in agricultural operations in western Kansas. The number of cattle, for example, increased from 135,582 in 1887, in the counties west of the 100th meridian, to 293,000 in 1890. Very low prices and the series of lean crop years caused cattle numbers to shrink somewhat, but by the end of the century there were 437,000 cattle in this area.[129] The value of these cattle rose from $4,000,000 in 1887 to $6,200,000 in 1890, and up to $9,000,000 in 1899.[130] Finally, the value of animals slaughtered or sold for slaughter jumped sharply in the extreme western counties from only

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[126]Compiled from figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1889 through 1896.

[127]Eighth Biennial Report of the State Board of Agriculture, Kansas, 1891-1892, vii.

[128]Ibid., Pt. 2, p. 36; and Eleventh Biennial Report of the State Board of Agriculture, Kansas, 1897-1898 (Topeka, 1899), p. 795.

[129]Compiled from figures given in the Biennial Report of the State Board of Agriculture, Kansas, for the years 1887 through 1900.

[130]Ibid.

$122,000 in 1887 to $566,000 three years later, and up to $1,200,000 in 1894.[131]

Although the number of farms west of the 100th meridian decreased during the decade of the 1890's from 14,505 to 8,952, the average size of each farm increased dramatically from 219 acres in 1890 to 642 acres in 1900.[132] As a result, the total number of acres in farms actually grew from 3,176,595 to 5,747,184. Thus to a large extent, the system of agriculture that Professor Shelton envisioned had become a reality in the west by 1900. That is, a large farm operation emphasizing livestock raising, and growing such drouth-resisting forage crops as sorghum, milo maize, and kafir corn, and small grain crops of barley, rye and wheat. Corn continued to be grown, but largely in the northern tier of counties. Some farmers in the northern part also continued to raise significant quantities of spring wheat. Elsewhere in the western counties, however, farmers had shifted to the hard, red varieties of winter wheat.

In addition to the adaptation of crops and systems of farming to the soil and climatic conditions in western Kansas during the lean, hard years 1887 to 1897, a second significant development in Kansas agriculture in the late nineteenth century was the change that occurred in wheat culture. This involved, first of all, a shift from spring wheat varieties to the soft winter wheats, and finally the emergence of a hard winter wheat belt in the central section of the state. Both the

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[131] Ibid.

[132] U. S., Census, Eleventh Census (1890), "Agriculture," pp. 208-09; and U. S., Census, Twelfth Census (1900), "Agriculture," V, Pt. 1, pp. 80-85.

shift from spring to winter wheat and the emergence of hard winter wheat represented important changes in farming practices in the central and west-central regions of the state based upon the experience of farmers with soil and climatic conditions.

Although most counties in the state originally grew some spring wheat, it had dwindled to less than 5 per cent of the total wheat acreage by the mid-1880's.[133] By the end of the century, spring wheat was considered a diminishing and not prominent item in Kansas agriculture, with its growth given little or no attention outside a few northern or extreme northwestern counties bordering Nebraska. Farmers gave up spring wheat for a number of reasons. For one thing it matured late and was, therefore, more liable to be affected by summer drouth. Moreover, it was subject to infestation by the chinch bug which was considered the worst enemy with which early Kansas farmers had to contend.[134] Finally, it was an inferior wheat that yielded about a third less per acre than winter wheat and commanded a 10 to 15 per cent lower market price. As a result, spring wheat had been virtually abandoned by 1900 simply because "it don't pay."

Winter wheat culture dates back to the very earliest farming efforts in Kansas. As early as 1839, it was included in the crop program at the Shawnee Methodist Mission.[135] Later, a Quaker missionary attempted

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[133] Fifth Biennial Report of the State Board of Agriculture, Kansas, 1885-1886, Pt. 2, pp. 8-12.

[134] Report of the Kansas State Board of Agriculture for the Quarter Ending June 30, 1881 (Topeka, 1881), p. 74; Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1902 (Topeka, 1902), p. 12; and Kansas Farmer, XVI (February 20, 1878), p. 69.

[135] Martha B. Caldwell, comp., Annals of Shawnee Methodist Mission and Indian Manual Labor School (Topeka, 1939), p. 37.

to persuade Kansas residents that the soil and climate was peculiarly adapted to winter wheat culture. Because of the generally dry and moderate winters, he noted, winter-killing was minimized and, since the crop came to early maturity, the hot, dry summers were avoided.[136] Still later a Doniphan County farmer wrote that "with proper care winter wheat can be as successfully cultivated /in Kansas/ as in any portion of the United States."[137]

The one person who was perhaps most responsible for promoting the cultivation of winter wheat in Kansas, however, was Theodore C. Henry who had settled in Abilene in 1867.[138] Henry acquired a great deal of land through his real estate business and, in 1870, began to experiment with winter wheat. His first large venture was a 500 acre field in the Smoky Hill River Valley just east of Abilene in August, 1873. Although drouth and grasshoppers brought great distress in the frontier counties in 1874, where crops of all kinds were nearly a total failure, Henry's "fenceless" wheat field yielded nearly twenty bushels per acre, and sold for ninety cents per bushel. He expanded his winter wheat operation to 1,200 acres in 1875, and later to nearly 10,000 acres. In 1883 Henry moved to Colorado where he engaged in extensive wheat growing and general farming operations involving irrigation.

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[136]James C. Malin, "Beginnings of Winter Wheat Production in the Upper Kansas and Lower Smoky Hill River Valleys: A Study in Adaptation to Geographical Environment," Kansas Historical Quarterly, X (August, 1941), p. 229.

[137]Kansas Farmer, I (August, 1863), p. 101.

[138]See Malin, Winter Wheat, pp. 66ff., for a good interpretation of the role Henry played in the winter wheat boom.

Although Henry did not introduce winter wheat into Kansas, he grew it on a large scale for the first time, and thus helped to promote its acceptance. "No evangelist," he wrote,

> was ever more active. I answered hundreds of letters, sent out thousands of circulars, wrote treatises and delivered addresses. No town site boomer of the West ever overlapped me. As I recall some of my alluring wheat literature, I am sure I was more poet all those years than farmer.[139]

With the rapid progress of agricultural settlement into the central and west-central portions of the state during the late 1870's and early 1880's, it became evident that the soil and climate there was especially favorable to the cultivation of winter wheat. As a result, there emerged a so-called "wheat belt." In 1878 this area consisted of ten counties, which together produced 49 per cent of the total crop.[140] Nine of these counties were located in central Kansas. By 1884, the wheat belt embraced sixteen counties, all of which were situated in central Kansas. McPherson County, situated in the heart of the belt, was the leading winter wheat producer.[141]

By the turn of the century, the wheat belt had expanded to include twenty-six counties, occupying a compact territory in the central region. Each of these counties produced over 1,000,000 bushels in 1900. Together they produced over 58,000,000 bushels, or 76 per cent of the total crop. Sumner County led in 1900 with a yield of 5,800,000 bushels from 288,000

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[139] Kansas Scrapbook, Biography, XV (Kansas State Historical Library, Topeka), p. 148.

[140] First Biennial Report of the State Board of Agriculture, Kansas, 1878-1879 (Topeka, 1880), pp. 490-91. The ten counties were Sedgwick, McPherson, Sumner, Dickinson, Saline, Cowley, Reno, Montgomery, Butler, and Harvey.

[141] Fourth Biennial Report of the State Board of Agriculture, Kansas, 1883-1884 (Topeka, 1885), p. 464.

acres, with Barton County a close second.[142] During the period from 1875 to 1900, Kansas farmers harvested a grand total of 65,000,000 acres of winter wheat which yielded over 800,000,000 bushels and which was valued at nearly $500,000,000.[143]

Even more significant than the shift from spring wheat to winter wheat was the trend of central Kansas farmers away from the soft winter varieties to hard, red winter wheat. No one played a more important role in this story than the Mennonites. The first party of Mennonites, some 600 strong, arrived at Topeka on September 8, 1874, and two weeks later a second contingent of 1,100 arrived.[144] These first settlers brought 60,000 acres of land from the Santa Fe in Marion, Harvey, McPherson, and Reno counties. The Mennonites were a hard-working, thrifty lot who erected houses and sowed wheat the first year. By the following year, the colonists in Harvey County, for example, had fields of winter wheat ranging from five to thirty acres for each family. The flow of these people into Kansas continued until by 1883 no fewer than 15,000 had located on lands purchased from the Santa Fe.

Before they left Russia, each family selected the best Turkey seed wheat from their granaries and brought it to Kansas. Although some reasonable doubt exists as to whether the Mennonites introduced hard

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[142]Compiled from the figures given in the Twelfth Biennial Report of the State Board of Agriculture, Kansas, 1899-1900, Pt. 5, pp. 878-79.

[143]Compiled from the figures given in the Annual and the Biennial Report of the State Board of Agriculture, Kansas, for the years 1875 through 1900.

[144]Floyd B. Streeter, The Kaw: The Heart of a Nation (New York, 1941), p. 246. Refer to footnote No. 28 in chapter three of this study for further citations concerning Mennonite immigrations.

winter wheat into Kansas, they did grow it extensively.[145] Turkey wheat was quite early identified with all these colonists from southeastern Europe, and the four-county Mennonite area of Marion, Harvey, McPherson, and Reno, became the diffusion center for hard wheats. Although no formal surveys were made of the distribution of wheat varieties over the state, county reports submitted to the Board of Agriculture in 1880 indicate that Turkey or Russian wheat was grown in eleven counties, and newspaper sources add two others.[146] In 1881, eighteen counties were reported growing Turkey, and in the following year, no less than thirty-five counties.[147]

Although Turkey wheat was gaining in popularity during the early 1880's, it certainly had not replaced the soft winter varieties. Indeed, experimentation carried on at Kansas State College did not involve this wheat until 1883, and it was not mentioned again until 1891.[148] Only in 1896 was Turkey wheat characterized as a heavy yielder, and as perhaps the hardiest wheat ever tested. Then two years later this wheat was specified by the Experiment Station as "our standard hard wheat."[149] Meanwhile, hard winter wheat was established as a class on the Kansas City Board of Trade in 1880 but at a price three cents below top grade.[150] Later the price spread widened. In Abilene in 1883, for example, No. 1

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[145] Malin, Winter Wheat, pp. 162ff.

[146] Ibid., p. 146.

[147] Ibid.

[148] Ibid., pp. 181-84.

[149] Ibid., p. 187.

[150] Ibid., p. 197.

wheat was quoted at eighty cents and Russian at seventy-two cents, while at Junction City, the differential between soft and hard wheat reached twenty-one cents in March, 1884.[151] This price discrimination continued throughout the 1890's.

One of the main reasons for this difference in price was the hesitancy of the milling industry to adapt to the new processes required to reduce hard wheat to flour. This necessitated costly re-tooling of the mills from the direct reduction to the gradual reduction process. Fortunately, mill manufacturers began marketing new roller machines around 1883 to accommodate the hard spring wheats then being introduced in the northern United States. Thus the way was also cleared for reconversion of mills to process the ever-expanding hard winter varieties. By the turn of the century, nine-tenths of the winter wheat production in the state was of the red, flinty sort that had been introduced from Russia, and Kansas had emerged as the foremost producer of hard winter wheat.[152]

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[151] Ibid., pp. 197-99.

[152] Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1902, p. 5.

CHAPTER X

KANSAS AGRICULTURE IN 1900

Following a decade of depression, debt, and hard times, the fortunes of Kansas agriculture turned upward in 1897. This was brought about by a series of good harvests which commanded rising prices. Indeed, farm commodity prices advanced sharply during the last years of the decade. Corn, for example, increased from an average of about nineteen cents in 1897 to slightly over twenty-nine cents in 1900, while wheat jumped from forty-four cents in 1896 to better than sixty-seven cents the following year.[1] The most dramatic rise, however, occurred in cattle prices which began to recover in 1896 from a long period of the lowest values ever recorded in Kansas history. Prices rose to $19.20 in 1896 from an average value of $16.65 during the six-year period 1890-1895, and then climbed sharply to $26.38 in 1898 and reached an all-time high of $28.90 in 1900.[2]

As a result, the aggregate value of all farm products for the 1897-1898 biennium represented a gain of 18 per cent over the previous two-year period, while the last biennium of the century recorded a 24

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[1]Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1936 (Topeka, 1937), pp. 8-9.

[2]These figures are farm value prices as of January 1 of the years indicated. Compiled from the figures given in U. S., Department of Agriculture, Bureau of Statistics, Bulletin 64 (Washington, 1908), p. 123.

per cent gain over the 1898 figures. Furthermore, the value of livestock on hand in March, 1898, showed a rise of nearly 42 per cent over the 1896 figures, and two years later the value had jumped another 33 per cent. Thus during the last four years of the nineteenth century, the aggregate value of all farm products had increased nearly $113,000,000, or 42 per cent, over the 1895-1896 totals, and the value of livestock on hand had risen $130,000,000, or 75 per cent.[3] Recovery from the adversities of the post-boom decade had been largely achieved by 1900.

At the turn of the century Kansans could look back upon a relatively short span of years, hardly more than a generation, during which their state had been largely settled and the land put into agricultural production. Kansas had been opened to settlement in 1854 and admitted into the Union seven years later. Almost immediately, however, the nation became engaged in a Civil War. Because of the unsettled conditions in Kansas and the nation, agricultural progress was modest until after the war. During these early years the three eastern tiers of counties were settled and pioneers pushed up the major river valleys well beyond the ninety-sixth meridian. Since the environment of this region was quite similar to that of states farther east, from whence most of the early inhabitants came, eastern Kansas represented an extension of the traditional pattern of frontier settlement that had been repeating itself since colonial days. Little, therefore, was required in the way of adaptation of crops and systems of farming to the new geographic and climatic conditions. Corn, together with an abundance of

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[3] Eleventh Biennial Report of the State Board of Agriculture, Kansas, 1897-1898 (Topeka, 1899), Pt. 7, pp. 761-62; and Twelfth Biennial Report of the State Board of Agriculture, Kansas, 1899-1900 (Topeka, 1901), Pt. 5, pp. 876-77.

lush native grasses and forage crops, early laid the basis for a profitable and productive livestock operation. In addition, wheat became the principal cash grain.

The decade following the Civil War was notable for railroad construction and also for an influx of settlers who pushed the line of settlement beyond the ninety-eighth meridian. While a number of rail lines were built in the eastern counties, the Santa Fe and Kansas Pacific opened the state to the Colorado border. Since these railroads had received huge federal land grants, they were greatly interested in securing permanent settlers along their rights-of-way. As a result, they encouraged immigration and pioneers pushed well into central and west-central Kansas. The northern border counties as far west as Norton on the 100th meridian, for example, were well-settled by 1875. Settlers had also moved up the Republican, Smoky Hill, Saline, and Solomon rivers as far as Lincoln and Ellsworth counties in central Kansas. Still others had swept across the southern portion of the state to Sedgwick and Sumner counties in south-central Kansas.

Thus by 1875 the eastern and east-central portions of the state were well-settled, and land farther west was rapidly being opened to occupation. Farmers and stockmen in the east had familiarized themselves with climatic and soil conditions and were engaged in a stable, productive grain-livestock agriculture. Moreover, the population of the state had passed the half-million mark, the number of farms had jumped from 10,400 in 1860 to an estimated 75,000 in 1875, the aggregate value of all livestock and farm products had risen to $66,000,000, while livestock on hand in 1875 was valued at $29,000,000. Despite severe

drouth conditions, hard times, grasshopper invasions, and other ills that normally beset frontier communities, the main ingredients for a stable and prosperous agriculture were present. Few in 1875 would have denied that Kansas was potentially a great agricultural state.

The history of Kansas agriculture during the last quarter of the nineteenth century divides into two periods of almost equal length. The first extended to 1887, and represented a series of years of phenomenal growth and development. Good crops, profitable prices, prosperity, boom conditions, and expansion to the western limits of the state all describe these years. The second period extended from 1887 to 1897 and was characterized by the bursting of the boom, drouth, poor crops, low prices, debt burden, and generally hard times.

The twelve years following 1875 represent an unparalleled period of agricultural growth and development in Kansas history. A number of factors explain this progress. Railroad construction, for instance, reached boom proportions as track mileage quadrupled. In 1888 only six counties were without rail service. Not only did the railroads make all areas of the state accessible, but the vast sums of money spent on construction and related goods and services stimulated the state's economy and was in large measure responsible for touching off and sustaining the boom conditions of the mid-1880's. In addition to the great impact of railroad building, the widespread use of new or improved farming implements and equipment, application of new farming techniques, use of new or improved varieties of grains, and the drilled well and windmill enabled farmers to adapt to geographic and climatic conditions and thus greatly aided settlement and agricultural conquest of the western portions of the state.

Finally, a series of mild years, beginning in 1875, encouraged pioneers to move westward. By 1881 the entire central portion of Kansas was largely settled and farmers and stockmen there were actually leading the eastern counties in cereal production and they were engaged as extensively in livestock operations. Although some moved into the extreme western counties during the late 1870's, drouth conditions forced them out and it was not until the unusually wet years of 1883 to 1885 that large numbers of settlers were enticed into that area. Within a period of only three years, at the height of the Kansas boom, tens of thousands of pioneers flooded into that region and carved thousands of farms out of the semi-arid land, all the way to the Colorado line.

The fact that the population of the state, number of farms, and the area under cultivation all increased three-fold during this twelve-year period attest to the vitality of Kansas Agriculture. In addition, the aggregate value of all farm products for these years amounted to $1.5 billion, or an average of nearly $115,400,000 per year, compared to the $66,000,000 produced in 1875, and to the less than $5,000,000 gathered in 1860.

Overextension of credit, excessive speculation, particularly in the cities and towns, and general crop failure in 1887, due to drouth conditions, brought the Kansas boom to an abrupt end. The effects of the collapse were immediate and severe. Most farmers had gone into debt during the years when money was easy to obtain in order to purchase more land, or to make improvements, add to their stock, buy machinery and equipment, and a few to speculate on agricultural land or town lots. When the boom burst, however, credit became exceedingly tight and farmers had difficulty meeting their interest and principal payments.

Moreover, their problem was complicated by some lean crops and falling farm commodity prices. But despite these adversities, farmers and stockmen in the eastern and central portions of the state tightened their belts and struggled on. Indeed, good crops in 1889, 1891, and 1892 enabled many of them to liquidate portions of their debts. Settlers in the western counties, however, did not have the resources to survive the more severe weather conditions that brought repeated crop failures in their section. This, together with the fact that many of them were petty speculators who were hoping to secure cheap land and then sell out after the pressure of settlement had appreciated land values, caused an exodus from the west. The southwestern portion of the state was especially hard hit.

Just as agriculturalists in eastern and central Kansas were beginning to get back on their feet after fine harvests in 1891 and 1892, extremely hot and dry weather returned in 1893 and lasted generally until 1897. This period of lean crop years coincided with four years of world-wide depression that carried farm prices to their lowest levels ever. And once again, while the eastern and central portions of the state suffered from the effects of short crops and low prices, these adverse conditions weighed most heavily upon the west and more settlers left that region. Even though times were hard during this decade of drouth, lean crops, low prices, and heavy debts, agricultural growth and development did not cease, even in the extreme western counties where the force of hard times was most severe. While many settlers left, those who remained, and others who joined them, adjusted their crops and systems of farming to the environment and thus made limited agricultural advances.

As a matter of fact, the amazing success achieved by Kansas agriculturalists in so short a period of time is in no small way associated with the adjustments that they were able to make to their environment. While little was required in the way of adjusting to conditions in the eastern counties, the rise in elevation and, most significantly, the gradual diminution of rainfall west of the ninety-seventh meridian greatly affected agricultural operations.

As settlers moved into the central and west-central portions of the state, therefore, they had to adapt themselves and their systems of farming to the changing climatic conditions. This they did with relative ease. They turned, for example, to sorghums, especially kafir corn and milo maize, which were hardy, drouth-resistant crops. In addition, they began to grow large acreages of alfalfa. Of greatest significance in the way of adaptation in the central counties was the emergence of a winter wheat belt which gradually shifted from soft winter varieties to the hard red winter wheat that shortly made Kansas famous throughout the United States and in much of Europe. Hard winter wheat was ideally suited to soil and climatic conditions in central Kansas and farmers were quick to realize its qualities and to specialize in its production.

Moreover, the counties along the northern border, from Doniphan and Atchison in the east to Smith in the west, emerged as the corn belt of the state, while the lush bluestem pastures became another area of agricultural specialization. Finally, farmers and stockmen were quick to realize the profits to be had from mixed farming and so they turned easily and naturally to a heavy emphasis upon livestock. The native grasses were supplemented by such forage crops as kafir and alfalfa,

rye and winter wheat pasturage, together with other cereal grains to sustain an extensive livestock operation.

While there was little need for adjustment east of the ninety-sixth meridian, and while adjustment between that line and the ninety-ninth came easy and almost natural, adaptation to geography and climate was more difficult west of the ninety-ninth meridian. A number of reasons account for this situation. For one thing, the area was settled within the very short period of only two or three years. Moreover, this rapid settlement was largely stimulated by a series of unusually wet years that deceived settlers into believing that the climate in the west was changing, and all that was needed to increase the annual rainfall was to cultivate the soil and plant trees. Finally, when dry spells did occur there, as in 1879-81, again in 1887-88, in 1890, and during the period 1893-97, these people turned to irrigation which they believed would rescue them from times of adversity.

However, until the practical farmer in the west recognized and understood the true nature of the region, that it was radically and fundamentally different from the environment in the eastern and central counties, that a scanty and uncertain rainfall was a permanent condition, and that he would have to adjust his methods of farming to those conditions, he was in for rough times. Those who survived gave up trying to make corn the principal crop and turned instead to such hardy, drouth-resisting crops as hard winter wheat, Egyptian rice corn, Jerusalem corn, the sorghums such as kafir corn and milo maize, and alfalfa on river bottom lands, or where irrigation was feasible. They also concentrated on raising stock cattle. Thus by the turn of the century adaptation had been forced upon western Kansas.

The success of Kansas farmers and stockmen in adapting their crops and systems of farming to their environment is written large in the statistics of American agriculture. By 1900 they had carved nearly 81 per cent of the state's area into 173,098 farms to rank second behind Texas among all the states of the Union in farm land. Furthermore, Kansas ranked third behind Iowa and Illinois with its 25,000,000 acres of improved land. Most of this land, indeed 73 per cent of it in 1900, was given over to the production of cereals, chiefly corn and wheat. In the production of all cereals, Kansas ranked third nationally behind Illinois and Iowa, both in acreage and in yield, in 1890 as well as in 1900. The state also ranked third in 1890 and in 1900 in the production of corn, being exceeded only by Illinois and Iowa. It ranked fifth in wheat production in 1900 behind Minnesota, North Dakota, Ohio, and South Dakota, and no lower than eleventh in 1900 in the production of rye, oats, and barley. Thus by the turn of the century, Kansas had clearly emerged as one of the foremost cereal producers in the United States.

Kansas was also one of the leading livestock states. Indeed, the state ranked fourth in the value of livestock in 1900, behind Iowa, Texas, and Illinois, and second behind Iowa in the average value of livestock per farm. Furthermore, the state ranked third behind Texas and Iowa in the value of neat cattle. Fortunately, Kansas was endowed with an abundance of native grasses and the soil and climatic conditions necessary to produce vast quantities of forage crops to sustain the large livestock herds. In 1900 nearly 7,000,000 acres of prairie land was fenced which produced over 2,000,000 tons of hay to rank Kansas third in the nation behind Minnesota and Nebraska. Furthermore, the state led the nation by a wide margin in production of millet and

Hungarian grasses, and ranked only behind Colorado, California, and Utah, with their vast irrigation systems, in the production of alfalfa.

In addition, Kansas ranked eighth in clover production, twenty-first in other tame and cultivated grasses, and seventh in grains cut green for hay. Finally, Kansas had an acreage and production of forage crops, which included corn, kafir, and sorghum cane cut green, one-third as large as that reported for all the other states and territories. Altogether the state produced over 7,000,000 tons of hay and forage, or 9 per cent of the entire United States total, to lead the nation in 1900. The large area devoted to corn, oats, rye and barley, and hay and forage production thus laid a firm basis for an extensive livestock operation in Kansas.

"With her present progress, prosperity, and citizenship, and the bright future of which her many advantages give unquestionable assurance," Secretary Coburn wrote in 1900, "Kansas is certainly occupying a most enviable position in the sisterhood of states."[4] And indeed she was. Kansas truly had emerged as one of the foremost agricultural regions in the nation. In her rise to national prominence, which coincided with the passing of the farmer's last frontier, two things stand out clearly. First, the speed with which Kansas was settled and its lands placed into agricultural production, and secondly, the readiness and willingness with which the settlers adjusted their crops and systems of farming to the realities of their environment.

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[4] Twelfth Biennial Report of the State Board of Agriculture, Kansas, 1899-1900, vi.

BIBLIOGRAPHY

United States Documents

Annual Report of the Commissioner of Agriculture, for the years 1871 and 1886. Washington: U. S. Government Printing Office, 1872, 1887.

Annual Report of the Commissioner of the General Land Office, for the years 1854 to 1900. Washington: U. S. Government Printing Office, 1854-1900.

Bark, Don H. "Irrigation in Kansas," United States Department of Agriculture, Office of Experiment Stations, Bulletin 211. Washington: U. S. Government Printing Office, 1909.

U. S. Department of Agriculture, Bureau of Statistics. Bulletin 59, 60, 61, 63, 64. Washington: U. S. Government Printing Office, 1908.

U. S. Statistical Abstract of the United States, 1961.

U. S. Statutes at Large, Volumes IV, X, XII, XIII, XVI, XVII, and XXI.

U. S. Eighth Census, Agriculture, 1860.

U. S. Eighth Census, Population, 1860.

U. S. Ninth Census, Agriculture, 1870.

U. S. Tenth Census, Agriculture, 1880.

U. S. Eleventh Census, Agriculture, 1890.

U. S. Eleventh Census, Report of Real Estate Mortgages, 1890.

U. S. Twelfth Census, Agriculture, 1900.

Kansas Public Documents and Reports

Kansas. Constitution (1861).

Kansas. General Session Laws, for the years 1860, 1861, 1865, 1872, 1874 (Special session), 1877, 1881, 1889, 1891, 1895, and 1933.

Kansas. Manuscript Census Report, for the years 1865, 1875, 1885, and 1895. The state legislature provided that a census be taken every ten years beginning in 1865. Most of these sources are bound and on file in the Kansas State Historical Library in Topeka.

Annual Report of the Kansas State Board of Agriculture to the Legislature of the State, for the years 1873 to 1876. Topeka: State Printer, 1874-1877.

Annual Report of the Kansas State Board of Railroad Commissioners to the Legislature of the State, for the years 1892, 1893, and 1895. Topeka: State Printer, 1893-1896.

Bidwell, O. W. "Major Soils of Kansas," Kansas Agricultural Experiment Station, Circular 336. Topeka: State Printer, 1956.

Biennial Report of the Kansas State Board of Agriculture to the Legislature of the State, for the years 1887 to 1900. Topeka: State Printer, 1888-1901.

Cardwell, A. B., and Flora, S. D. "Kansas Weather and Climate," Kansas Agricultural Experiment Station, Bulletin 302. Topeka: State Printer, 1942.

Flora, S. D. "Climate of Kansas," Report of the Kansas State Board of Agriculture, LXVII, No. 285, Topeka: State Printer, 1948.

"Grasses in Kansas," Report of the Kansas State Board of Agriculture for the Quarter Ending December 31, 1936. Topeka: State Printer, 1937.

Hilton, H. R. "The Three Belts of Kansas," Kansas State Board of Agriculture, World's Fair Report, 1893. Topeka: State Printer, 1893.

Hoover, Leo M. "Kansas Agriculture After 100 Years," Kansas Agricultural Experiment Station, Bulletin 392. Topeka: State Printer, 1957.

Kansas State Board of Agriculture. "Compilation . . . of the Manner and Means Heretofore Employed for the Extermination of the Grasshopper. . . . Circular 4. Topeka: State Printer, 1877.

Kansas State Board of Agriculture. Kansas: A Brief Account of its Geographical Position, Dimensions, Topography, Railroads, Manufactures and Mineral Resources. Topeka: Kansas Publishing House, 1885.

Kansas State Board of Agriculture. Transactions, 1872. Topeka: State Printer, 1873.

Kansas Water Commission. Surface Waters of Kansas, 1895-1919, Prepared in Cooperation With the U. S. Geological Survey. Topeka: State Printer, 1921.

Kellerman, W. A. "The Native Grasses of Kansas," Report of the Kansas State Board of Agriculture for the Quarter Ending March 31, 1889. Topeka: State Printer, 1889.

Monthly Report of the Kansas State Board of Agriculture to the Legislature of the State. for the years 1879 to 1900. Topeka: State Printer, 1879-1901.

Quarterly Report of the Kansas State Board of Agriculture to the Legislature of the State, for the years 1879-1900. Topeka: State Printer, 1879-1901.

Report of the Executive Board of the Kansas Central Relief Committee. Topeka: State Printer, 1875.

Throckmorton, R. I., and Dudley, F. L. "Soil Fertility," Kansas Agricultural Experiment Station, Bulletin 260. Topeka: State Printer, 1932.

Books and Pamphlets

Adams, Franklin G. The Homestead Guide Describing the Great Homestead Region in Kansas and Nebraska and Containing the Homestead, Preemption and Timber Bounty Laws, and a Map of the Country Described. Waterville, Kansas: F. G. Adams, Compiler and Publisher, 1873.

Andreas, A. T. History of the State of Kansas. 2 vols. Chicago: A. T. Andreas, 1883.

Billington, Ray A. The Far Western Frontier: 1830-1860. New York: Harper Brothers, 1956.

Billington, Ray A. Westward Expansion. 3d ed. New York: The MacMillan Company, 1967.

Blackman, Frank W. (ed.) Kansas. A Cyclopedia of State History, Embracing Events, Institutions, Industries, Counties, Cities, Towns, Promient Persons, etc. 2 vols. Chicago: Standard Publishing Company, 1912.

Blanchard, Leola H. Conquest of Southwest Kansas. Wichita: Wichita Eagle Press, 1931.

Bogue, Allan G. Money at Interest: The Farm Mortgage on the Middle Border. Ithaca, New York: Cornell University Press, 1955.

Bowers, D. N. Seventy Years in Norton County, Kansas, 1872-1942. Norton, Kansas: The Norton County Champion, 1942.

Bowman, T. E. Some Facts About the Western Mortgage Business: Its History and Its Outlook. Topeka: n.p., 1892.

Bright, John D. (ed.) Kansas: The First Century. 4 vols. New York: Lewis Historical Publishing Company, Inc., 1956.

Burch, Lawrence D. Kansas As It Is. A Complete Review of the Resources, Advantages, and Drawbacks of the Great Central State. Chicago: C. S. Burch & Co., 1878.

Caldwell, Martha. (comp.) Annals of Shawnee Methodist Mission and Indian Manual Labor School. Topeka: State Printer, 1939.

Clark, Carroll, and Roberts, Roy L. People of Kansas. A Demographic and Sociological Study. Topeka: State Planning Board, 1936.

Crawford, Samuel J. Kansas in the Sixties. Chicago: McClurg, 1911.

Dale, Edward Everett. The Rangle Cattle Industry. Norman: University of Oklahoma Press, 1930.

Dick, Everett N. The Sod-House Frontier, 1854-1890: A Social History of the Northern Plains from the Creation of Kansas and Nebraska to the Admission of the Dakotas. New York: Appleton-Century Co., Inc., 1937.

Dick, Everett N. Vanguards of the Frontier: A Social History of the Northern Plains and Rocky Mountains from the Earliest White Contacts to the Coming of the Homemaker. New York: Appleton-Century Co., Inc., 1941.

Elliott, R. S. Industrial Resources of Western Kansas and Eastern Colorado. Kansas Pacific Railway. St. Louis: Levison & Blithe, Stationers. . . , 1871.

Fite, Gilbert C. The Farmers' Frontier, 1865-1900. New York: Henry Holt and Co., 1966.

Gard, Wayne. The Chisholm Trail. Norman: University of Oklahoma Press, 1954.

Gates, Paul W. Fifty Million Acres: Conflicts Over Kansas Land Policy, 1854-1890. Ithaca: Cornell University Press, 1954.

Giles, F. W. Thirty Years in Topeka: A Historical Sketch. Topeka: George W. Crane, 1886.

Gressley, Gene M. Bankers and Cattlemen. New York: Alfred A. Knopf, 1966.

Hamblin, George W. The Kansas Guide. Facts and Practical Suggestions to Those Who Intend Seeking New Homes in the "Far West." Ottawa, Kansas: Geo. W. Hamblin, 1871.

Hicks, John D. The Populist Revolt: A History of the Farmers' Alliance and the People's Party. Minneapolis: University of Minnesota Press, 1931.

Howes, Charles C. This Place Called Kansas. Norman: University of Oklahoma Press, 1952.

Hyatt, Thaddeus. Kansas Famine Fund of 1860-61. A Letter to the Hon. E. G. Ross. London: Whittinham, 1872.

Ise, John. Sod and Stubble, the Story of a Kansas Homestead. New York: Wilson-Erickson, Inc., 1936.

Jelinek, George. Ellsworth, Kansas, 1867-1947. Salina, Kansas: Consolidated, 1947.

Kansas. Agricultural Society. List of Premiums for the Second Annual Fair to be held on the 2d, 3d, 4th, and 5th of October, 1866, at Lawrence, Kansas. N.p., 1866.

Kansas. Facts and Figures About Kansas. An Emigrants' and Settlers' Guide; Containing Reliable Information as to the Advantage of the State of Kansas, the Finest Fruit, Grain, Stock, and Farming Country in America. With a Correct Map of the State of Kansas . . . . Lawrence, Kansas: Blackburn & Co., Publishers, 1870.

Kansas. Handbook of Scott County, Kansas. Chicago: C. S. Burch Publishing Co., 1887.

Kansas. The Emigrant's Guide. A History and Description of Northwestern Kansas, with a Full Synopsis of the Government Land Laws . . . . Kirwin, Kansas: W. W. & L. L. Gray, Publishers, 1880.

Kansas As She Is. The Greatest Fruit, Stock and Grain Country in the World. Lawrence, Kansas: n. p., 1870.

Kansas Pacific Railway Company. Emigrant's Guide to the Kansas Pacific Railway Lands. Best and Cheapest Farming and Grazing Lands in America. Six Million Acres for Sale by the Kansas Pacific Railway Company. . . . Lawrence, Kansas: Land Department, Kansas Pacific Railway Company, 1871.

Kansas Pacific Railway Company. Map of the Best and Shortest Cattle Route from Texas to the Kansas Pacific Railway. Published by the Kansas Pacific Railway Company, 1871. The Great Stock Route. Brooksville, Salina, Solomon, Abilene, and Ellsworth. . . . Lawrence, Kansas: Land Department, Kansas Pacific Railway Company, 1871.

Krahn, Cornelius. (ed.) From the Steppes to the Prairies. Newton, Kansas: Mennonite Publication Office, 1949.

Laude, G. A. Kansas Shorthorns: A History of the Breed in the State from 1857 to 1920. Iola, Kansas: The Laude Printing Co., 1920.

McNeal, Thomas A. When Kansas Was Young. New York: Macmillan Co., 1922.

Malin, James C. Winter Wheat in the Golden Belt of Kansas: A Study in Adaption to Subhumid Geographical Environment. Lawrence: University of Kansas Press, 1944.

Marshall, James L. Santa Fe: The Railroad that Built an Empire. New York: Random, 1945.

Masterson, Vincent V. The Katy and the Last Frontier. Norman: University of Oklahoma Press, 1952.

Mechem, Kirke. (ed.) The Annals of Kansas: 1886-1925. 2 vols. Topeka: Kansas State Historical Society, 1954-56.

Osgood, Ernest S. The Day of the Cattleman. Minneapolis: University of Minnesota Press, 1929.

Pfister, Richard. "Water Resources and Irrigation," Part IV, Economic Development in Southwestern Kansas. School of Business, Bureau of Business Research, University of Kansas. Lawrence: University of Kansas Press, 1955.

Robbins, Roy M. Our Landed Heritage: The Public Domain, 1776-1936. Princeton: Princeton University Press, 1942.

Robinson, Sara T. L. Kansas: Its Interior and Exterior Life. Including a Full View of Its Settlement, Political History, Social Life, Climate, Soil, Productions, Scenery, etc. Boston: Crosby, Nichols and Co., 1856.

Roenigk, Adolph. Pioneer History of Kansas. Lincoln, Kansas: Adolph Roenigk, 1933.

Rogin, Leo. The Introduction of Farm Machinery in Its Relation to the Productivity of Labor in the Agriculture of the United States During the Nineteenth Century. Berkeley: University of California Press, 1931.

Ruede, Howard. Sod-House Days, Letters From a Kansas Homesteader, 1877-78. Edited by John Ise. New York: Columbia University Press, 1937.

Shannon, Fred A. The Farmer's Last Frontier, Agriculture, 1860-1897. New York: Farrar and Rinehart, Inc., 1945.

Smith, Charles H. The Coming of the Russian Mennonites, an Episode in the Settling of the Last Frontier, 1874-1884. Berne, Indiana: Mennonite Book Concern, 1927.

Stark, Andrew. (ed.) Kansas Annual Register for 1864. Leavenworth, Kansas: Bulletin Job Printing Estab., 1864.

Streeter, Floyd B. The Kaw: The Heart of a Nation. New York: Farrar and Rinehart, Inc., 1941.

Streeter, Floyd B. Prairie Trails and Cow Towns. Boston: Chapman and Grimes, 1936.

Svobida, Lawrence. An Empire of Dust. Caldwell, Idaho: The Caxton Printers, 1940.

Union Pacific Railroad. Pamphlets. Kansas State Historical Library, Topeka.

Vestal, Stanley. Queen of Cowtowns, Dodge City: The Wickedest Little City in America, 1872-1886. New York: Harper and Brothers, 1952.

Webb, Walter P. The Great Plains. Boston: Ginn and Company, 1931.

Wik, Reynold M. Steam Power on the American Farm. Philadelphia: University of Pennsylvanis Press, 1953.

Wilder, Daniel W. (ed.) The Annals of Kansas: 1541-1885. New Edition. Topeka: T. Dwight Thatcher, Kansas Publishing House, 1886.

Wilson, R. R., and Sears, Ethel M. History of Grant County, Kansas. Wichita: Wichita Eagle Press, 1950.

Wright, Robert M. Dodge City, the Cowboy Capital, and the Great Southwest in the Days of the Wild Indian, the Buffalo, the Cowboy, Dance Halls, Gambling Halls, and Bad Men. Wichita: Wichita Eagle Press, 1913.

Articles

Abel, Anna H. "Indian Reservations in Kansas and the Extinguishment of Their Title," Kansas State Historical Society, Transactions, VIII (Topeka, 1904), 72-109.

Adams, Franklin G. "Irrigation in Kansas," Kansas Academy of Science, Transactions, VII (1879-1880), 79.

"Address of Governor John A. Martin," Kansas State Historical Society, Transactions, III (Topeka, 1886), 376.

"Address of the Honorable T. Dwight Thacher," Kansas State Historical Society, Transactions, III (Topeka, 1894), 444.

Anderson, George. "The Administration of Federal Land Laws in Western Kansas, 1880-1890: A Factor in Adjustment to a New Environment," Kansas Historical Quarterly, XX (November, 1952), 233-51.

Barry, Louise. (comp.) "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Spring, 1961), 73, 75-76.

Barry, Louise. (comp.) "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Autumn, 1961), 369.

Barry, Louise. (comp.) "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVII (Winter, 1961), 499-500.

Barry, Louise. (comp.) "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVIII (Spring, 1962), 31-32, 58.

Barry, Louise. (comp.) "Kansas Before 1854: A Revised Annals," Kansas Historical Quarterly, XXVIII (Autumn, 1962), 324-25.

Barry, Louise. (comp.) "Circuit-Riding in Southwest Kansas in 1885 and 1886: The Letters of Jeremiah Evarts Platt," Kansas Historical Quarterly, XII (November, 1943), 387.

Berryman, J. W. "Early Settlement of Southwest Kansas," Kansas Historical Collections, XVII (Topeka, 1928), 561-70.

Bogue, Allan G. "The Land Mortgage Company in the Early Plains States," Agricultural History, XXV (January, 1951), 20-33.

"Chisholm Trail, The," Kansas Historical Quarterly, XXXIII (Summer, 1967), 129-37.

Coultis, H. P. "Introduction and Development of Hard Red Winter Wheat in Kansas," Report of the State Board of Agriculture for the Quarter Ending September 30, 1920 (Topeka, 1920), 217-19.

Cushman, George L. "Abilene, First of the Kansas Cow Towns," Kansas Historical Quarterly, IX (August, 1940), 240-58.

Dick, Everett. "The Long Drive," Kansas Historical Collections, XVII (Topeka, 1928), 27-97.

Gill, Helen G. "The Establishment of Counties in Kansas," Kansas Historical Collections, VIII (Topeka, 1904), 449-71.

Glick, George W. "The Drought of 1860," Kansas Historical Collections, IX (Topeka, 1906) 480-84.

Green, Albert R. "U. S. Land-Offices in Kansas," Kansas Historical Collections, VIII (Topeka, 1904), 1-12.

Haney, E. D. "The Experiences of a Homesteader in Kansas," Kansas Historical Collections, XVII (Topeka, 1928), 305-25.

Harger, Charles M. "The Short Grass Country," Harper's Weekly, XLV (January 26, 1901). 88-89.

Henry, Theodore C. "The Story of a Fenceless Winter-Wheat Field," Kansas Historical Collections, IX (Topeka, 1906), 502.

Hickman, Russell K. "The Great Drouth of 1860," Kansas Magazine (Topeka, 1951), 19-23.

Hilton, H. F. "The Bluestem-Limestone Pastures of Kansas," Twenty-Sixth Biennial Report of the Kansas State Board of Agriculture (Topeka, 1929), 189.

Hilton, H. F. "Twenty Years of Kansas Agriculture, Analyzed," Eleventh Biennial Report of the Kansas State Board of Agriculture (Topeka, 1899), 545.

Howes, Cecil. "This Month in Kansas," Kansas Teacher, LI (September, 1942), 38-40.

Howes, Cecil. "This Month in Kansas," Kansas Teacher, LII (February, 1944), 30-32.

Hull, O. C. "Railroads in Kansas," Kansas Historical Collections, XII (Topeka, 1912), 44-46.

Kollmorgen, Walter M., and Simonett, David S. "Grazing Operations in the Flint Hills-Bluestem Pastures of Kansas," Annals of the Association of American Geographers, LV (June, 1965), 265.

Leibbrandt, George. "The Emigration of the German Mennonites from Russia to the United States and Canada in 1873-1880," Mennonite Quarterly Review, VI (October, 1932), 205-26.

Leibbrandt, George. "The Emigration of the German Mennonites from Russia to the United States and Canada in 1873-1880," Mennonite Quarterly Review, VII (January, 1933), 5-41.

Lynch, William O. "Population Movements in Relation to the Struggle for Kansas," reprint from Studies in American History, Indiana University (June, 1926), 404.

McNeal, T. A. "Southwestern Kansas," Kansas Historical Collections, VII (Topeka, 1902), 90-95.

McClure, James R. "Taking the Census and Other Incidents in 1855," Kansas State Historical Society, Transactions, VIII (Topeka, 1904), 227-50.

Malin, James C. "The Adaptation of the Agricultural System to Sub-Humid Environment," Agricultural History, X (July, 1936), 118-41.

Malin, James C. "Beginnings of Winter Wheat Production in the Upper Kansas and Lower Smoky Hill River Valleys: A Study in Adaptation to Geographical Environment," Kansas Historical Quarterly, X (August, 1941), 229.

Malin, James C. "An Introduction to the History of the Bluestem-Pasture Region of Kansas," Kansas Historical Quarterly, XI (February, 1942), 3-28.

Malin, James C. "The Kinsley Boom of the Late Eighties," Kansas Historical Quarterly, IV (February, 1935), 23.

Malin, James C. "The Turnover of Farm Population in Kansas," Kansas Historical Quarterly, IV (November, 1935), 339-72.

Martin, George W. "Early Days in Kansas," Kansas State Historical Society, Transactions, IX (Topeka, 1906), 12[illegible] 43.

Meyer, Roy W. "The Iowa Indians, 1836-1885," Kansas Historical Quarterly, XXVIII (Autumn, 1962), 273-300.

Miller, Raymond C. "The Background of Populism in Kansas," Mississippi Valley Historical Review, XI (March, 1925), 479.

Porter, Kenneth W. (ed.) "'Holding Down' A Northwest Kansas Claim, 1885-1888," Kansas Historical Quarterly, XXII (Autumn, 1956), 220-35.

Rossel, John. "The Chisholm Trail," Kansas Historical Quarterly, V (February, 1936), 3-14.

Sageser, A. Bower. "Editor Bristow and the Great Plains Irrigation Revival of the 1890's," Journal of the West, III (January, 1964), 78.

St. John, O. "Notes on the Geology of Southwestern Kansas," Fifth Biennial Report of the Kansas State Board of Agriculture (Topeka, 1887), Pt. II, 132-52.

St. John, O. "Sketch of the Geology of Kansas," Third Biennial Report of the Kansas State Board of Agriculture (Topeka, 1883), 569-99.

Schmidt, Carl B. "Reminiscences of Foreign Immigration Work in Kansas," Kansas Historical Collections, IX (Topeka, 1906), 485-96.

Schcewe, Walter H. "The Geography of Kansas: Part I, Political Geography: Geographic Position and Coordinates," Kansas Academy of Science, Transactions, LI (September, 1948), 253-88.

Schoewe, Walter H. "The Geography of Kansas: Part II, Physical Geography: Geology," Kansas Academy of Science, Transactions, LII (September, 1949), 261-333.

Schoewe, Walter H. "The Geography of Kansas: Part III, Hydrogeography," Kansas Academy of Science, Transactions, LIV (September, 1951), 263-329.

Schoewe, Walter H. "The Geography of Kansas: Part IV, Economic Geography: Mineral Resources," Kansas Academy of Science, Transactions, LXI (Winter, 1958), 359-468.

Street, William D. "The Victory of the Plow," Kansas Historical Collections, IX (Topeka, 1906), 33-44.

Taft, Robert. "Agriculture in Early Kansas: The St. Mary's Model Farm," Kansas Academy of Science, Transactions, LVIII (Spring, 1955), 9-13.

Taft, Robert. "Emigrant Guides for Kansas Settlers," Kansas Teacher, LXIII (October, 1954), 109-12.

Throckmorton, R. I. "Kansas Soils and Soil Map," Twenty-Eighth Biennial Report of the Kansas State Board of Agriculture (Topeka, 1933), 91-102.

Walker, Hays. "First Hereford Herd in Kansas," American Hereford Journal, XXVI (June, 1935), 105.

Walters, J. D. "The Kansas State Agricultural College," Kansas State Historical Society, Transactions, VII (Topeka, 1902), 169.

Williston, S. W., and Martin, H. T. "Some Pueblo Ruins in Scott County, Kansas," in Kansas State Historical Society, Transactions, VI (Topeka, 1900), 124-28.

Wright, Robert M. "Reminiscences of Dodge," Kansas Historical Collections, IX (Topeka, 1906), 66-72.

Newspapers

The Atchison Daily Globe. 1894.

The Dodge City Globe. 1886.

The Great Bend Tribune. 1887, 1936.

The Hutchinson News-Herald. 1941.

The Kansas Farmer. 1863-1900.

The Prairie Farmer. 1863.

The Topeka Daily Capital. 1928-1929.

Clipping File
Kansas State Historical Library

Atchison County. Clippings, IV.

ATSF. Clippings, I.

Barton County. Clippings, I.

Biographical Scrapbook. XV.

Dickinson County. Clippings, I.

Ellis County. Clippings, II.

Kansas History. Clippings, V.

Kansas Relief. Clippings, II, III, IV, XIII.

Legislature. Clippings, XVIII.

Mennonites. Clippings, I.

Norton County. Clippings, I.

Rush County. Clippings, I.

Saline County. Clippings, I.

Scott County. Clippings, I.

Theses and Dissertations

Aistrup, Gearld K. "An Investigation of the Relationship Between Climatic Conditions and Population Changes in Western Kansas, 1885-1900." Unpublished Master's thesis, Fort Hays, Kansas, State College, 1956.

Bogue, Allan G. "Farm Land Credit in Kansas and Nebraska, 1854-1900." Unpublished Ph.D. dissertation, Cornell University, 1951.

Lee, Lawrence B. "Kansas and the Homestead Act, 1862-1905." Unpublished Ph.D. dissertation, University of Chicago, 1957.

Miller, Glenn H. Jr. "Financing the Boom in Kansas, 1879-1888, with Special Reference to Municipal Indebtedness and Real Estate Mortgages." Unpublished Master's thesis, University of Kansas, 1954.

Smith, Hilda. "The Advance and Recession of the Agricultural Frontier in Kansas, 1865-1900." Unpublished Master's thesis, University of Minnesota, 1931.

Thompson, Leonard W. "The History of Railway Development in Kansas." Unpublished Ph.D. dissertation, University of Iowa, 1942.

Venable, Robert C. "The Kansas Frontier, 1861-1875." Unpublished Master's thesis, University of Oklahoma, 1936.

Waldron, Nell B. "Colonization in Kansas from 1861 to 1890." Unpublished Ph.D. dissertation, Northwestern University, 1932.