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United States Department of Agriculture • Northern Plains Region
3705 Miller Parkway, Ste. A, Manhattan, KS 66503 • (800) 582-6443

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Contact: Dean C. Groskurth

(800) 582-6443

dean.groskurth@nass.usda.gov

KANSAS WHEAT HISTORY



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INTRODUCTION

Abraham Lincoln called agriculture the "largest interest" of the nation, when he asked Congress to establish the Department of Agriculture in 1862. One year later, in July, the Department's Division of Statistics issued the nation's first Crop Report. The Report was a pioneering attempt to survey the condition of crops in the young nation and help inform farmers. The idea was to halt speculation among producers, consumers, and others by establishing a system to routinely gather crop information from the most reliable source--the farmer--and disseminate summary estimates nationwide.

The Kansas State Board of Agriculture, created in 1872, also compiled extensive reports on the State's agriculture. These were published in a series of biennial and annual reports dating back to 1872. Over the next fifty years, both the State Board of Agriculture and USDA's Division of Statistics published data pertaining to Kansas agriculture. These two "statistical systems" caused extra reporting effort on the part of farmers and sometimes resulted in conflicting reports. Thus, in 1924 a cooperative agreement was signed to consolidate the crop reporting functions of the State Board of Agriculture and USDA to create what is now known in Kansas as the National Agricultural Statistics Service. The Kansas State Board of Agriculture became the Kansas Department of Agriculture on May 4, 1995.

It seems most fitting to commemorate this long history of crop reporting with a review of Kansas' number one crop--wheat. Kansas has long been known as the "Wheat State", and with good reason since Kansas is the nation's leading wheat producer with records of wheat production actually pre-dating statehood. There are indications that wheat was produced in the area as early as 1839. Production statistics on wheat in Kansas have been published since 1866 and are shown on an annual basis in the table at the back of this booklet.

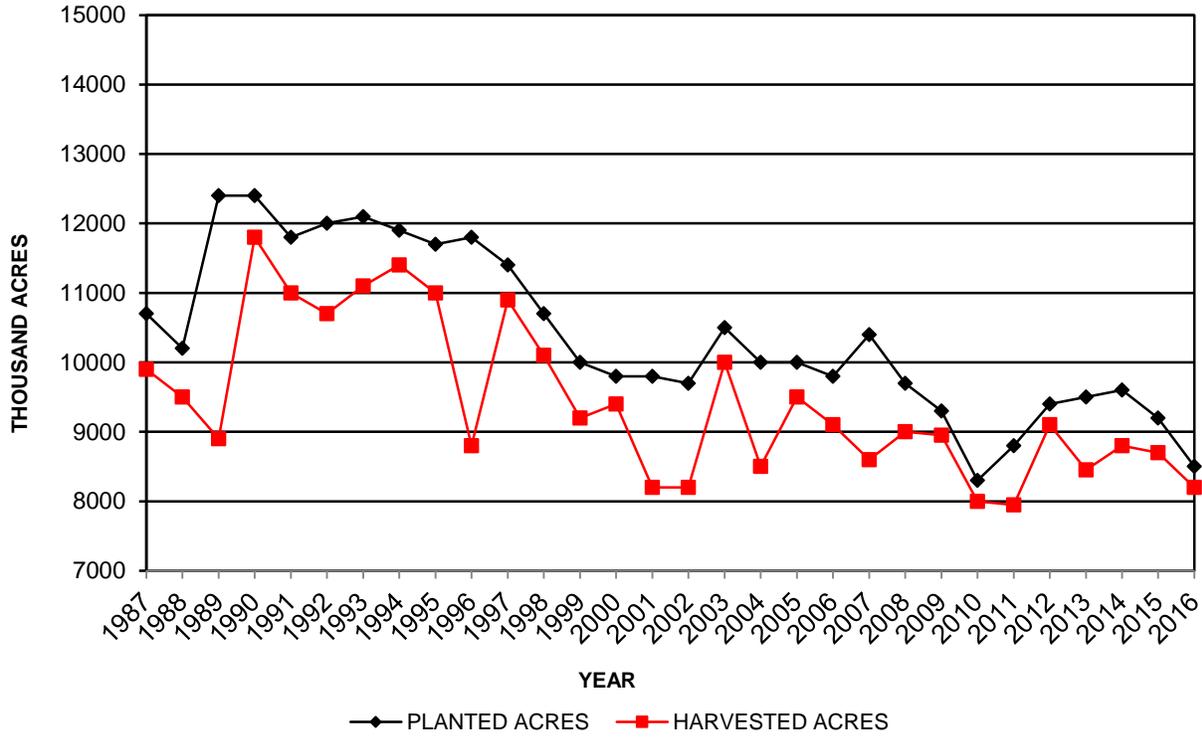
More detail, however, is provided in a section entitled "Annual Kansas Wheat Crop Sketches." This material was first published in 1973 when Raymond Hancock was State Statistician for Kansas. It was written by J.E. "Jap" Pallesen and John L. Wilson, who served together as State Statistician and Deputy State Statistician a combined total of forty years prior to their retirements in 1973. Their description of each crop year from 1918 through 1972 was based on personal knowledge as well as the records of Hubert L. Collins, who served as State Statistician from 1935 to 1958.

These narrative descriptions have been brought up to date by various statisticians and point out a number of high and low points in our Kansas wheat history. It is said that "the past is prologue," and we present this with the thought that this historical record will be a useful base in understanding current wheat crops and in future decision making.

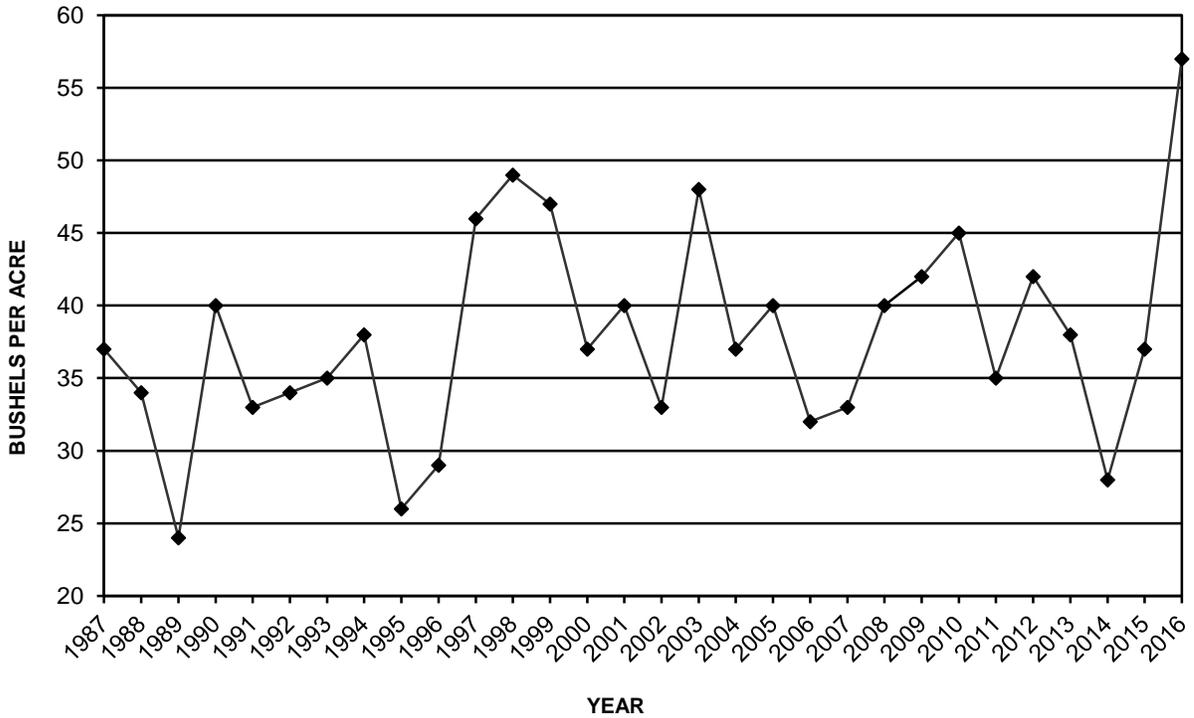
This publication highlighting the Kansas wheat crop is dedicated to the thousands of Kansas farmers who have been producing wheat these many years, those farmers and county agents who have faithfully reported on the progress and the outcome of the crop, elevators and grain dealers reporting stocks and prices, and to the statisticians who have had a hand in helping to measure the success of Kansas' number one field crop. Funding for this publication was provided by the Kansas Wheat Commission.

KANSAS WHEAT

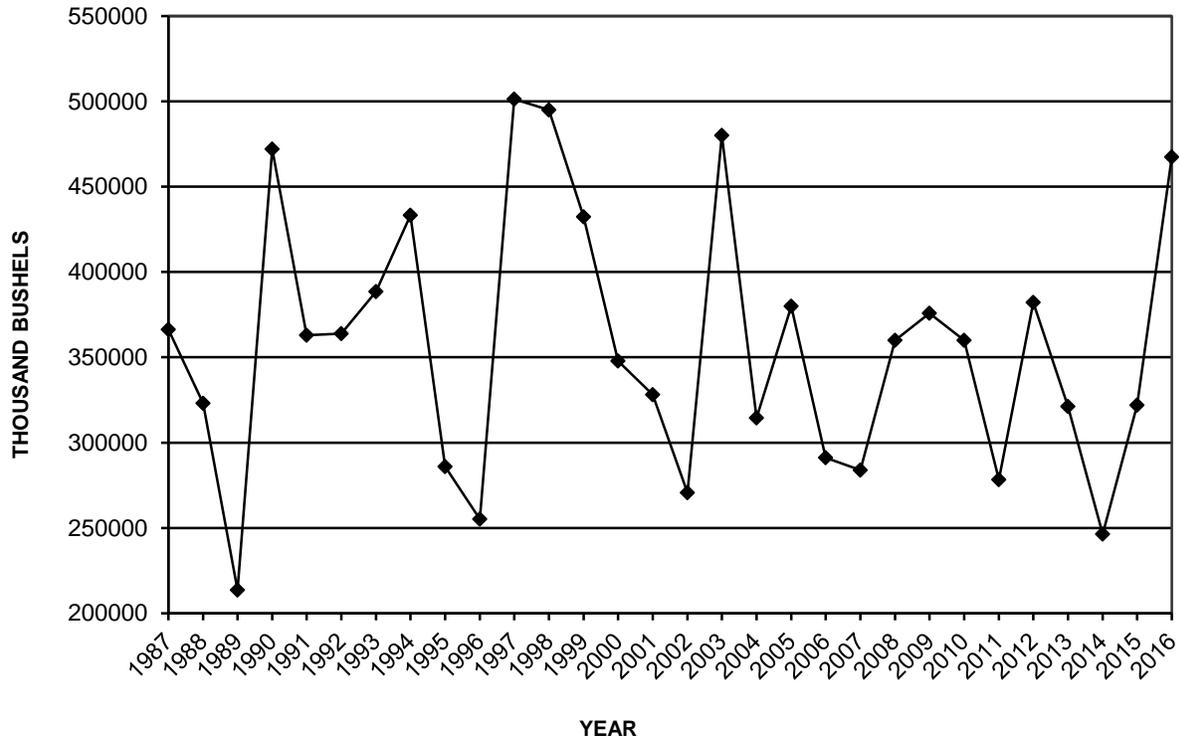
ACRES PLANTED AND HARVESTED, 1987 - 2016



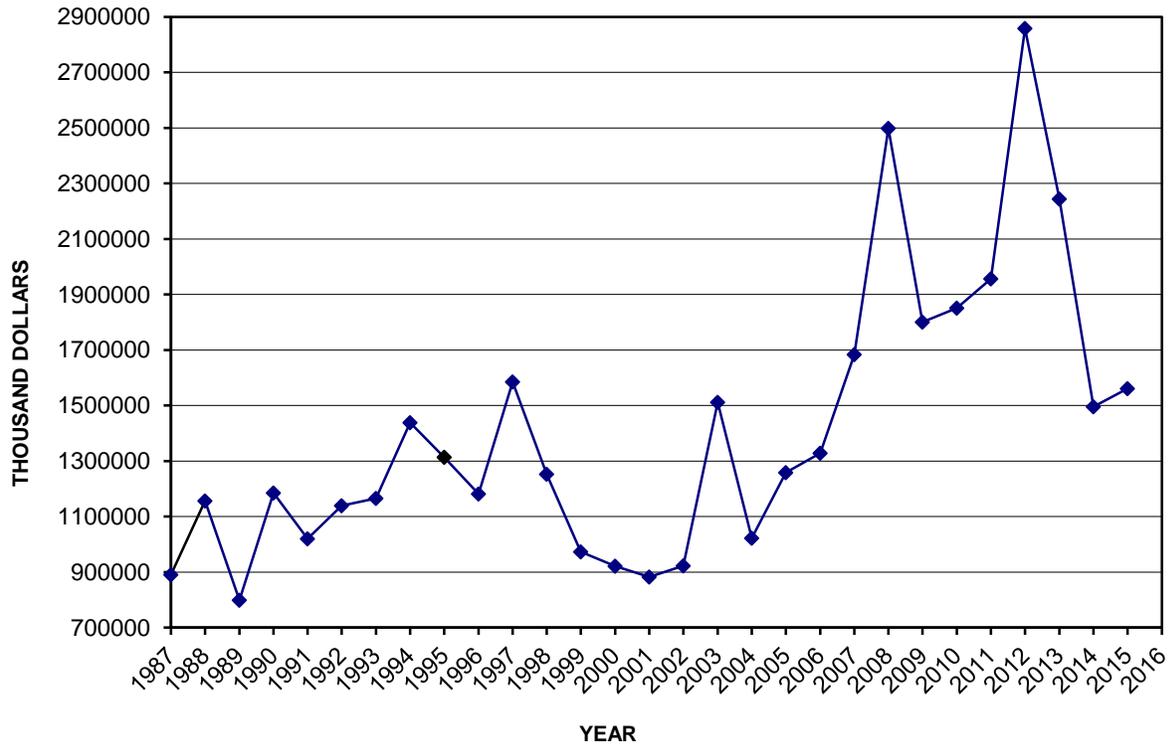
YIELD PER HARVESTED ACRE, 1987 - 2016



KANSAS WHEAT TOTAL PRODUCTION, 1987 - 2016



VALUE OF PRODUCTION, 1987- 2016 *



* 2016 figures will be available February 2017

ANNUAL KANSAS WHEAT CROP SKETCHES 1918-2016

1918 Crop: Seeded acres 10,199,000; harvested acres 7,250,000. December 1 condition was 71 percent. Persistent drought during the summer of 1917 depleted moisture reserves. Seed wheat was scarce and high in price. Seeding continued in the western half of the State until the first of December. Much late fall sown wheat had not sprouted by mid-December. Wet snows of February and light rains in March benefitted wheat, but winter kill was severe in northern and western Kansas. General rains during April greatly improved wheat prospects, and fields that looked like failure a month earlier offered promise of a fair crop on the first of May. Strong winds caused considerable damage to the wheat, but good rains the latter part of May were very beneficial. A heat wave in June with very low precipitation caused a deterioration of the wheat crop and wheat suffered considerable losses in later maturing wheat. Yield per acre 13.5 bushels. Total production was at 97,710,000 bushels.

1919 Crop: Seeded acres 11,671,000; harvested acres 11,624,000. December 1 condition was 98 percent. In some western counties seeding was delayed and stands damaged by grasshoppers. However, almost every acre came through the winter in flourishing condition. Early spring weather was favorable and encouraged vigorous growth. The rank foliage and excessive rainfall during May and June caused lodging and the development of many fungus diseases. Fields were heavily infested with leaf rust and smut, and immediately prior to harvest, black stem rust, scab, and blight also became apparent. Early July brought a wave of excessive heat that prematurely ripened thousands of acres in the west and shriveled much of the grain. Yield per acre forecast on May 1 was 17.7 bushels; final yield 13.2 bushels. Total production 153,311,000 bushels. Main variety was Turkey.

1920 Crop: Seeded acres 10,559,000; harvested acres 9,294,000. December 1 condition was 82 percent. A prolonged drought did not abate until October, and wheat was seeded at a very late date in poorly prepared seedbeds. West of a north-south line through Larned, half of the wheat was volunteer growth. During the winter the crop was handicapped by deficient moisture in areas south of Great Bend and east of Dodge City. Drought and late seeding in the fall, lack of moisture during the winter, and violent wind storms during early spring all contributed to loss of acreage. Wheat improved during May as a result of ample moisture in all sections of the State. There was some premature ripening in the central and southwest counties and some local damage by Hessian fly. Final yield per acre was at 15.6 bushels. Total wheat production 144,933,000 bushels.

1921 Crop: Seeded acres 11,470,000; harvested acres 10,554,000. December 1 condition was 88 percent. Good stands were the rule but fall growth was not large. Late seeding, wind damage, and an Easter freeze all caused abandonment. Some of the damage from frost was not apparent until wheat began to head. Due to May drought, wheat was short stemmed and heads were short. Smut caused considerable damage in northern border and northwest counties while in the eastern three tiers of counties some wheat shriveled. Final yield per acre was at 12.7 bushels. Total wheat production 133,964,000 bushels.

1922 Crop: Seeded acres 12,299,000, State's largest to date; harvested acres 9,756,000. December 1 condition a low 60 percent. Much early sown wheat in western and north central counties sprouted and died from lack of moisture, and an estimated 2 million acres of wheat in the western half of the State had not germinated by December 1. A fall and winter drought resulted in much poor wheat in a broad strip extending on each side of a line from Liberal to Mankato. April weather provided abundant moisture and plants were generally in good shape on acreage that sprouted normally in the fall. Spring sprouted grain was thin, weak, and weed infested. Moisture during May was sufficient to mature the crop but was also conducive to rank growth of straw and fungus diseases. Leaf rust and smut were present in many counties. A heat wave during mid-June shriveled much grain in the eastern half of the State, but was partially offset by improvement in western Kansas wheat where spring-sprouted fields with thin stands improved. Final yield per acre was at 12.8 bushels. Total wheat production 124,809,000 bushels.

1923 Crop: Seeded acres 11,601,000; harvested acres 8,299,000. December 1 condition was 73 percent. Conditions in December were very promising in the eastern half of the State but most unsatisfactory in the southwestern counties where much of the acreage had not sprouted because of drought. Thin stands were prevalent in the northwest and north central counties due to wire worm damage. The drought in western Kansas was not relieved until the last week in April and in the area west of a line from Mankato to Ashland, abandonment was heavy and spring condition of the remaining acreage very unpromising. Eastern Kansas wheat was infected with Hessian fly and chinch bugs while greenbugs damaged wheat in the southern counties. A frost on May 8

seriously injured wheat plants in the joint and boot stages. Winter drought, spring frosts, Hessian fly, chinch bugs, greenbugs, and May frost and hail all took their toll of the wheat crop. Northwest counties which had lost 40 to 60 percent of their acreage during the winter showed improvement with favorable May and June rainfall, but black rust appeared in late June and caused a near failure. Final yield per acre was at 10.1 bushels. Total production was at 83,804,000 bushels.

1924 Crop: Seeded acres 10,266,000; harvested acres 9,817,000. December 1 condition was 84 percent. There was no lack of moisture for this crop but Hessian fly infestation severely retarded fall growth and persisted during the winter. In the southeast there was considerable winter kill. Moisture conditions in April were about ideal but cold, dry weather during the first three weeks of May, chinch bugs in eastern Kansas, and Hessian fly in most of the northern half of the State all caused deterioration of the crop. June weather was very favorable for maturing wheat. Final yield per acre was at 16.0 bushels, best in ten years. Total wheat production 157,022,000 bushels, second largest for State to date. Leading varieties were Turkey, Kanred, and Blackhull.

1925 Crop: Seeded acres 10,941,000; harvested acres 8,755,000. December 1 condition was 76 percent. In most areas wheat got a good start but many north central counties suffered from dry weather with only about half of the seed germinating in some counties. Hessian fly was present over the eastern two-thirds of the State but in lesser numbers than a year earlier. Fall growth was heavy in the south half and northwest counties, providing good pastures. Abandonment was heavy in north central Kansas, and freeze damage, Hessian fly, and cutworms took their toll of wheat in the southwestern and central counties. April weather was generally favorable and those fields which came through the winter with good stands made satisfactory growth. In the northwest, however, heavy plant growth made severe inroads on soil moisture, resulting in considerable abandonment. Dry weather and high winds during May reduced the prospects. Weakened from a severe winter and a dry spring, plants had little resistance to Hessian fly, chinch bug, and foot rot. High temperatures in late May and early June caused premature ripening. Final yield per acre was at 9.2 bushels, lowest in 30 years. Total production was at 80,539,000, smallest since 1917.

1926 Crop: Seeded acres 11,695,000; harvested acres 10,409,000. December 1 condition was 84 percent. Late seeding was common in the eastern two-thirds of the State due to the menace of Hessian fly, which was prevalent in the big wheat counties of the central section. In a few north central counties, a deficiency of moisture at seeding time gradually improved during the fall. Early spring moisture conditions were good and growth normal except in the northwest, where top growth was small. The southwest rated a very high condition. During the last two weeks of May, wheat burned badly in the northern half of the State west of Blue River. Weather during June was mostly favorable for filling, but additional abandonment occurred in the northwest due to the continued lack of moisture. Final yield per acre was at 14.8 bushels. Total wheat production 153,991,000 bushels, third largest crop to date.

1927 Crop: Seeded acres 12,750,000, largest to date; harvested acres 10,202,000. December 1 condition was 80 percent. Lack of summer moisture and a dry fall in western Kansas gave the crop a poor start there. A large portion of the acreage improved during the winter, but an area about two counties wide along the eastern border of the eastern third of the State suffered considerable deterioration. Wheat in this area was of low vitality, poorly rooted, and badly wind blown. May moisture was ample and growth advanced well with abundant stooling. Lack of moisture and high winds hurt the crop in May, and Hessian fly, chinch bugs, grasshoppers, straw worms, and foot rot caused some damage. Final yield per acre was at 11.2 bushels. Total wheat production 114, 216,000 bushels.

1928 Crop: Seeded acres 12, 761,000, largest to date; harvested acres 10,639,000. The crop was seeded in a poorly prepared seedbed, surface moisture was deficient in the western third of the State, and damage from Hessian fly in western counties became apparent late in the fall. Winter abandonment was heavy in the west central and north western counties due to lack of moisture at seeding time and during the winter months. Wheat made a remarkable improvement in the western third and held its own in the central district in response to abundant rainfall and favorable temperatures during May. Some loss of wheat from hail and heavy rain occurred in June, but additional rain increased yields to more than offset losses. Harvest in the western and north central counties was hampered by continued rains and wet fields, and considerable wheat was still unharvested by August 1. Final yield per acre was at 16.3 bushels. Total wheat production 173,185,000 bushels, largest Kansas crop to date.

1929 Crop: Seeded acres 13,142,000; harvested acres 12,550,000; both largest to date. December 1 condition was 82 percent. Seeding was late as lack of rain in August and September hindered preparation of the seedbeds. Much seeding was done in November and in many counties the drills were still active until the middle of December. Many late planted fields had not yet emerged by December 1. However, surface and subsoil

moisture was abundant in all sections of the State, and insect damage during the fall was light. Abandonment from winter kill was moderate and growth during April and May was favorable. Presence of much volunteer acreage lowered yields in the southwest and wheat heads were generally short. Too much rain in eastern counties caused lodging and increased leaf rust. A heat wave in mid-June caused immature ripening. Infestations of straw or joint worms, wheat scab, rust, root rot, and Hessian fly all caused some damage. Final yield per acre was at 12.4 bushels. Total wheat production 155,563,000 bushels. Leading varieties were Turkey, Blackhull, and Kanred.

1930 Crop: Seeded acres 13,687,000; harvested acres 13,132,000; both largest to date. December 1 condition was 92 percent, the best since 1919. Planting conditions were ideal except in the eastern third. Top growth and general appearance of the plants was good. Volunteer wheat was plentiful. Lack of moisture during seeding time in south central and southeastern Kansas and a sudden temperature drop in January resulted in moderate abandonment. Moisture conditions were good during May but lack of stooling in early spring, short heads that formed during spring, root rot, Hessian fly, and straw worm helped to hold down yields. Final yield per acre 14.2 was at bushels. Total wheat production 186,277,000 bushels, largest Kansas crop to date.

1931 Crop: Seeded acres 13,898,000; harvested acres 13,623,000; both largest to date. December 1 condition was 90 percent. Condition of the growing crop was excellent. Moisture abundant and fall growing conditions was excellent. Crop entered the dormant stage late. Damage from Hessian fly was small and volunteer stands in western Kansas were very promising. Winter damage was minimal and early spring condition excellent except for a few counties on the western edge of the south central district. Wheat grew rapidly from January to mid-April when the rate of growth was retarded by low temperatures. By May 1, the top growth was unusually rank and the crop more advanced than usual. During May lack of moisture bothered north central, northwestern, and some central counties with some frost injury and insect damage, but the crop in south central Kansas was especially promising. Final yield per acre a record high 18.5 bushels. Total wheat production was 251,885,000 bushels, which stood up as the State's largest crop until 1947, but price per bushel of 33 cents was the State's lowest of record.

1932 Crop: Seeded acres 12,963,000; harvested acres 10,365,000. Acreage planted was reduced some because of the poorest planting conditions in years and low prices. Inadequate moisture at planting time, poorly prepared seedbeds, late planting with considerable reseeding, poor stands, and Hessian fly all contributed to a poor fall start for the wheat, especially in the western one-third and some central counties of the State. Winter abandonment was rather heavy, reflecting a poor start the crop made in western Kansas, adverse effects of a severe March freeze, and wind erosion during March and April. Only half-normal May rainfall greatly reduced yield prospects. Wheat in the western third deteriorated rapidly due to lack of surface and subsoil moisture. Many fields in the western third were badly fired at the end of May and Hessian fly took a heavy toll in the central and northwest areas. Above normal June rainfall caused the Kansas crop to turn out better than expected, with heads filling well and berries plump. Harvest was difficult due to wet fields and much wheat was bleached. Final yield per acre was at 11.6 bushels. Total production was at 120,178,000 bushels.

1933 Crop: Seeded acres 13,231,000; harvested acres 7,361,000. December 1 condition was 57 percent, lowest of record. In the southeastern and western border counties, much wheat was not up when winter weather arrived and a large percentage of the crop was shallow rooted and suffered from lack of moisture. The outlook was more promising in the northwest, northeast, and some central counties. April 1 condition was 37 percent, the lowest of record. Conditions were extremely poor in the western third of the State and southwestern counties. Following below normal rainfall for nine months and serious injury from an early February freeze and high winds, the crop was off to a poor spring start except in eastern Kansas. Abandonment was extremely heavy, reflecting the abnormal weather and some damage by army cutworm and Hessian fly. Wheat was pushed to maturity by a hot dry June that caused severe shriveling. Most of the grain was harvested by the end of June. Final yield per acre was at 9.1 bushels, lowest in 38 years. Total wheat production 66,931,000 bushels, smallest since 1917.

1934 Crop: Seeded acres 12,699,000; harvested acres 8,610,000. December 1 condition was 64 percent. Condition was below average in all parts of the State, although more promising than the preceding year except in central and north central areas. Subsoil moisture supplies were scanty following harvest but timely August rains proved helpful for planting. Following a dry fall, the crop was in critical condition in western areas through the winter. Wheat was well rooted but subsoil moisture generally deficient and surface moisture lacking in many counties, and abandonment was substantial. The crop deteriorated rapidly during an extremely dry April with little subsoil moisture, drying winds, and above normal temperatures. Greenbugs damaged the crop considerably in the eastern half of the State. With May also dry, Kansas was suffering from one of the worst droughts in history. In the western third and southwestern counties, about half of the seeded acreage was abandoned. Excessive

May temperatures and lack of precipitation reduced wheat yields. A very small crop was harvested in the western third of the State and in north central counties, but wheat turned out unusually well in south central, southeastern, and east central counties. Final yield per acre was at 9.8 bushels. Total wheat production 84,323,000 bushels. Leading varieties were Turkey, Black hull, and Kanred.

1935 Crop: Seeded acres 13,456,000; harvested acres 6,888,000. December 1 condition was 71 percent. In the western third and north central Kansas, moisture was deficient at planting time and continued below normal with heavy abandonment of seedings. In other areas the crop got a good start and provided considerable pasture. In western Kansas much wheat was blown out by high winds, covered by soil drifting, or died for lack of moisture during the winter. Lack of April moisture, high winds, and drifting soil caused further deterioration of most wheat west and north of a line from Belleville to Salina to Meade. Double normal May rainfall in the eastern and central areas improved prospects for wheat there but heavy rains while in bloom stage were unfavorable for filling. Harvest was unusually late due to frequent heavy June rains. Final yield per acre was at 9.3 bushels. Total wheat production 64,055,000 bushels, the second smallest crop in the 20th century.

1936 Crop: Seeded acres 14,254,000, largest to date; harvested acres 10,458,000. December 1 condition was 81 percent. In the western third of the State, well below normal rainfall from July to December gave the crop a poor fall start. However, in the eastern two-thirds of the State, rains built up a reserve of moisture and carried the wheat through the winter. There was heavy abandonment of planted acreage during the winter in western districts. Prospects continued gloomy into the early spring until good rains were received in late April and May. The crop improved until the middle of June when hot winds over northwest and central Kansas caught wheat in the soft dough stage and caused premature ripening. The crop in western Kansas was extremely light for the fourth consecutive year, but a fairly good crop was produced in eastern and parts of central Kansas. Final yield per acre was at 11.5 bushels. Total wheat production 120,234,000 bushels.

1937 Crop: Seeded acres 17,110,000, the State's all-time high; harvested acres 13,172,000. Seedings had a generally poor start in the western third of the State but good fall growth elsewhere. Spring top growth was small due to low temperatures in March, but stands were uniform with only small loss due to freezing. High winds during March caused some damage in the western third. Prospects declined sharply during May due to deficient rainfall and well above normal temperatures. Late wheat suffered severe damage from high temperatures in June. Injury from black stem rust was general over the eastern third of the State and excessive rainfall at filling time was detrimental in the southeastern counties. Final yield per acre was at 12.0 bushels. Total wheat production 158,052,000 bushels.

1938 Crop: Seeded acres 16,942,000; harvested acres 14,494,000; both state's second largest. December 1 condition was 73 percent. Early sown wheat made good growth but precipitation after seeding was below normal. Much wheat entered the dormant period in poor condition, and below normal precipitation with high winds in January and February caused considerable abandonment. Above normal moisture in March and April rains were favorable, and heavy May rains were beneficial in western and northern counties. However, extreme lack of soil moisture at seeding time, shallow rooted wheat plants, severe April and May freezes, excessive May and June rains, widespread infestation of orange leaf rust, and black stem rust all contributed to holding down yields. Final yield per acre was at 10.5 bushels. Total wheat production 152,163,000 bushels.

1939 Crop: Seeded acres, 13,703,000; harvested acreage 9,574,000. Below normal precipitation after September and extremely dry topsoil over a large acreage of late seeded wheat resulted in thin, spotty stands and poorly rooted plants going into the winter. February and March precipitation was above normal and by April, wheat had greatly improved with stands showing good growth and color. High winds and above normal temperatures the last ten days of April caused serious deterioration, particularly in the southwest where rank growth made plants more subject to wind damage. Hot, dry weather with high winds in May continued unfavorable for wheat development in western and some central areas. During late May and early June, rains were beneficial to wheat and moderate June temperatures favorable for filling and ripening. Frequent rains delayed harvest and much over-ripe wheat shattered. Final yield per acre was at 12.0 bushels. Total wheat production 114,858,000. Leading varieties were Blackhull, Turkey, and Tenmarq.

1940 Crop: Seeded acres 12,360,000; harvested acres 8,739,000. December 1 condition was 35 percent, lowest of record. Much wheat was planted in dry topsoil in the western third to half of the State. Some late wheat had sprouted in the western part by the first of December, but much of the wheat did not emerge until mid-February and in many fields, not until the first of April. April rains helped in the eastern and central areas but were decidedly below normal in the west. During May, many fields that had appeared hopeless improved to show prospects for a good yield in the eastern third. Some late sown and spring emerged wheat in the western third

also improved and was kept for harvest. Ripening weather was excellent and the crop was harvested under very favorable conditions. Final yield per acre was at 14.5 bushels. Total wheat production 126,553,000.

1941 Crop: Seeded acres 13,091,000; harvested acres 11,799,000. December 1 condition was 88 percent. Wheat was planted early and made good top growth. Average depth of soil moisture at mid-October was 27.9 inches. The crop had an excellent start. Extreme low temperatures in November came suddenly causing considerable injury to wheat as became apparent during late winter and spring. Some abandonment occurred as a result of the low temperatures, blow damage, and grasshoppers. Above average precipitation in April and May was favorable for good growth of wheat. Hessian fly took a considerable toll in southeastern and east central counties. Wet weather delayed harvest in all sections. Stem rust reduced yields slightly in southwest and south central counties. Final yield per acre was at 14.7 bushels. Total wheat production 173,332,000 bushels.

1942 Crop: Seeded acres 10,861,000; harvested acres 10,374,000. December 1 condition was 88 percent. Seeding was satisfactory and wheat had ample moisture to continue growth until a later date than usual. The crop went through the winter well and made excellent growth in April with good stands, well rooted plants, and well stooled with good color. Subsoil moisture was the best in a decade. Through the winter, wheat was favored with an abundance of moisture and no loss of consequence from winter kill, freezes, soil drifting, insects, or diseases. Greenbugs were numerous in southern counties, but wheat developed satisfactorily until the latter part of May when above normal temperatures and high winds caused severe damage in the southwestern and west central counties. June conditions were favorable for developing heavy test weight grain, but cool wet weather delayed harvest in all sections of the State. Final yield per acre was at 19.3 bushels, the best in 28 years. Total wheat production was 200,101,000 bushels, the second largest to date.

1943 Crop: Seeded acres 10,741,000; harvested acres 10,159,000. December 1 condition was 91 percent. Conditions were ideal for seeding. Temperatures and precipitation favored rapid growth. Stands were uniform, well rooted, good color, and thrifty. Winter rainfall and early spring temperatures were below normal and top growth was retarded. Plants were small but satisfactory, well stooled, and rooted. April rainfall was below normal, and wheat in the southwestern quarter suffered severe damage from mid-April freeze, particularly early maturing varieties. May condition declined due to moisture deficiency in west and southwest, floods in southeast. Hessian fly reduced yields in east central and southeast, while greenbugs caused some damage in the south central. Yields were excellent in north central and northwestern areas. Yield per acre May 1 forecast 16.0 bushels; final 14.2 bushels. Total wheat production 144,241,000 bushels.

1944 Crop: Seeded acres 13,210,000; Harvested acres 11,377,000. December 1 condition was 62 percent. Seeding and seedbed preparation accomplished under conditions unfavorable for germination and growth of wheat. Summer and fall months were dry. A large acreage was seeded in dry seedbeds. Condition was particularly low in southwest and extreme north central counties. In central and eastern counties, wheat had made fairly satisfactory growth. Much wheat in western and extreme northeastern counties failed to emerge until January moisture was received. In other areas wheat entered the winter in satisfactory condition and although plants were small, they were well rooted and of good color. Record April precipitation improved prospects and May weather was extremely favorable for crop growth. Under abundant moisture, plant development was rapid and growth was lush in central and southwestern counties. A large acreage of late seeded wheat in western counties made a substantial recovery but some was later abandoned because of heavy weed growth. Weather during June was favorable for ripening and harvesting of wheat, except for a period in late June when high temperatures caused some injury to late wheat. By July 1, black stem rust was prevalent over the State but most of the crop was far enough advanced to escape substantial damage. May 1 forecast yield per acre 14.5 bushels; final 16.5 bushels. Total wheat production 187,700,000. Leading varieties were Tenmarq, Blackhull, Turkey, Early Blackhull, and Chiefkan.

1945 Crop: Seeded acres 14,148,000; harvested acres 13,416,000; December 1 condition 92 percent. Soil moisture conditions were excellent at seeding time, and normal precipitation during November provided sufficient reserves to carry the wheat through the winter. Fall growth was rapid and wheat wintered well with very limited losses from winter killing and soil drifting. Early spring growth was ahead of normal with conditions uniformly high throughout the State. In May, a small acreage was abandoned in the southeastern quarter from floods and standing water, plants over most of the southwestern two-fifths of the State tillered poorly causing weed problems, and some leaf rust developed. June was favorable for filling and ripening but harvest was delayed by frequent rains. When harvest was completed, rather large quantities of grain were piled on the ground in some western and southwestern counties. May forecast yield per acre 18.0 bushels; final yield 15.5 bushels. Total wheat production 207,939,000 bushels, second largest crop to date.

1946 Crop: Seeded acres 14,006,000; harvested acres 13,147,000. December 1 condition was 78 percent. Seeding was delayed by lack of moisture, except in western two or three tiers of counties. In extreme western counties summer fallow made rapid growth, and seeded and volunteer fields furnished excellent pasture for livestock until growth was retarded by lack of moisture. Elsewhere plant growth was slow and wheat entered the dormant period with plants small and poorly tillered. A heavy blanket of snow in mid-December in the eastern half of the State was of material benefit. Improved moisture conditions and warm weather during the last half of February and March permitted rapid growth. Prospects declined during April due to light precipitation, and deficiency in subsoil moisture, particularly in the southwestern district, with some wheat plowed under. Cool weather in May slowed deterioration and was favorable for filling of heads. Prospects generally improved in the western two-thirds of the State but a freeze on May 11 caused scattered damage in many counties in the western half of the State. June was favorable for filling and ripening of wheat, and yields were substantially above earlier expectations. Harvest was nearly completed in the southern half of the State by July 1. May forecast yield per acre 14.5 bushels; final 16.2. Total wheat production 212,977,000 bushels, second largest to date.

1947 Crop: Seeded acres 15,404,000; harvested acres record 14,855,000. December 1 condition was 94 percent. Conditions were favorable for seeding except in south central and southeastern areas and a few western counties where soils were dry. Precipitation in most western counties in October and November favored good growth and a large acreage of seeded and volunteer wheat was pastured. Because of cool weather top growth was not rank, but plants were well rooted and in thrifty condition. Spring surface and subsoil moisture was good to excellent over the State except for a few south central and western counties. A large acreage of volunteer wheat was saved for harvest. May weather favored wheat except in the eastern third where there was too much rain. A freeze on May 29 caused some damage in north central counties. Favorable June weather offset losses from a late May freeze and early June hot winds in southwest Kansas. Fields were the best in many years. Following harvest; storage, transportation, and terminal facilities were inadequate for handling the crop and large quantities were piled on the ground in the western half of the State. May 1 yield per acre forecast 18.0 bushels, final 19.3 bushels. Total wheat production 286,702,000 bushels, largest to date. This was called the "miracle crop". Leading varieties were Pawnee, Tenmarq, Comanche, Early Blackhull, Blackhull, and Red Chief.

1948 Crop: Seeded acres 14,634,000; harvested acres 13,221,000. December 1 condition was 59 percent. Dry topsoil during the fall was unfavorable for seeding in the western two-thirds of the State. Dry topsoil delayed seeding and prevented germination until November rains and snows were received. Most seed germinated but crop entered dormant period with very poor root development. Crop was in the poorest condition in west central, southwest, and central sections of the State. Winter and early spring precipitation improved soil moisture supplies. Some wheat in dry areas did not emerge to satisfactory stands until the last half of March, but growth was favorable in extreme western and northwestern counties and in eastern Kansas. Lack of rain and warm weather during April delayed development, but yield prospects improved in May as a result of favorable filling weather even though many fields were thin and stalks short. Control of weeds through spraying with 2,4-D was beneficial and a large acreage of improved varieties--Pawnee, Comanche, and Wichita--helped average yields. Moderate temperatures and abundant rainfall during June resulted in yields much greater than expected earlier. Late wheat reached harvest with no injury from hot winds, insects, or diseases. Harvest was delayed by general rains in late June. May 1 yield per acre forecasted at 12.0 bushels, final at 17.5 bushels. Total wheat production 231,368,000 bushels. Weight per bushel 59.1 pounds, protein 12.4 percent. Leading varieties were Pawnee, Comanche, Tenmarq, Wichita, and Early Blackhull.

1949 Crop: Seeded acres 16,244,000; harvested acres 14,279,000. December 1 condition was 82 percent. Moisture conditions in the fall were favorable for seeding in most western counties and early sown wheat in that area came up to good stands. Lack of early rainfall delayed seeding in central and some western counties but precipitation during late October and early November permitted completion of seeding, aided germination and improved stands by the first of December. Root development was excellent and stands uniform. The crop came through the winter in good shape except for soil blowing in a few west central counties and winter killing in central and north central counties due to freezing, ice cover, and standing water. Spring top growth was generally good but excessively heavy in south central and southwest areas, and late wheat improved in north central counties from May rains. Before harvest, however, wheat streak mosaic took a heavy toll in western Kansas, loss from hail was the heaviest in years, widespread leaf rust hurt in south central counties, and "wet weather" diseases reduced yields substantially. Wet weather caused some delay in harvest operations. May 1 yield per acre forecasted at 17.0 bushels, final at 11.0 bushels. Total wheat production 157,069,000. This was the "mystery crop". Weight per bushel a record low 54.9 pounds; protein content a high at 12.3 percent. Leading varieties were Pawnee, Comanche, Wichita, Tenmarq, and Triumph.

1950 Crop: Seeded acres 13,807,000; harvested acres 12,280,000. December 1 condition was 90 percent. Abundant precipitation during August and early September made conditions ideal for seeding over most of the State except for limited areas in central and southeastern counties. Plant development was rapid and many fields made rank growth. A prolonged fall and winter drought depleted topsoil moisture and low temperatures in January caused heavy winter killing in the southwestern quarter of the State, and sharply reduced yield on remaining acreage. Greenbugs survived the winter in northern Oklahoma and southern Kansas and ate their way northward during April and May, causing varying amounts of damage. More favorable rainfall and temperatures during May and June improved yields. May 1 yield per acre at 13.0 bushels, final at 14.5 bushels. Total wheat production 178,060,000 bushels. Weight per bushel 59.3 pounds; protein 12.8 percent. Leading varieties; Pawnee, Comanche, Wichita, Triumph, and Red Chief.

1951 Crop: Acres seeded 14,773,000; acres harvested 9,701,000. December 1 condition was 84 percent. The crop was planted under very favorable conditions and plants made a heavy early top growth. However, a period of warm dry weather after mid-October dried out the topsoil rapidly and crown roots failed to develop. This, together with leaf rust and insect damage, left plants in a weakened condition. Low and sharply fluctuating temperatures without snow cover during the winter resulted in extensive winter killing of wheat in the western third of the State. Unusually heavy rains starting in April and continuing throughout the summer caused additional heavy abandonment, particularly in the eastern half of the State. Loss was also incurred from lowered test weights, inability to enter fields with machinery, lodging, and shattering of grain. May 1 yield per acre forecast at 14.5 bushels; final 13.0 bushels. Total production was relatively small at 126,113,000 bushels. Weight per bushel 56.2 pounds; protein content 11.9 percent. Leading varieties; Pawnee, Comanche, Wichita, Triumph, and Red Chief.

1952 Crop: Acres seeded 15,068,000; acres harvested 14,649,000. December 1 condition was 92 percent. Soil moisture reserves from the record 1951 precipitation provided abundant moisture supplies for growth and development of the crop. Plantings were a little later than usual and fall top growth was small, but root systems were firmly established. Freezing temperatures occurring in early April and again in early May in western areas resulted in only minor damage, and with weather otherwise ideal, heads filled well. In contrast to the 1951 "wet harvest", the 1952 harvest was completed under nearly ideal weather condition. About 80 percent of the crop was harvested during the last week of June. Brisk hot winds caused some loss from shattering and shriveling in extreme northwestern counties. May 1 yield per acre forecast 17.5 bushels; final 21.0 bushels was a new record. Production of 307,629,000 bushels was also a new record. Weight per bushel 61.6 pounds, record to date; protein content a low 11.1 percent. Leading varieties Pawnee, Comanche, Wichita, Red Chief, and Blue Jacket.

1953 Crop: Acres seeded 14,315,000; acres harvested 11,573,000. December 1 condition 41 percent. Soil moisture reserves in the fall were at the lowest point in more than a decade. A major share of the acreage was seeded in dry soil and germination and emergence were very spotty with some wheat not coming up until after March 1 rains. Abandonment was heavy in many western and central areas with about 19 percent of the seeded acreage for the entire State not harvested. Spring weather was ideal for growth and development of the crop in the eastern third of the State. Weather conditions were generally favorable for harvesting, except for showers in scattered areas which caused some delay. May 1 yield per acre forecast 11.0 bushels; final 12.5 bushels. Total production 144,662,000 bushels. Weight per bushel relatively low 59.0 pounds, but protein content second high 13.5 percent. Leading varieties Pawnee, Wichita, Comanche, Triumph, and Red Chief.

1954 Crop: Acres seeded 11,738,000; acres harvested 10,069,000. December 1 condition 85 percent. September rains brought up good stands of early planted wheat in the southwest and northwest, but elsewhere most wheat seeded before mid-October went into dry soil. Rains in the west in mid-October and over all of Kansas in early November provided ample surface moisture, but subsoil reserves were low. Small top growth, due to late start, left many fields subject to spring blowing. Abandonment was quite high in the southwest and some other western areas, but surviving wheat made a remarkable late spring comeback. Good weather during critical blooming and filling stages brought total production sharply above earlier forecasts. May 1 yield per acre forecast 15.5 bushels; final 17.5 bushels. Total wheat production 176,208,000 bushels. Weight per bushel 60.4 pounds; protein content 12.3 percent. Leading varieties Pawnee, Wichita, Comanche, Kiowa, and Triumph.

1955 Crop: Acres seeded 10,799,000; acres harvested 8,559,000. December 1 condition 79 percent. The soil moisture situation was relatively unfavorable when the crop was seeded. All sections of the State received rain during October and wheat emerged to mostly good stands. Early planted wheat developed crown roots and tillered well but dry soil restricted top growth and prevented secondary root development in late seeded fields. Lack of effective moisture during the late fall and winter months left soils loose and wind erosion losses were severe in the southwest and nearby counties. During the last week of April and the first two weeks of May, hot,

dry winds cut wheat prospects sharply. Rains beginning in mid-May and continuing through early June halted deterioration of the crop. Uneven ripening and weed growth delayed harvest operations in some areas. May yield per acre forecast 14.5 bushels; final 15.0 bushels. Total wheat production 128,385,000 bushels. Weight per bushel good 61.1 pounds; protein 12.5 percent. Leading varieties Wichita, Pawnee, Comanche, Kiowa, and Triumph.

1956 Crop: Seeded acres 10,907,000; harvested acres 9,244,000. December 1 condition 78 percent. Late rains provided moisture for seeding and resulted in very good stands. Lack of recurring moisture limited top growth and root development, leaving many acres vulnerable to spring winds. Wind erosion losses were not generally as heavy as they were the two preceding years. Early February snows improved moisture and early May rains considerably brightened prospects. Strong searing winds in May caused considerable damage and dry soil reduced the crop in western and north central counties. Rains in late May and early June resulted in some recovery. The crop was harvested about two weeks ahead of usual under nearly ideal conditions. May 1 yield per acre forecast 16.0 bushels; final 15.5 bushels. Total wheat production 143,282,000 bushels. Weight per bushel a good 61.2 pounds; protein content a record high 14.1 percent. Leading varieties Wichita, Pawnee, Kiowa, Comanche, and Ponca.

1957 Crop: Seeded acres 7,199,000; harvested acres 5,269,000; smallest since 1917. December 1 condition 59 percent. The seeded acreage was reduced sharply by drought at seeding time and assignment of 4.25 million allotted acres to the Soil Bank Reserve. Substantial mid-October rains in eastern Kansas permitted planting in that area. Abandonment was heavy because of dry weather and wind erosion in western Kansas and some losses from flooding and lodging in eastern and central sections of the State. The wheat matured two to three weeks later than usual and wet fields delayed harvest into late July. May 1 yield per acre forecast 16.5 bushels; final 19.0 bushels. Total wheat production 100,111,000 bushels, smallest since 1935. Weight per bushel a low 57.4 pounds; protein content 12.0 percent. Leading varieties Pawnee, Wichita, Ponca, Triumph, Kiowa, and Comanche.

1958 Crop: Seeded acres 10,727,000; harvested acres 10,433,000. December condition 96 percent. The crop got off to a good start in the fall, came through the winter in excellent condition, made vigorous spring growth, and filled exceptionally well. The wheat matured at about normal time but harvest was delayed during June by intermittent rains. This was followed by warm, drying weather and about 60 percent of the crop was harvested during the first two weeks of July. An unusually large proportion of seedings on summer fallowed land, abundant moisture, thick stands, and cool, damp filling weather all contributed to an excellent yield per acre, uniformly high across the State. May 1 yield per acre forecast 20.5 bushels; final 28.5 bushels, 7.5 bushels above the previous record set in 1952. Total wheat production 297,340,000 bushels, second largest crop to date. Weight per bushel 60.6 pounds; protein content 11.8 percent. Leading varieties Wichita, Kiowa, Pawnee, Triumph, Ponca, and Comanche.

1959 Crop: Seeded acres 10,727,000; harvested acres 10,329,000. December 1 condition 89 percent. Wheat was planted at about the usual time the previous fall and germinated well except for some dry areas in a number of western and southeastern counties. With the help of late November rains, the crop came through the winter in good condition with only minor losses from freezing or soil blowing. Mid-April soil moisture supplies in wheat fields were second only to the record moisture available in the spring of 1958. Wheat developed well in eastern and far western counties but yields in a west central area about 5 counties wide extending from Oklahoma to Nebraska were severely reduced by wheat streak mosaic disease. The crop matured a little ahead of normal and, with unusually good harvest weather, harvest was virtually complete by July 15. May 1 yield per acre forecast 22.0 bushels; final 20.5 bushels. Total wheat production was 211,744,000 bushels. Weight per bushel was 59.6 pounds; protein content 12.5 percent. Leading varieties Wichita, Triumph, Kiowa, Ponca, and Pawnee.

1960 Crop: Seeded acres 10,727,000; harvested acres 10,329,000. December 1 condition 78 percent. The crop had a variable start in the fall. In the western one-third of the State, wheat was seeded at about the optimum time. However, in central and eastern sections, planting was delayed by wet fields. Stands in these areas were thinned by an early November freeze which caused substantial winter kill. Cool May weather was ideal for growth. Timely, early June rains and near optimum filling weather pushed yields far beyond earlier expectations. Yields in the western one-third of Kansas were phenomenally high, with over half of the counties in this area having average yields of 35 bushels or higher. The crop matured later than usual and harvest started late but once underway, moved ahead to a relatively rapid completion. May 1 yield per acre forecast 21.0 bushels; final 28.5 bushels. Total wheat production was 294,376,000 bushels. Weight per bushel of 61.9 pounds was highest to date, but protein content of 11.5 percent was quite low. Leading varieties Bison, Triumph, Wichita, Kiowa, Pawnee, and Ponca.

1961 Crop: Seeded acres 10,727,000; harvested acres 10,329,000. December 1 condition 94 percent. The crop had a good start the previous fall. Planting time was a week to ten days earlier than average and timely moisture and warm weather aided germination. Fall top growth provided excellent grazing and good cover. An early December freeze slowed growth but did not cause much damage. Snow cover during periods of extremely low temperatures provided protection against freeze damage in most areas. Early spring weather was ideal for rapid growth and development, and cool, damp wheat in May and June aided filling. Stem rust reduced yields for some northern and northwestern areas. The wheat harvest started about the usual time, progressed rapidly and was virtually complete by mid-July. May 1 yield per acre forecast 25.0 bushels; final 26.5 bushels. Total wheat production 273,718,000 bushels. Weight per bushel an excellent 61.6 pounds, was exceeded only by the 61.9 pounds in 1960; protein content a record low 10.7 percent. Leading varieties Bison, Triumph, Wichita, Kiowa, and Pawnee.

1962 Crop: Seeded acres 9,762,000; harvested acres 8,986,000. December 1 condition 94 percent. Seeded in good time in the fall, the crop wintered well with minimum losses from freezing and wind erosion. Early spring weather conditions were favorable but dry, hot weather in May speeded maturity of the crop and reduced yields in southern areas. Cool, rainy weather late in May and early June was ideal for filling of wheat heads in the later maturing central and northern areas and contributed to good yields there. Harvesting started unusually early and was completed somewhat ahead of the usual time. May 1 yield per acre forecast 25.0 bushels; final 23.5 bushels. Total wheat production 211,171,000 bushels. Weight per bushel above average 61.1 pounds; protein content below average 11.7 percent. Leading varieties Triumph, Bison, Wichita, Kiowa, and Rodco.

1963 Crop: Seeded acres 10,641,000; harvested acres 8,627,000. December 1 condition 90 percent. Wheat was seeded early in most of the State and particularly in central and western areas. Stands were good but early heavy growth reduced available soil moisture. Hessian fly infestations were also noted in several areas of the State. In eastern sections seeding was delayed somewhat by wet soil conditions. Severe winter temperatures, coupled with lack of snow cover and abrupt temperature changes, contributed to the rather heavy wheat acreage abandonment. Early spring weather was favorable, although many western and central counties suffered from lack of soil moisture. Army worms caused considerable damage in southwest Kansas and May freezes caused limited damage in northern and eastern areas. Late May and early June weather was ideal for filling. Harvest was the earliest of recent years with harvest under way in southern border counties by late May and virtually finished for the State by early July. May 1 yield per acre forecast 21.0 bushels; final 21.5 bushels. Total wheat production was 185,480,000 bushels. Weight per bushel was an excellent 61.9 pounds, protein content 12.1 percent. Leading varieties Triumph, Bison, Wichita, Kaw, and Rodco.

1964 Crop: Acres seeded 10,535,000; acres harvested 9,490,000. December 1 condition 90 percent. Seeding the preceding fall was completed early in most western and central areas and the crop got a fairly good start as a result of late summer rains. In eastern areas planting was delayed by drought, but November rains gave the crop a necessary lift. The crop came through the winter fairly well but some losses occurred in extreme western Kansas from lack of moisture and wind erosion. Continued dry weather through the spring caused some additional losses in southwestern Kansas. Timely rains in late May and early June provided a late growth boost and excellent filling weather. The drier weather which followed permitted harvest to move along rapidly. May yield per acre forecast 24.0 bushels; final 22.0 bushels. Total production 208,780,000 bushels. Weight per bushel a good 61.2 pounds; protein content 12.2 percent. Leading varieties Triumph, Bison, Wichita, Kaw, and Ottawa.

1965 Crop: Acres seeded 11,272,000; acres harvested 10,059,000. December 1 condition 87 percent. Wheat seeding started slowly the previous fall because of lack of moisture but mid-September rains provided favorable conditions and seeding proceeded rapidly. Dry weather later in the fall retarded development particularly in far western and eastern sections. November rains benefitted the crop over the entire State. Cool, dry early spring weather slowed growth but later rains and warm temperatures supported excellent development. Late May and early June weather was excellent for filling, but an outbreak of stem rust reduced yields and test weight of the crop in some northern counties. Harvest operations started a little late about mid-June, were slowed some near the end of the month, but had caught up to usual completion by mid-July. May 1 yield per acre forecast 22.0 bushels; final 23.5 bushels. Total production 236,386,000 bushels. Test weight 61.1 pounds; protein content 11.3 percent. Leading varieties Triumph, Bison, Kaw, Wichita, and Ottawa.

1966 Crop: Acres seeded 11,047,000; acres harvested 10,260,000. December 1 condition 90 percent. Wheat seeding the previous fall started in early September, then progressed slightly behind usual but was completed by mid-October. In western Kansas the wheat got off to a good start, but in eastern counties development was slow

because of insufficient moisture. Additional moisture helped carry the crop through the winter in good to excellent condition in most areas. The wheat crop was severely damaged by late April and May freezes, with damage most severe in central, west central, and southwest areas. Cool, damp weather during early June benefitted filling wheat heads, particularly in the northern half of the State. Harvest, favored by hot, dry weather, got off to a good start and was completed earlier than usual. May 1 yield per acre forecast 24.0 bushels; final 19.5 bushels. Total production was 200,070,000 bushels. Weight per bushel of 62.1 pounds was the highest to date; protein content an above average 12.2 percent. Leading varieties were Triumph, Kaw, Bison, Wichita, and Ottawa.

1967 Crop: Acres seeded 13,146,000; acres harvested 11,081,000. December 1 condition 74 percent. Seeding the previous fall was underway in early September but dry soils limited early operations. Mid-September rains provided moisture in western Kansas and seeding there proceeded rapidly. In central and eastern sections of the State seedings followed about the usual pattern being virtually complete by mid-October. Despite some rain in late November and early December, the crop continued to suffer from dry conditions during most of the winter. Late April and early May freezes caused considerable damage to the crop--most severe in southern and western portions of the State. Pale western and army cut worms also thinned stands and contributed to abandonment. Excellent filling weather during late May and early June helped to overcome some of the early problems. Harvest was latest of any recent year, being delayed by rainy weather in late June and July, with some wheat in eastern areas not harvested until August. May 1 yield per acre forecast 18.5 bushels; final 20.0 bushels. Total production 221,620,000 bushels. Test weight per bushel a below average 60.2 pounds, but protein content of 12.9 percent best since 1956. Leading varieties were Triumph, Scout, Kaw, Bison, and Wichita.

1968 Crop: Acres seeded 11,963,000; acres harvested 9,751,000. December 1 condition 81 percent. Wheat seeding the previous fall lagged in early September but following rains gained momentum and was virtually completed by the end of October. In extreme western Kansas dry weather caused some spotted stands, and continued lack of moisture into early spring, coupled with greenbug and cut worm damage, caused sharp acreage losses and reduced yields in this area. Elsewhere in the State ample late spring moisture and a favorable filling period produced especially good yields. Harvest was rather slow starting but gained momentum under favorable weather and was completed sooner than usual. May 1 yield per acre forecast 20.0 bushels; final 26.0 bushels. Total wheat production was 253,526,000 bushels. Weight per bushel was an excellent 61.9 pounds; protein content a slightly below average 11.7 percent.

1969 Crop: Acres seeded 10,767,000; acres harvested 9,849,000. December 1 condition 87 percent. Wheat seeding the previous fall got off to a slow start but moved ahead rapidly and was virtually completed by the end of October. Stands were generally good except in a few extreme western counties where lack of moisture slowed development and in southeast areas where excessive moisture created problems. The crop came through the winter well. Spring moisture was generally abundant and favorable weather during the filling period produced exceptionally good wheat yields. Harvest was slowed considerable in many areas by wet fields but was virtually completed by the third week of July. May 1 yield per acre forecast 28.0 bushels; final yield 31.0 bushels, a record to date. Total production 305,319,000 bushels, second largest to date. Weight per bushel was near average at 61.2 pounds; protein content a much below average 10.9 percent. Leading varieties were Scout, Triumph, Bison, Kaw, and Wichita.

1970 Crop: Acres seeded 9,690,000; acres harvested 9,061,000. December 1 condition 88 percent. Wheat seeding the previous fall started slowly, but with ample moisture moved along rapidly to virtual completion in late October. Some replanting was necessary due to army worm damage in central areas and some local heavy rains. Stands were generally good and the crop moved into the winter in good condition. Wheat came through the dry, mild weather exceptionally well and responded quickly to good spring moisture. Hot, dry winds early in May put considerable stress on the crop in southern counties. A cool, damp filling period in late May and early June, however, helped to produce one of the most uniformly high-yielding crops of record. Wet weather caused some early harvesting delays, but harvest progressed rapidly during late June and early July to near completion at mid-July. May 1 yield per acre forecast 31.0 bushels; final 33.0 bushels, a record to date. Total wheat production 299,013,000 bushels. Weight per bushel was an excellent 61.9 pounds; protein content a moderately below average 11.5 percent. Leading varieties were Scout, Triumph, Parker, Bison, and Wichita.

1971 Crop: Acres seeded 9,593,000; acres harvested 9,061,000. December 1 condition 85 percent. Wheat plantings the previous fall lagged a little behind usual but in the western two-thirds of the State were completed during September and October, and in eastern districts a little later. Stands were generally good with only a limited amount of replanting necessary. Soil moisture was adequate for most seedlings to root down, but top growth did not provide as much pasture as in some years. The crop came through the winter quite well with relatively little damage from blowing or winter kill. Extensive rains in May aided crop development and cool, damp

weather late in the month and during June helped the grain fill well. Harvest started about the normal time along the southern border and after some delay by intermittent rains, moved ahead to a rather rapid completion. May 1 yield per acre forecast 30.0 bushels; final yield a record high 34.5 bushels. Total wheat production a new high record 312,605,000 bushels, surpassing the previous record set 19 years earlier. Weight per bushel was a record high 62.3 pounds; protein content an above average 12.0 percent.

1972 Crop: Acres seeded 10,300,000; acres harvested 9,400,000. December 1 condition 94 percent. Wheat planting the previous fall lagged in early September but proceeded rapidly after mid-month. Progress was normal by early October and seeding was completed by the end of the month. Stands were generally good with only limited replanting necessary. The plants rooted down well and top growth provided considerable pasture in most areas. The wheat wintered well with relatively little damage from freezing or blowing. Lack of early spring moisture in some western and southern counties, coupled with April freezes in some southern areas, caused some damage in local areas. However, cool, damp filling weather in May and June was exceptionally favorable for yields over most of the State. Harvest started about normal time in early June, was slowed by rains in mid to late June, but progressed rapidly in early July and was virtually completed by mid-month. May 1 yield per acre forecast 32.0 bushels; final yield 33.5 bushels. Total wheat production 314,900,000 bushels, the largest Kansas crop produced to date. Weight per bushel was a slightly above average 61.6 pounds; protein content a slightly below average 11.5 percent. Leading varieties were Scout, Triumph, Satanta, Parker, and Gage.

1973 Crop: Acres seeded 10,800,000; acres harvested 10,400,000; abandonment 3.7 percent. December condition 93 percent, among the higher years. Precipitation in late October and into November delayed seedings but resulted in good stands. Fall top growth was adequate for field protection. Plentiful moisture and cool temperatures in spring months provided ideal conditions. Harvest started June 10 along the southern border, accelerated rapidly, and was completed by mid-July. May 1 yield forecast was 35.0 bushels per acre; final yield was a record 37.0 bushels per acre, providing the basis of a record production of 384,800,000 bushels. Protein content 11.0 percent, was lower than average while average test weight of 62.2 was above the 10-year average. Leading varieties were Scout 46.5 percent, Triumph 9.4 percent, Eagle 8.9 percent, and Parker 8.5 percent.

1974 Crop: Acres seeded 12,000,000; acres harvested 11,600,000; abandonment 3.3 percent. December condition 81 percent, lowest since 1968. In the western third condition 87 to 89 percent; eastern third 73 to 80 percent. Bulk of acreage was seeded later than normal due to fall rains. Top growth during fall less than normal but moisture supply was more than adequate. Spring rainfall was short, especially in late April and May, and in addition wheat streak mosaic sharply reduced yields in central areas of the State. May 1 forecast yield 36.0 bushels per acre; final yield 27.5 bushels per acre. Total wheat production was 319,000,000 bushels. Protein content at 11.3 percent was above the 11.0 in 1973 but below the 10-year average of 11.8 percent. Test weight of 61.3 pounds per bushel, about average. Leading varieties were Scout 36.5 percent, Eagle 17.8 percent, Centurk 9.5 percent, Triumph 8.3 percent, and Parker 7.6 percent.

1975 Crop: Acres seeded 12,800,000; acres harvested 12,100,000; abandonment 5.5 percent. Season started with good expectations. Seeding completed in good time. December condition was 86 percent. Heavy early fall and late winter rains caused some field flooding. Widespread soil-borne mosaic cut yield in central, south central, and southeast Kansas. May forecast was 33.0 bushels; final 29.0. Heavy rains delayed harvest and caused considerable lodging and deterioration of quality. Total wheat production was 350,900,000 bushels. Crop had a very high percentage of yellow berry and protein content was 11.2, well below the 10-year average of 11.7. Test weight of 61.3, the same as a year ago. Leading varieties were Scout 33.2 percent, Eagle 22.6 percent, Centurk 9.8 percent, Triumph 8.2 percent, and Parker 6.4 percent.

1976 Crop: Seeded acres 12,900,000; harvested acres 11,300,000; abandonment was 12.4 percent. The season started off under poor conditions with a dry summer and fall causing delayed seeding. December 1 condition was 71 percent (lowest since December 1957) with the crop going into winter with short top growth and limited root development. Limited winter precipitation and high winds caused heavy losses in the southwestern quarter of the State. Winter kill was above average in many areas and a May 3 freeze did extensive damage in east central and southeast counties. Heavy rains came in late April and May which improved yields far beyond earlier expectations. The May 1 yield forecast was 28.0 bushels per acre; the December final was 30.0 bushels. Quality of the crop compared favorably with other recent years. Total wheat production was 339,000,000 bushels. Protein content was 11.7 percent, compared with the previous year's 11.4 percent. Test weight averaged 61.2 pounds per bushel, 0.2 pound below 1975 and 0.4 pound below average. Leading varieties were Scout 25.2 percent, Eagle 20.1 percent, Sage 10.1 percent, Centurk 9.8 percent, and Triumph 7.9 percent.

1977 Crop: Acres seeded, 13,200,000; acres harvested, 12,100,000; abandonment 8.3 percent. Seeding in the fall was completed on schedule. Although moisture supplies were short, some light general rains were received in late September enabling the wheat to get off to a fairly good start. Condition of the crop was rated 75 percent

on December 1. The crop went into winter short on top growth and root development but came out of dormancy in the spring with very little freeze damage or wind erosion problems. April brought much needed rains across the State, accompanied by above normal temperatures. Rainfall in May was well above the long-time average for the State as a whole. All sections of the State received good rains at one time or another during the month. May yield forecast was 32.0 bushels; final 28.5 bushels. Heavy rains came in June and July delaying harvest in many areas of the State, primarily the three eastern districts where some wheat went down, resulting in yield reductions. Total wheat production was 344,850,000 bushels. The protein content of the crop reached 12.5 percent with test weight at 60.3 pounds per bushel and moisture content averaging 12.3 percent. Leading varieties were Scout 21.7 percent, Eagle 19.9 percent, Sage 14.7 percent, Centurk 11.9 percent, and Triumph 6.3 percent.

1978 Crop: Seeded acres 11,300,000; harvested acres 10,000,000; abandonment 11.5 percent. Seeding in the fall was completed on schedule. The wheat crop generally attained good growth in the fall, although a few fields were seeded late. Because of grasshopper damage, some field borders had to be reseeded. Condition of the crop was rated 89 percent on December 1. Very little winter kill occurred and little acreage was blown out. Continuing through April, the eastern half of the State received generally ample to heavy rainfall. The western half was under considerable stress by the end of the month. On April 30 and May 1 most of the western two-thirds of the State received more than one inch of rainfall, relieving drought stress particularly in the southwest. Kansas rainfall during May was 24 percent above the long-time average for the State. Temperatures were below normal much of April and frost and freezing temperatures occurred in much of the west and north on April 20 and 21. Many local areas received damage from hail and heavy rains at harvest time. May yield forecast was 31.0 bushels; final 30.0 bushels. Total wheat production was 300,000,000 bushels. Protein content of the crop averaged 12.0 percent. Test weight averaged 60.7 pounds per bushel and moisture content averaged 11.4 percent. Leading varieties were Eagle 23.0 percent, Scout 19.6 percent, Sage 14.0 percent, Centurk 10.0 percent, Triumph 5.8 percent, and Tam 101 4.1 percent.

1979 Crop: Acres seeded 12,100,000; harvested acres 10,800,000; abandonment 10.7 percent. Fall seeding was accomplished during periods of dry conditions in many areas of the State resulting in poor germination during the fall, particularly in the west central district. Many poor wheat stands with larger than normal abandonment resulted in those areas. Condition of the crop was rated 77 percent on December 1. Wheat was stressed through the winter with extremely cold temperatures, although much of the wheat had adequate snow cover. Wheat coming out of the winter generally lacked sufficient root development but early precipitation limited wind damage from blowing. Precipitation was generally ample across the State during the spring and extremely good growing conditions generated large heads and excellent kernel fill. Some frost occurred around mid-May leaving visible signs of damage in areas of west central Kansas. Varying amounts of damage occurred, depending on stage of development. For the State, development on June 1 was running nearly a week behind the average. The May 1 yield forecast was 30.0 bushels; final 38.0 bushels, a new record to date. As harvest time arrived, intermittent showers caused delays. Total wheat production was a record 410,400,000 bushels. Quality tests showed protein content to be 12.1 percent. Test weight averaged 60.8 pounds per bushel and moisture content averaged 11.9 percent. Leading varieties were Eagle 21.1 percent, Scout 15.6 percent, Sage 12.7 percent, Centurk 8.7 percent, Triumph 6.5 percent, and Tam 101 4.9 percent.

1980 Crop: Acres seeded 13,000,000; harvested acres 12,000,000; abandonment 7.7 percent. Wheat that was planted as early as October attained good stands as they had the benefit of late fall rains. Late planted wheat was more spotty and thin, particularly in the central and south central districts where there was poor germination and some blow-outs. Condition of the crop was rated 72 percent on December 1. April and May precipitation was below normal in all but the three western districts. June was a very dry month for most of Kansas with only the west central district receiving normal rainfall. The crop was largely mature before the summer drought and intense heat occurred. The May 1 yield forecast was 32.0 bushels per acre; final was 35.0 bushels. Total wheat production was 420,000,000 bushels, a new record. Protein content was 12.3 percent, and test weight averaged 61.2 pounds per bushel. Leading varieties were Newton 17.5 percent (jumping from 2.8 percent the previous year), Eagle 15.7 percent, Scout 12.5 percent, Larned 11.1 percent, Sage 8.8 percent, Centurk 5.9 percent, Triumph 5.1 percent, and Tam 101 4.8 percent.

1981 Crop: Acres seeded 13,900,000; harvested acres 12,100,000; abandonment 12.9 percent. Wheat was planted the previous fall under generally dry conditions which continued into the spring. Condition of the crop was rated 78 percent on December 1. Hot and dry conditions in April were detrimental, particularly in the south central and southwest areas. Temperatures were unusually mild and allowed the crop to develop two to three weeks ahead of schedule. A freeze in the northern and western areas of the State on May 9, 10, and 11 caught the crop in the critical flowering stage and caused heavy losses. General rains occurred in May, and June rainfall was generous in eastern Kansas but very limited in western areas. Harvest got off to an early start but rains slowed progress. Weeds along with muddy fields caused problems. Much patch harvesting was done and some spots in

fields were too poor or weedy to justify harvesting. The May 1 yield forecast was 32.0 bushels per acre; final 25.0 bushels, as the full effects of the freeze and other weather factors became known. Total wheat production was 302,500,000 bushels. Protein content, at 13.2 percent, was the highest in 14 years. Test weight averaged 60.5 pounds per bushel and moisture content affected by wet weather at harvest was 12.2 percent. Wheat graded 51 percent U.S. No. one and 37 percent No. two. Leading varieties were Newton 34.2 percent, Larned 12.0 percent, Eagle 11.3 percent, Scout/Scout 66 9.2 percent, and Vona 6.7 percent.

1982 Crop: Acres seeded 14,100,000; harvested acres 13,100,000; abandonment 7.1 percent. Condition of the crop was rated 90 percent on December 1. Wheat went into the winter with good stands and growth. Some winter kill occurred in the northeast and east central districts with relatively small acreages of wheat involved. Minimum precipitation occurred during April but generous rains during May were very beneficial to the crop as it was going through the critical boot, heading, and milk stages. Temperatures were below normal during the entire month of June and rain occurred every week during the month. Stands were heavy but heads developed well because of the cool temperatures. The prolonged wet period brought on the diseases take-all and head blight (scab). The latter affected test weights on some of the acreage, particularly in eastern Kansas. The mycotoxin scare, however, was perhaps overstated by the trade and press. Harvest progress was slower than average because of wet weather, but was finally wound up around the first of August. The May 1 yield forecast was 35.0 bushels; final 35.0 bushels. Total wheat production was a record 458,500,000 bushels. Protein content averaged 11.4 percent and test weight 60.0 pounds per bushel. Moisture content, affected by wet weather at harvest time, was 12.1 percent. Wheat graded 52 percent U.S. No. one and 34 percent No. two. Leading varieties were Newton 41.1 percent, Larned 11.2 percent, Eagle 10.2 percent, Scout/Scout 66 6.1 percent, and Vona 5.5 percent.

1983 Crop: Acres seeded 13,200,000; harvested acres 10,800,000; abandonment 2,400,000 acres or 18.2 percent of planted acres. For the week ending November 28, the condition of the crop was rated fair to poor in the southwest and south central districts, and good to excellent elsewhere. Abandonment was higher than normal due to farmer participation in the Acreage Reduction and Payment in Kind Programs. Wheat went into the winter with soil moisture on the short side, particularly in the southwest and south central districts. Top growth was generally less than desirable. Winter and spring precipitation was above normal and spring temperatures were cool. This contributed to late crop development, increased tillering, and heavy lush stands. The delayed development minimized the effects of a mid-May freeze. Showers and cool temperatures continued until the third week of June. Wheat development was about two weeks behind normal. Rank growth and heavy stands resulted in lodged wheat in many fields. The long, wet period allowed development of some diseases such as septoria leaf blotch and take-all, particularly in eastern Kansas, but there was generally less trouble with some other diseases. Harvest was hampered by rainy weather at the start, but dry, hot weather prevailed from July 4th on, enabling farmers to harvest under favorable conditions and ahead of schedule. The May 1 yield forecast was 40.0 bushels per acre; final was 41.5 bushels, a record to date. Total wheat production was 448,200,000 bushels. Protein content averaged 11.3 percent and test weight averaged 61.6 pounds per bushel. Moisture content, at 11.1 percent, was down from the previous two years as a result of favorable harvesting weather. Wheat graded 63 percent U.S. No. one and 31 percent No. two. Leading varieties were Newton 38.5 percent, Larned 10.4 percent, Tam 105 10.3 percent, Eagle 6.0 percent, and Vona 5.9 percent.

1984 Crop: Acres seeded 13,300,000; harvested acres 11,200,000; abandonment 2,100,000 acres or 15.8 percent of planted acres. This was less abandonment than the previous year and corresponds to the decrease in the percentage of P.I.K. participants in 1984. For the week ending November 27, the condition of the crop was rated good at the State level; fair in the western districts, but excellent elsewhere. The northwest and parts of the north central and west central districts had poor stands going into the winter. Many farmers dusted their wheat in and late fall rains did not occur sufficiently on time for proper emergence, resulting in some bare spots on higher ground and tops of terraces. Some fields which did not emerge till spring rains came had only limited time for tillering. In other areas of the State, growing conditions were mostly good. Spring moisture conditions were quite favorable. May temperatures were cooler than normal and warmed to normal and above in June with wheat developing somewhat slower than normal. Late development delayed harvest but once underway, the weather cooperated nicely and harvest was completed on schedule. Disease infestations were generally light to moderate, but weeds such as cheat, downy brome, and mustard were heavy in some fields. The May 1 yield forecast was 35.0 bushels per acre; final was 38.5 bushels. Total wheat production was 431,200,000 bushels. Protein content average 11.6 percent and test weight 60.4 pounds per bushel. Moisture content, at 11.6 percent, reflected mostly favorable harvest weather. Wheat graded 45 percent U.S. No. one and 44 percent No. two. Leading varieties were Newton 30.9 percent, Tam 105 13.1 percent, Larned 10.2 percent, Hawk 9.0 percent, and Vona 5.7 percent.

1985 Crop: Acres seeded 12,400,000; harvested acres 11,400,000; abandonment 1,000,000 acres or 8.1 percent of planted acres. Dry conditions prevailed prior to wheat seeding the previous fall. A substantial acreage of wheat was dusted in and some planting was delayed when rains occurred in October. Some reseeding was also done due to cheat and grass problems. For the week ending December 2, the condition of the crop was rated 87 percent good to excellent. The crop over-wintered with minimal losses, and above normal temperatures during April and May brought on early spring growth and faster than normal development. Precipitation during April was above normal in all areas except the western three districts. May precipitation was above normal in all but the southwest, central, and south central districts. June precipitation was about normal, but varied widely with the west and north central areas less than normal. High temperatures in late May were a contributing factor to lowered prospects for wheat. Leaf rust, particularly in southern counties, and weedy conditions also reduced yields from earlier potential. June temperatures averaged slightly below normal and warm, dry weather in early July was favorable for wheat harvest, with harvest completed in near record time. The May 1 yield forecast was 40.0 bushels per acre; final was 38.0 bushels. Total wheat production was 433,200,000 bushels. Protein content averaged 11.6 percent, test weight 60.0 pounds per bushel, and moisture content was 11.8 percent. Wheat graded 38 percent U.S. No. one and 42 percent No. two. Leading varieties were Newton 25.7 percent, Tam 105, 13.4 percent, Hawk 12.3 percent, Larned 8.6 percent, and Arkan 6.3 percent.

1986 Crop: Acres seeded 11,500,000; harvested acres 10,200,000; abandonment 1,300,000 acres or 11.3 percent of planted acres. Wheat seeding began on schedule in the fall, but bogged down during October due to wet weather. Heavy rains and flooding hampered seeding efforts and washed out many fields in southern and eastern areas. Reseeding was necessary in many counties. Emergence was very good for early planted wheat during October due to abundant moisture, but slowed later on because of cold November temperatures. For the week ending December 1, the condition of the crop was rated 89 percent good to excellent. This slow emergence reduced growth going into winter. A mild winter with little snow followed. The light freeze in mid-April did not cause extensive damage. Tillering took place under dry conditions in the spring, resulting in lower plant counts. Warm weather in March and April influenced fast development of the crop. Approximately 95 percent of the acreage had headed out by May 20th, while normally only about half of the acreage is headed by that date. Harvest began about the 10th of June and was nearly complete by the 4th of July, the earliest wind-up in recent years. Wheat diseases such as leaf rust, wheat streak mosaic and stem rust were prevalent, resulting in yield losses. There was enough initial infection over much of the State in late April to begin producing spores when the warm rainy period began in early May. Stem rust was particularly devastating, causing yield losses greater than any year since the early 1960's. The May 1 yield forecast was 33 bushels per acre; final was also 33.0 bushels. Total wheat production was 336,600,000 bushels. Protein content averaged 11.9 percent, test weight 59.8 pounds per bushel, and moisture 11.9 percent. Wheat graded 44 percent U.S. No. one and 39 percent No. two. Leading varieties were Newton 21.1 percent, Hawk 13.5 percent, Arkan 10.1 percent, Mustang 8.2 percent, Larned 7.9 percent, and Tam 105 6.8 percent.

1987 Crop: Acres seeded 10,700,000; harvested acres 9,900,000; abandonment 800,000 acres or 7.5 percent of planted acres. Planting conditions were generally favorable in the western two-thirds of the State and seeding was complete by mid-November. Some areas had to be replanted after heavy rains washed out the young crop in late September. Seeding was delayed in the eastern districts by wet, muddy fields and the inability to finish late crop harvest. Planted acreage was down significantly from a year ago in these districts. Emergence was rapid and progressed ahead of normal. For the week ending November 30, the condition of the crop was rated 82 percent good to excellent. Adequate moisture was received during the winter and the crop came out of dormancy in good shape. A late March freeze damaged the crop, especially in south central Kansas. Following the freeze, abundant rainfall and mild spring temperatures provided excellent growing conditions for wheat. Harvest progressed ahead of normal although slowed by rain at the beginning. Harvest was completed ahead of schedule in all but west central and northwest Kansas, which were plagued by rain and high humidity. Although not as devastating as in 1986, diseases did take their toll on yield. Most significant were leaf rust, barley yellow dwarf and tan spot, accounting for about an 11 percent loss. The May 1 yield forecast was 43.0 bushels per acre; final was 37.0 bushels. Total production was 366,300,000 bushels. Protein content averaged 11.5 percent protein, test weight 59.7 pounds per bushel, and moisture 12.0 percent. Wheat graded 39 percent U.S. No. one and 47 percent No. two. No variety survey was done due to lack of funds.

1988 Crop: Acres seeded 10,200,000; harvested acres 9,500,000; abandonment 700,000 acres or 6.9 percent of the planted acres. Wheat seeding got off to a good start in early September and was ahead of normal throughout the fall. By early October, however, moisture was needed in central and western counties to assure emergence and stand development. For the week ending November 29, the condition of the crop was rated 57 percent good to excellent. Conditions remained dry in these areas until a mid-December snow storm helped relieve some moisture stress. Leaf rust was present over the entire State and wheat streak mosaic developed in epidemic

proportions in most areas. Greenbugs appeared in mid-November and endangered the younger wheat, especially if already affected by mosaic. The crop came through the winter in only fair shape with 55 percent rated good to excellent, compared to 88 percent the year before. This reflected the shortage of topsoil moisture in central and western districts. Spring moisture was generally adequate for growth and development. June was hot and dry, causing rapid maturing. Harvest was one of the fastest on record with over 90 percent cut by July 1. The disease causing the greatest yield losses in 1988 was wheat streak mosaic with an estimated 13.0 percent loss, compared with a 1.3 percent average. This disease, along with others such as leaf rust and barley yellow dwarf, caused an estimated total loss of 22.4 percent, the highest since loss estimates began in 1976. The Russian wheat aphid appeared once again and spread across the western half of the State causing additional yield losses. Despite the problems experienced, test weights and protein averaged higher than normal and were a pleasant surprise to many producers. The May 1 yield forecast was 38 bushels per acre; final was 34 bushels. Total wheat production was 323,000,000 bushels. Protein content averaged 12.5, test weight 60.3 pounds per bushel, and moisture 10.2 percent. The wheat graded 55 percent No. one and 40 percent NO. 2. Leading varieties were Arkan 14.9 percent, Newton 13.4 percent, Larned 10.9 percent, AgriPro Hawk 7.6 percent, Pioneer 2157 7.2 percent, and AgriPro Victory 6.2 percent.

1989 Crop: Acres seeded 12,400,000; harvested acres 8,900,000; abandonment 3,500,000 acres or 28.2 percent of the planted acres, the largest percent abandoned since 1951. Moderate to light rains in September allowed farmers to start wheat seeding with some surface moisture; however, most of the State had struggled through nearly a year of less than normal rainfall. Germination was poor and early growth was slow. Temperatures were generally mild but precipitation continued on the short side through the fall and early winter. Some late seeded fields did not germinate and establish stands. For the week ending November 27, the condition of the crop was rated only 35 percent good to excellent, the poorest rating in many years. Unusually mild weather in January caused some stands in the central and southern areas of the State to break dormancy and start putting on top growth. Sub-zero temperatures in mid-February killed much of the top growth across the State, and in many areas entire stands were lost. Moisture continued on the short side in March, and a dust storm in mid-March damaged many stands in central and western Kansas. April was the driest on record for many counties in the State, and dealt another blow to an already drought-stressed crop. The rains finally came in May, but too late to be of much benefit to most non-irrigated wheat and caused severe weed problems in nearly every area of the State. Additional heavy rains in June caused more weed problems and delayed the start of harvest, which finally got underway in late June. With a far less than normal crop, there were more than enough custom harvest operators to complete harvest in short order. Test weights were the lowest since 1957 but the drought conditions produced the highest protein in over 30 years. The May 1 yield forecast was 21 bushels per acre; final was 24 bushels. Total wheat production was 213,600,000 bushels, the lowest production since 1963. Protein content averaged 13.4, the highest in 30 years, test weight 59.5 pounds per bushel, and moisture 12.1 percent. The wheat graded only 34 percent No. one and 45 percent No. two. Leading varieties were Arkan 11.9 percent, Newton 11.6 percent, Larned 9.7 percent, Pioneer 2157 9.5 percent, Tam 107 9.5 percent, and AgriPro Victory 8.2 percent.

1990 Crop: Acres seeded 12,400,000; harvested acres 11,800,000; abandonment 600,000 acres or 4.8 percent of the planted acres, the lowest abandonment since 1974. Wheat seeding started in mid-September and lagged behind schedule through the end of the month because of wet fields. As fields dried out in late September and early October, seeding surged ahead of schedule and good early emergence was noted. Condition was generally good to excellent but early growth rates dropped off as unseasonable warm dry weather covered most of the State. Surface moisture dropped from 97 percent adequate to surplus in late September to only 11 percent in late October and was down to only 8 percent adequate to surplus by the end of November. For the week ending November 26, the condition of the crop was rated 40 percent good to excellent. Because of this, poor secondary root development was noted in many stands. Sub-zero temperatures covered much of the State through the first three weeks of December and with little or no snow cover in central and western Kansas, wheat stands were extremely susceptible to winter kill and wind damage. Weather conditions took a sharp turn for the better after the first of the year and were near ideal through late winter and early spring. Relatively cool wet weather allowed the crop to mature slowly and completely. Harvest got started in mid-June in the southern areas, moved north rapidly, and reached completion by mid-July. The May 1 yield forecast was 39 bushels per acre; final was 40 bushels. Total wheat production was 472,000,000 bushels, more than double the drought stricken 1989 crop and exceeded the previous record of 458,900,000 bushels in 1982. Protein content averaged 12.2, test weight 60.7 pounds per bushel, and moisture 10.5 percent. The wheat graded 69 percent No. one and 27 percent No. two. Leading varieties were Tam 107 14.7 percent, Larned 10.7 percent, AgriPro Thunderbird 9.3 percent, Newton 8.3 percent, AgriPro Victory 7.7 percent, and Pioneer 2157 7.2 percent.

1991 Crop: Acres seeded, 11,800,000; harvested acres 11,000,000; abandonment 800,000 acres or 6.8 percent of the planted acres. Wheat seeding started on schedule in September but because of hot, dry weather and short

surface moisture, progress was slow. Late September rains, however, provided good seeding moisture. Seeding progress and plant emergence through October were generally ahead of schedule. Additional rains in November allowed good secondary root growth and top growth to occur. For the week ending December 2, the condition of the crop was rated 90 percent good to excellent. Rainfall was about normal throughout most of the spring and temperatures were normal or above. Condition of the wheat crop was rated mostly fair to good all spring. Rains in late May and early June delayed the beginning of wheat harvest about a week but weather was ideal from mid-June on. Farmers made short work of harvest once combines moved into the fields. The May 1 yield forecast was 34 bushels per acre; final was 33 bushels. Total wheat production was 363,000,000 bushels. Protein content averaged 12.9, test weight 59.9 pounds per bushel, and moisture 11.2 percent. The wheat graded 45 percent No. one and 45 percent No. two. Leading varieties were Tam 107 15.4 percent, Larned 11.6 percent, AgriPro Thunderbird 9.0 percent, AgriPro Victory 8.2 percent, Newton 7.6 percent, and AgriPro Abilene 5.9 percent.

1992 Crop: Acres seeded 12,000,000; harvested acres 10,700,000; abandonment 1,300,000 acres or 10.8 percent of the planted acres. Most of the wheat crop was seeded under generally short moisture conditions. A cold front the last week of October brought subfreezing temperatures to most of the State, along with moderate to heavy rains. For the week ending December 1, the condition of the crop was rated only 24 percent good to excellent. Fields stayed too wet to seed until well after the first of January. There was a significant acreage of wheat that was not planted until after the first of December and some farmers were still planting as late as early February. Temperatures and rainfall were well above normal from January through March. Wheat stands came out of dormancy well ahead of normal and were susceptible to freeze damage from March through May. A cold front in late May brought unusually cold weather to most of the State and produced one of the latest freezes ever recorded. Wheat stands in the northwest and west central areas were especially hard hit. Cool wet weather prevailed throughout June and July, causing numerous harvest delays. The May 1 yield forecast was 33 bushels per acre; final was 34 bushels. Total wheat production was 363,800,000 bushels. Protein content averaged 12.4, test weight 59.4 pounds per bushel, and moisture 12.6 percent. The wheat graded 39 percent No. one and 41 percent No. two. Leading varieties were Tam 107 18.3 percent, Karl 11.5 percent, AgriPro Victory 10.2 percent, Larned 8.9 percent, AgriPro Thunderbird 7.5 percent, and Newton 5.8 percent.

1993 Crop: Acres seeded 12,100,000; harvested acres 11,100,000; abandonment 1,000,000 acres or 8.3 percent of the planted acres. Moisture conditions generally were favorable for seeding. Wheat seeding proceeded rapidly under mostly good weather conditions from mid-September to mid-October. Cool, wet weather from late October through the end of the year delayed planting in the eastern third of the state, and some farmers probably did not seed as many wheat acres as they intended. Widespread moisture in early October provided a boost to the emerging crop in all districts, except the southwest. Generally warm temperatures and scattered precipitation prevailed until a major snowstorm at Thanksgiving. Much of the state's wheat crop remained snow covered for a major part of the winter. Dodge City received over 60 inches of snow for the season to set a new record. For the week ending December 6, the condition of the wheat crop was rated 92 percent good to excellent. Temperatures averaged below normal for much of the first six months of 1993, while precipitation was well above normal. This resulted in wheat stands coming out of dormancy well behind normal. Development of the crop remained well behind normal through the growing season. Plentiful moisture resulted in increased pressure from foliar diseases such as rust, powdery mildew, tan spot and speckled leaf blotch, which were present in virtually all areas of the state. Test cutting took place in extreme southern areas by June 20, but harvest didn't get under way until the last week of June. Wheat harvest was able to make significant progress despite rain in most parts of the state. By July 4, 40 percent of the wheat crop was harvested, compared with the 80 percent average for that date. Heavy rains continued in many areas of the state from late June through July. North central, central, northeast, and east central districts received from 12 to 17 inches of rainfall in July. Substantial acreages were lost, yield prospects plummeted, and quality declined. Through August 1, there was still 10 percent of the crop left to be harvested, mostly in the northwest, west central, north central, central, northeast and east central districts. Completion of harvest was one of the latest on record. Total production was 388,500,000 bushels with a yield of 35 bushels. Protein content averaged 11.4, test weight 59.8 pounds per bushel, and moisture 12.4 percent. The wheat graded 47 percent No. 1 and 39 Percent No. 2. Leading varieties were: Karl 23.0 percent, Tam 107 19.8 percent, and 2163 9 percent.

1994 Crop: Planted acres 11,900,000; harvested acres 11,400,000; abandoned acres 500,000 or 4.2 percent of the planted acres. Wheat seeding proceeded rapidly under mostly good weather conditions. On November 28, the crop was rated 91 percent good to excellent. Mild winter temperatures limited winter kill. Soil moisture was short over winter and into early April but became mostly adequate through the end of May. Freezing temperatures in April caused some damage along the State's southern border. Condition as of May 1 was 50 percent good, 48 percent fair, and 2 percent poor and held through the remainder of the season. Hot, dry

weather during June quickly ripened the crop and allowed for a rapid harvest. By June 26, most of the wheat was ripe and harvest was completed by July 3, well ahead of normal. Total production was 433,200,000 bushels with a yield of 38 bushels. Protein content averaged 12.1 percent; test weight, 60.3 pounds per bushels; and moisture, 11.4 percent. The wheat graded 57 percent No. 1 and 36 percent No. 2. Leading varieties were: Karl 23.6 percent, Tam 107 19.0 percent, and 2163 13.8 percent.

1995 Crop: Planted acres 11,700,000; harvested acres 11,000,000; abandoned acres 700,000 or 6 percent of the planted acres. Seeding started quickly and by mid-September was about 25 percent seeded. Dry conditions through mid-October delayed seeding in the western two-thirds of the State. However, October rains delayed, and in some cases prevented, some seeding. Mild weather and favorable moisture supplies encouraged early crop development and by April 9, nearly two thirds of the acreage was jointing. However, freezing temperatures in mid-April caused damage in western areas and condition fell from 85 percent good to excellent on April 9 to 54 percent on May 7. Freeze damage, wet weather, and disease combined to lower the quantity and quality of the crop, except in the northwest where yields and production were excellent. Harvest began later than normal and rains slowed progress until the second week of July when hot, dry weather arrived. Harvest was completed by the end of July. Total production was 286,000,000 bushels with a yield of 26 bushels. Protein content averaged 12.3 percent; test weight, 58.4 pounds per bushel; and moisture, 11.1 percent. The wheat graded 16 percent No. 1 and 43 percent No. 2. Leading varieties were: Karl and improved Karl 22.4 percent, Tam 107 20.6 percent, and 2163 17.1 percent.

1996 Crop: Planted acres 11,800,000; harvested acres 8,800,000; abandoned acres 3,000,000 or 25.4 percent of the planted acres. Only 12 percent had been seeded before a major freeze occurred along with rain and snow on September 22. Seeding resumed in late September and by early November was completed. By late November, emergence and growth had been severely stunted by dry conditions. Condition of the crop had declined to 73 percent fair to good and 24 percent poor to very poor. Dry soil and high winds in the western two thirds of the State over winter reduced crop conditions. By mid-March, crop condition had declined to 16 percent good, 41 percent fair, and 43 percent poor to very poor. Several hard freezes in mid-March caused severe damage in the western third of the State. By April 9, 52 percent of the crop rated poor to very poor while wheat jointing was only 3 percent complete. Large acreages were abandoned as conditions continued to decline in April. In early May, rain began to fall over much of the State and crop conditions began to improve. Harvest began in mid-June. Total production was 255,200,000 with a yield of 29 bushels. Protein content averaged 13.3 percent; test weight, 60.2 pounds per bushel; and moisture, 12.3 percent. The wheat graded 55 percent No. 1 and 38 percent No. 2. Leading varieties were: Karl and improved Karl 20.9 percent, 2163 19.8 percent, and Tam 107 17.1 percent.

1997 Crop: Planted acres 11,400,000; harvested acres 11,000,000; abandoned acres 400,000 or 3.5 percent of the planted acres. Seeding started in western districts by September 8; however, rains slowed progress and was only 2 percent complete on October 1. Fair weather returned during October and by November 1, most of the acreage had emerged with a condition of 91 percent good to excellent. Warm temperatures brought the crop out of dormancy and by March 30, 23 percent of the crop was jointing. On April 12th and 13th a hard freeze occurred. However, the crop benefitted from very moderate temperatures and overcast days during much of May. Condition fell to 55 percent good to excellent on June 1. Delayed custom harvesters and scattered rains kept harvest at a slow pace during June. By mid-July 7, harvest was ending. Total production was 506,000,000 bushels with a yield of 46 bushels. Protein content averaged 11.8 percent; test weight, 60.6 pounds per bushel; and moisture, 11.9 percent. The wheat graded 72 percent No. 1 and 23 percent No. 2. Leading varieties were: Karl and improved Karl 22.1 percent, Tam 107 17.0 percent, and 2163 15.4 percent.

1998 Crop: Planted acres 10,700,000; harvested acres 10,100,000; abandoned acres 600,000 or 5.6 percent of the planted acres. Seeding began the first week of September and progressed to 90 percent complete by mid-October. Rainfall and a blizzard in late October slowed seeding of the remaining acreage but by November 2 89 percent of the crop had emerged. Crop condition was 82 percent good to excellent entering dormancy, and on March 1 remained high at 77 percent. A storm system on March 7 brought heavy winds and snowfall of up to 18 inches. By March 29, 9 percent of the crop was jointing. During late May, a severe hail and wind storm moved across the west central, southwest central, and south central parts of the State, destroying some acreage and causing significant damage. The first of June turned hot and dry. The crop was rated 69 percent good to excellent with 99 percent of the crop headed and 40 percent showing color. Although harvest began the second week of June, renewed rainfall delayed harvest. However, hot, dry conditions returned and by Fourth of July, 97 percent of the wheat had been harvested compared to an average of 59 percent. Total production was 494,900,000 bushels with a record yield of 49 bushels. Protein content averaged 11.5 percent; test weight, 61.5 pounds per bushel; and moisture, 11.2 percent. The wheat graded 88 percent No. 1 and 11 percent No.2. Leading varieties were: Jagger 20.2 percent, 2137 13.5 percent, and TAM 107 12.6 percent.

1999 Crop: Planted acres 10,000,000; harvested acres 9,200,000; abandoned acres 800,000 or 8.0 percent of the planted acres. Seeding began the first week of September in the southwest, south central and central districts, and by the first of November seeding was nearly complete. Although there was very little snow cover for the crop over winter, crop condition declined only slightly. Wheat began to break dormancy by the end of February and was 36 percent jointed on April 5th. The crop was reported in mostly good condition throughout the spring. Some severe hail storms occurred from mid-May through the first week of June, causing significant damage to the crop. Numerous damaged fields were baled. Harvest began in the Southern areas of the State the week of June 21st. The next week, rains began to fall with the northeast district extremely hard hit by flooding in some counties. Dark heads, as well as sprouting occurred in some fields. Harvest fell behind and by the July 4th weekend only 44 percent of the crop had been harvested, compared to the average of 66 percent. Harvest was complete by the third week of July. Total production was 432,400,000 bushels with a yield of 47 bushels. Protein content averaged 11.5 percent; test weight, 60.2 pounds per bushel; and moisture 12.2 percent. The wheat graded 61 percent No. 1 and 34 percent No. 2. Leading varieties were: Jagger 29.2 percent, 2137 22.0 percent, and TAM 107 8.3 percent.

2000 Crop: Planted acres 9,800,000; harvested acres 9,400,000; abandoned acres 400,000 or 4.1 percent of the planted acres. Seeding started in early September but progressed slowly until scattered showers were received in late September and early October. Seeding was complete by the middle of November. Condition was rated 45 percent good to excellent. Very little precipitation fell during December and most of January leaving some areas without any measurable precipitation since September. The crop also lacked a snow cover until the end of January when a winter storm covered fields with 2 to 4 inches. The crop broke dormancy by the end of February. By April 2, 44 percent of the crop was jointed. Crop conditions improved during March and April. However, condition declined as temperatures reached the 90's and 100's the last week of May. Eighty-seven percent of the crop was turning color by June 4, as harvest began in the south-central area. Harvest progressed very rapidly and was 94 percent completed by the first week of July. Total production was 347,800,000 with a yield of 37 bushels. Protein content averaged 11.9 percent; test weight 59.9 pounds per bushel; and moisture 11.8 percent. The wheat graded 39 percent No. 1 and 52 percent No. 2. Leading varieties were: Jagger 34.0 percent, 2137 23.1 percent, and TAM 107 6.3 percent.

2001 Crop: Planted acres 9,800,000; harvested acres 8,200,000; abandoned acres 1,600,000 or 16.3 percent of the planted acres. Seeding of the 2001 wheat crop started in early September. With three-quarters of the States topsoil moisture rated as very short, many producers were waiting for rain. Scattered rains were fell during the last half of September into early October. Dry weather returned by mid-October and seeding progressed to 69 percent complete. Although delayed by rainfall over the next few weeks, by November 26, 98 percent of the acreage had been seeded, 92 percent had emerged, and 55 percent of the crop was rated in good to excellent condition. December started out mild but turned very cold and windy by the end of the month. Stands in some areas were thin. During January and February, the western half of the State received much needed snow cover. The crop broke dormancy by the end of February with crop condition down to 30 percent good to excellent. Freeze damage was 31 percent light to severe. During March, most of the State received precipitation in the form of rain or snow. By the first of April only 2 percent of the crop was jointing compared to the average of 23 percent. Crop conditions continued to decline during April and May despite receiving scattered showers. By mid-April, some acres were being plowed under due to freeze damage, thin stands, and lack of tillering. The crop started to head the last week of April and progressed ahead of normal throughout May. Stripe rust was reported in the southwest, south central, and central districts the last half of May. Cool temperatures during May encouraged wheat head development which, in turn, contributed to higher than expected yields. Harvest of the 2001 crop began in the south-central part of the State during the second week of June and was 99 percent complete by July 8. Total production was 328,000,000 bushels with a yield of 40 bushels. Protein content averaged 12.1 percent; test weight 60.9 pounds per bushel; and moisture 11.8 percent. The wheat graded 67 percent No. 1 and 31 percent No. 2. Leading varieties were: Jagger on 35.8 percent, 2137 22.3 percent, and TAM 107 5.3 percent.

2002 Crop: Planted acres 9,700,000; harvested acres 8,200,000; abandoned acres 1,500,000 or 15.5 percent of the planted acres. Seeding began in early September and despite dry conditions, by November 26th, 98 percent had been seeded, 92 percent emerged, and 55 percent of the crop was in good to excellent condition. Crop condition declined over the winter months to 26 percent by the first week of March. Freeze damage was 41 percent light to severe. Dry conditions persisted during March, continuing to stress the crop. Although scattered light showers in April helped some areas, much of western and central Kansas remained very dry. Crop growth slowed due to the lack of moisture; however, disease and insect damage was generally light to none. The crop began to head the last week of April and progressed ahead of normal throughout May. Cool temperatures during May encouraged wheat head development which, in turn, contributed to higher than expected yields. During mid-May, several inches of rain fell in southeastern Kansas resulting in some flooding. Stripe rust was reported in the southwest, south central, and central districts during the last half of May. Harvest began in a few areas during the

second week of June. Widespread showers slowed harvest initially but by the last week of June, harvest progress was nearly average. Producers made rapid progress with harvest as the weather turned hot and dry and were virtually complete by July 7. Total production was 270,600,000 bushels with a yield of 33 bushels. Protein content averaged 13.0 percent with test weight at 60.1 pounds per bushel and moisture at 11.2 percent. The wheat graded 48 percent No. 1 and 47 percent No. 2. Leading varieties were: Jagger 42.8 percent; 2137 15.5 percent; and Karl/Karl92 3.6 percent.

2003 Crop: Planted acres 10,500,000; harvested acres 10,000,000; abandoned acres 500,000 or 4.8 percent of the planted acres. Seeding began the first week of September with 50 percent seeded and 18 percent emerged by the end of the month. Widespread showers the first week and the last two weeks of October improved soil moisture and seeding progressed to 96 percent complete with emergence at 87 percent by the first of November. Condition was just above 50 percent good to excellent all fall and by the first of December was rated at 59 percent good to excellent. Condition declined over the winter due to dry conditions and on March 2, 26 percent was rated in poor to very poor condition. However, widespread showers the last two weeks of April improved conditions so that on April 27th, 16 percent was in poor to very poor condition. Crop progress was near normal during spring with 86 percent jointed on April 27th. Temperatures were moderate during May and wide-spread showers fell throughout the month. As of June 1, heading was virtually complete and 37 percent had begun to turn color. Widely scattered showers and cool temperatures the first two weeks of June helped fill heads. Harvest was 58 percent complete by June 29. Hot, dry weather the first two weeks of July accelerated harvest, with 99 percent harvested by July 13. Total production was 480,000,000 bushels with a yield of 48 bushels. Protein content averaged 11.7 percent with test weight at 60.7 pounds per bushel and moisture at 11.5 percent. The wheat graded 73 percent No. 1 and 24 percent No. 2. Leading varieties were Jagger on 45.2 percent of the planted acreage, 2137 on 13.3 percent, TAM 110 on 3.8 percent, Karl/Karl 92 on 3.2 percent, and 2174 on 3.1 percent. Blends of two or more varieties accounted for 12.8 percent of the acres planted. All Hard White varieties accounted for 2.7 percent of the State's wheat acreage. Trego was the leading Hard White variety, accounting for 67 percent of the State's white wheat.

2004 Crop: Planted acres 10,000,000; harvested acres 8,500,000; abandoned acres 1,500,000 or 15 percent of the planted acres. Seeding began the first week of September with 45 percent seeded and 17 percent emerged by the 28th of September. Seeding was 96 percent complete and emergence was at 84 percent by the second of November. Condition was above 50 percent good to excellent all fall until dropping slightly by the end of November to 47 percent good to excellent. Ninety-five percent had emerged by the first of December. Condition declined over the winter due to dry conditions. On March 7, 34 percent was rated as poor to very poor. By the end of March, 7 percent either had not emerged or was lost to winterkill. On April 25th, 30 percent was in poor to very poor condition compared to 16 percent last year. Crop progress was ahead of normal during the spring with 84 percent jointed on April 25th, compared with 80 percent the previous year and 75 percent for the 5-year average. Heading began by late April and progressed ahead of normal during May. Damage from freezes in early spring became evident during May. Harvest began well ahead of normal. By June 13th, 15 percent had been harvested, compared to 1 percent the previous year and 6 percent for the 5-year average. Harvest continued ahead of average throughout June despite some scattered showers. Heavy rains in July slowed harvest and led to wheat sprout in the northern third of the State. Harvest was 99 percent complete by the 18th of July. This compared to 100 percent for both the previous year and the 5-year average. Total production was 314,500,000 bushels with a yield of 37 bushels. Protein content averaged 12.8 percent with test weight at 59.7 pounds per bushel and moisture at 11.6 percent. The wheat graded 51 percent No. 1 and 36 percent No. 2. Leading varieties were Jagger on 40.9 percent of the planted acreage, 2137 on 8.6 percent, TAM 110 on 4.2 percent, Trego on 3.5 percent, and Jagalene on 3.0 percent. Blends of two or more varieties accounted for 15.2 percent of the acres planted. All Hard White varieties accounted for 4.9 percent of the State's wheat acreage. Trego was the leading Hard White variety, accounting for 72 percent of the State's white wheat.

2005 Crop: Planted acres 10,000,000; harvested acres 9,500,000; abandoned acres 500,000 or 5 percent of the planted acres. Seeding began the first week of September. Twenty-nine percent was seeded and 10 percent was emerged by the 26th of September. Widespread showers the first and second weeks of October helped improve soil moisture. Seeding was 93 percent complete and emergence was at 79 percent by October 31st. Condition was above 75 percent good to excellent all fall. Ninety-six percent of the crop had emerged by November 28. Condition declined slightly over the winter due to dry conditions. On March 7, 6 percent was rated as poor to very poor. On March 27th, 2 percent had been lost to winterkill. On May 1st, 6 percent was in poor to very poor condition. Crop progress was ahead of normal during the spring with 94 percent jointed on May 1st. Heading began behind normal progress in late April and remained behind normal throughout May. Widespread showers the first two weeks of April helped improve conditions. Subsoil moisture remained short to very short in most of the western parts of the State, despite the rains. As of June 5th, heading was complete and 63 percent had begun to turn color. By June 19th 10 percent had been harvested. Harvest was complete by the 17th of July. Total production was 380,000,000 bushels with a yield of 40 bushels. Protein content averaged 12.3 percent with test

weight at 61.0 pounds per bushel and moisture at 11.6 percent. The wheat graded 82 percent No. 1 and 17 percent No. 2. Leading varieties were Jagger on 28.2 percent of the planted acreage, Jagalene on 21.2 percent, 2137 on 5.7 percent, TAM 110 on 3.3 percent, and 2174 on 3.0 percent. Blends of two or more varieties accounted for 11.3 percent of the acres planted. All Hard White varieties accounted for 3.9 percent of the State's acreage. Trego was the leading Hard White variety, accounting for 74 percent of the State's white wheat.

2006 Crop: Planted acres 9,800,000; harvested acres 9,100,000; abandoned acres 700,000 or 7.1 percent of the planted acres. Seeding of wheat acres began the first week of September. Fifty-five percent was seeded and 25 percent was emerged by the 2nd of October. Widespread showers during September and October improved soil moisture for germination. Seeding was 96 percent complete and emergence was at 84 percent by the 30th of October. Condition was above 60 percent good to excellent all fall. Ninety-eight percent was emerged by the 20th of November. Condition declined over the winter due to dry conditions. On March 5th, only 27 percent was rated as good to excellent. Mostly dry conditions and mild temperatures during January and February contributed to the depletion of topsoil moisture. By March 5th, 95 percent of topsoil moisture was rated short to very short. By mid-March, 4 percent of the crop had been lost to winterkill. On April 30th, 37 percent was in poor to very poor condition. Crop progress was ahead of normal during the spring with 98 percent jointed on April 30th. The crop began to head by mid-April and developed ahead of normal during late April and May. Sporadic rain showers did little to improve soil moisture condition during the spring. Throughout March and April, the best subsoil moisture supply rating was 57 percent short to very short. The crop continued to mature ahead of normal, with 44 percent of the wheat turning by May 28th, compared with 24 percent for the 5-year average. Harvest began well ahead of normal and by June 11th, 15 percent had been harvested. Harvest continued ahead of average throughout June despite some scattered showers. Harvest was 99 percent complete by the 9th of July. Total production was 291,200,000 bushels with a yield of 32 bushels. Protein content averaged 13.8 percent with test weight at 59.9 pounds per bushel and moisture at 10.9 percent. The wheat graded 60 percent No.1 and 35 percent No. 2. Leading varieties were Jagalene on 27.2 percent of the planted acreage, Jagger on 19.7 percent, Overlay on 15.3 percent, 2137 on 3.1 percent, and T81 on 2.6 percent. Blends of two or more varieties accounted for 10.0 percent of the acres planted. All Hard White varieties accounted for 1.7 of the State's wheat acreage. NuHills was the leading Hard White variety, accounting for 36 percent of the State's white wheat.

2007 Crop: Planted acres 10,400,000; harvested 8,600,000; abandonment 17.3 percent of planted acres. Seeding began the first week of September and progressed slightly behind average through the month. Emergence progressed slightly ahead of normal with 98 percent of the crop emerged by November 19th. Soil moisture conditions remained dry throughout the fall with the crop's condition rated as 51 percent good to excellent on November 26th. Winter brought colder temperatures and increased snowfall which helped to improve soil moisture conditions. As of March 18th, the condition was rated 70 percent good to excellent. Temperatures dropped below freezing for most areas the week ending April 8th, with some areas experiencing record lows. Disease presence was a concern with 38 percent of the crop considered to have moderate to severe presence at the end of May. Crop development was behind the 5-year average through May and harvest was delayed until the third week of June, primarily in the eastern third and the south central parts of the State due to precipitation. The Southeast district received heavy rain resulting in flooding the last week of June. As of July 1, harvest was 59 percent complete compared 82 percent for the 5-year average. Harvest was nearly complete across most of the State by the second week of July.

Total production was 283,800,000 bushels with a yield of 33 bushels. Protein content averaged 11.7 percent with test weight at 59.3 pounds per bushel and moisture at 12.0 percent. The wheat graded 55 percent No. 1 and 32 percent No. 2. Leading varieties were Overlay on 23.3 percent of the planted acreage, Jagalene on 23.1 percent, Jagger on 17.1 percent, TAM 111 on 4.0 percent and 2137 on 2.9 percent. Blends of two or more varieties accounted for 10.4 percent of the acres planted. All Hard White varieties accounted for 1.7 of the State's wheat acreage. Danby was the leading Hard White variety, accounting for 41 percent of the State's white wheat.

2008 Crop: Planted acres 9,700,000; harvested 9,000,000; abandonment 7.2 percent of planted acres. Seeding of wheat acres began the first week of September and progressed behind average throughout the fall. Emergence also progressed behind normal with 96 percent of the crop emerged by November 25th. Soil moisture conditions were mostly adequate throughout the fall with the crops condition rated 43 percent good to excellent on November 25th. The State received rain, freezing rain, and snow in December. The State experienced below normal temperatures in December, above normal in January, and normal in February. Temperatures were moderate across the State all spring and the whole State received precipitation during April with the heaviest amounts in the east. However, the western third of the State had significant short to very short topsoil rating in March and only improved moderately with the late April showers. As of April 27th, only 60 percent of the wheat was jointing compared to 90 percent for the 5-year average. Temperatures were moderate the first half of May and then warmed up the last half. The State received scattered showers throughout the month with accumulations over 2 inches in the eastern two-thirds. However, the southwest part of the State was still dry with a topsoil rating of 96 percent short to very short. Wheat headed was behind average the entire month and 14

percent of the wheat was turning on June 1st, behind the 5 year average of 47 percent. Most of the State received scattered showers the last two weeks of June. Wheat harvest was 36 percent complete on June 29th, compared to 48 percent last year, and 69 percent for the five year average. Wheat harvest made good progress the first week of July and was nearly complete across most of the State by the middle of the month.

Total production was 360,000,000 bushels with a yield of 40 bushels. Protein content averaged 12.4 percent with test weight at 60.4 pounds per bushel and moisture at 11.3 percent. The wheat graded 71 percent No. 1 and 26 percent No. 2. Leading varieties were Jagalene on 18.0 percent of the planted acreage, Overlay on 17.3 percent, Jagger on 14.7 percent, TAM 111 on 7.3 percent and Sante Fe on 5.8 percent. Blends of two or more varieties accounted for 10.4 percent of the acres planted. All Hard White varieties accounted for 1.9 of the State's wheat acreage. Danby was the leading Hard White variety, accounting for 59 percent of the State's white wheat.

2009 Crop: Planted acres 9,300,000; harvested acres 8,950,000; abandonment 4.8 percent of planted acres. Wheat seeding got off to a slow start in early September because of a couple weeks of cool, rainy weather. By the end of the month, farmers had caught up to their normal level. Then the last three weeks of October brought heavy rain across the State halting nearly all planting activity. Only 4 percent of the wheat was seeded those three weeks. By November 16th, 97 percent of the wheat in the State had been seeded. The crop emerged about normal after the slow start, reaching 95 percent by November 23rd. Soil moisture conditions were mostly adequate throughout the fall. Wheat condition was rated 67 percent good to excellent at the end of November. The State received snow and freezing rain in December. Precipitation was then below normal throughout the State the rest of the winter. Temperatures across the State were below normal in December and above normal in January and February. Wheat conditions declined during the winter and were rated 50 percent good to excellent by the end of February. Temperatures had been moderate across the State all spring except for the second week of April when they dropped below freezing. Rainfall was light until the second week of April when widespread showers started and continued throughout the month, with some areas of the State receiving more than ten inches of rain. On April 26th, Statewide topsoil moisture was rated 95 percent adequate to surplus. Wheat condition ratings ranged from 37 percent good to excellent after the freezing temperatures to 48 percent good to excellent by the end of April. The crop progressed behind the 5-year average during May, and by May 31st, only 10 percent of the wheat had turned color, well behind the 5-year average of 39 percent. Temperatures were mild most of the month and then started to warm up the last week of May. The State received widespread rainfall the first two weeks of May. Precipitation also fell on the western half of the State the last week of the month with some areas receiving up to 4 inches. Crop development continued to lag behind during June, hindered by frequent rains the first three weeks of the month. The wet conditions also delayed harvest. By June 21st, only 5 percent of the wheat acreage had been harvested, well below the average of 31 percent. The last week of June was hot across Kansas, reaching over 100 degrees in most areas. As of June 28th, wheat harvest was 47 percent complete, as farmers caught up on harvest, but still lagged behind the 5-year average of 61 percent. Precipitation was light the first two weeks of July and harvest progressed rapidly and was 96 percent complete by mid-July.

Total production was 375,900,000 bushels with a yield of 42 bushels per acre. Protein content averaged 11.6 percent with a test weight of 61.0 pounds per bushel and moisture content at 11.2 percent. The wheat graded 90 percent No. 1 and 9 percent No. 2. Overlay became the most popular variety of wheat seeded in Kansas, at 13.7 percent of the planted acreage, replacing Jagalene, which dropped to third at 9.1 percent. Other varieties included Fuller on 10.9 percent of the acreage, Sante Fe on 9.5 percent, and Jagger on 8.5 percent. Blends of two or more varieties accounted for 10.7 percent of the acres planted. All Hard White varieties accounted for 1.0 of the State's wheat acreage. Danby was the leading Hard White variety, accounting for 70 percent of the State's white wheat.

2010 Crop: Planted acres 8,300,000; harvested acres 8,000,000; abandonment 3.6 percent of planted acres. Seeding of wheat acres began the second week of September and was behind average all fall. Kansas received heavy rain the last week of September and the last three weeks of October. Only 13 percent of the crop was planted between October 11 and November 1. Drier weather in early November allowed planting to resume and by November 8th, 90 percent of the wheat in the State had been seeded. Emergence also progressed behind normal with seventy-eight percent of the crop emerged by November 8th. Topsoil moisture conditions were above 80 percent adequate to surplus through mid-October and then above 90 percent the rest of the fall. The condition of the crop was rated as 68 percent good to excellent on November 29th compared to 67 percent the previous year. Kansas received snow and freezing rain in December with the heaviest amounts in the Northeast and East Central Districts. Precipitation was below normal in January and temperatures in the western areas were above

normal while the rest of the State was below normal. Temperatures in February were cooler than normal and precipitation was limited with the heaviest amounts in the East Central and Southeast Districts. Wheat conditions declined during the winter and were rated as 53 percent good to excellent by the end of February compared to 50 percent the previous year. Wheat started breaking dormancy the first week of March. Below normal temperatures the first half of March caused jointing to fall behind the 5-year average. Eighty-eight percent of the wheat was jointing on May 2nd compared to 90 percent for the five-year average. Kansas received scattered showers throughout the spring with several weeks where accumulations were near or above two inches. Adequate to surplus topsoil ratings were 90 percent or above all spring. Warm temperatures the first three weeks of April caused the wheat condition to increase to 70 percent good to excellent by May 2nd. The crop started heading the last week of April and 17 percent was headed by May 2nd, 1 point behind the 5-year average. Temperatures during May were cooler than normal during the middle of the month, but then warmed to above normal levels the last week of the month. The State received widespread rainfall the middle two weeks of May with some areas receiving hail. At the start of May, wheat progress was near normal, but the cooler temperatures and rainfall caused the crop to fall behind. Crop condition rated as good to excellent, declined 11 points during May, but was still 13 points above the previous year. Topsoil moisture remained good throughout the month and was rated 92 percent adequate to surplus by the end of May, compared to 76 percent a year earlier. Warm temperatures and mostly dry conditions the last week of June allowed wheat harvest to increase to 55 percent complete by June 27th compared to 10 percent the week before. Wheat condition remained near 56 percent good to excellent the entire month. Wheat harvest was almost complete by mid-July despite being slowed by damp weather and high humidity during the second week of the month. Nearly 30 percent of the acreage was harvested the week before Independence Day.

Total production was 360,000,000 bushels with a yield of 45 bushels per acre. Protein content averaged 12.0 percent with a test weight of 61.4 pounds per bushel and moisture content at 11.2 percent. The wheat graded 89 percent No. 1 and 10 percent No. 2. Fuller became the most popular variety of wheat seeded in Kansas, at 11.8 percent of the planted acreage, replacing Overley, which dropped to fourth at 7.2 percent. Other varieties included TAM 111 on 9.9 percent of the acreage, Postrock on 8.0 percent, and Santa Fe on 7.0 percent. Blends of two or more varieties accounted for 11.6 percent of the acres planted. All Hard White varieties accounted for 1.9 of the State's wheat acreage. Danby was the leading Hard White variety, accounting for 79 percent of the State's white wheat.

2011 Crop: Planted acres 8,800,000; harvested acres 7,950,000; abandonment 9.7 percent of planted acres. Seeding of wheat acres began the second week of September and was behind average until the middle of October when it jumped ahead of normal. By October 31, 97 percent of the wheat in Kansas had been seeded. Emergence progressed behind normal all fall and was 92 percent emerged by November 21, compared to 94 percent for the 5-year average. Statewide temperatures were warmer than normal and precipitation was light most of fall. The State did receive some much needed rain the last two weeks of November. Topsoil moisture ratings dropped to 33 percent adequate to surplus through early-November then increased to 63 percent adequate to surplus by the end of November. The condition of the crop was rated as 37 percent good to excellent on November 28, compared to 68 percent a year earlier. Kansas received very little precipitation during December and January. The eastern part of the State did receive snow in February, but precipitation in the western half was still limited. Temperatures were mostly below normal the entire winter. By the end of February the crop's condition was rated as 25 percent good to excellent, compared to 53 percent a year earlier. Wheat started breaking dormancy the first week of March. The State had persistent dry conditions all spring and also experienced high winds the last week of March and the first week of April, especially in the western half, along with above normal temperatures. Kansas did receive some rain but it was not enough to have an impact on the wheat condition or soil moisture ratings. The dry weather caused the wheat condition to decrease to 21 percent good to excellent by May 1, compared to 70 percent the previous year. Topsoil moisture rated as adequate to surplus at the beginning of May was only 58 percent compared to 91 percent a year earlier. Jointing started ahead of last year but then fell behind and by the end of April was only 78 percent jointed compared to 85 percent a year earlier. Jointing was mostly behind the 5-year average all spring. The crop started heading the third week of April and 16 percent was headed by May 1, the same as the 5-year average. Temperatures during May were mostly cooler than normal except for the second week of the month when they were above average. Topsoil moisture ratings declined the first two weeks of the month but then increased to 65 percent adequate to surplus by the end of May, due to scattered showers. Despite the rain, topsoil moisture conditions in the Southwest, South Central, and West Central Districts did not improved during the month of May. The crop progressed near normal and slightly ahead of the previous year for most of May. Seventeen percent of the wheat was turning color by the end of May, behind the 5-year average of 22 percent. On May 29, 54 percent of the crop was reported to be in poor to very poor condition, 9 points more than at the beginning of the month. Temperatures turned hot for most of the State at the beginning of June and remained above normal the rest of the month. Wheat harvest

began the second week of June and progressed ahead of both last year and the 5-year average the entire month. Harvest was 55 percent complete on June 26th, compared to 49 percent a year earlier and 44 percent for the 5-year average. Wheat harvest made good progress the week before Independence Day and was virtually complete by the third week of July.

Total production was 278,250,000 bushels with a yield of 35 bushels per acre. Protein content averaged 12.8 percent with a test weight of 61.2 pounds per bushel and moisture content at 11.0 percent. The wheat graded 86 percent No. 1 and 13 percent No. 2. TAM 111 became the most popular variety of wheat seeded in Kansas, at 11.6 percent of the planted acreage, replacing Fuller, which dropped to second at 10.3 percent. Other varieties included Art on 8.0 percent of the acreage, Postrock on 7.4 percent, and Santa Fe on 4.0 percent. Blends of two or more varieties accounted for 11.1 percent of the acres planted. All Hard White varieties accounted for 2.1 percent of the State's wheat acreage. Danby was the leading Hard White variety, accounting for 50 percent of the State's white wheat.

2012 Crop: Planted acres 9,400,000; harvested acres 9,100,000; abandonment 3.2 percent of planted acres. Wheat seeding began the second week of September 2011 and was ahead of average by mid-October. By November 6, 99 percent of the crop had been seeded. Wheat emergence was ahead of average by mid-October and continued that way the next six weeks, and by November 27 was 97 percent emerged. At that time wheat condition was rated 47 percent good to excellent, 40 percent fair and 13 percent poor to very poor, compared to only 37 percent good to excellent a year earlier. Topsoil moisture conditions showed improvement throughout the wheat planting season and by late November was 56 percent adequate to surplus and only 44 percent very short to short. Most of the State received much needed moisture during December. The western half of Kansas received snow with amounts over a foot in some areas. January was unusually warm, dry and windy causing soil moisture and winter wheat condition to decline. Most of the state received moisture in varying amounts during February. Wheat condition improved slightly due to mild temperatures and the much needed precipitation. The condition of the crop was rated 52 percent good to excellent by the end of February compared to 25 percent last year. By February 26 topsoil moisture was rated 64 percent adequate to surplus, compared to 57 percent last year. Wheat started breaking dormancy in late February due to unseasonably warm temperatures across Kansas. The first three weeks of March were windy and temperatures were above normal with several areas setting new record highs. The warm weather helped the wheat crop to grow quickly as 61 percent was jointed by the end of March compared to 21 percent for the 5 year average. Widespread rain the third week of March helped improve both wheat condition and soil moisture ratings. The crop condition was rated 60 percent good to excellent by the end of March compared to 31 percent last year. Record temperatures continued into April and caused the wheat crop to develop three weeks ahead of average. The crop started heading the second week of April and was 74 percent headed by April 29, well ahead of the 5 year average of 7 percent. Widespread rain the second week of April again improved both wheat condition and soil moisture ratings. Topsoil moisture in the adequate to surplus rating was 79 percent by the end of April compared to 58 percent a year earlier. The crop's condition was rated 62 percent good to excellent by the end of April compared to 21 percent last year. Temperatures in Kansas during May were above normal and even record breaking at some locations. May 2012 ranks as the third warmest on record for Kansas, with the warmest occurring in 1962. Most of the State received very little precipitation during the month. Preliminary statewide average precipitation for May was 1.1 inches, which is only 26 percent of normal, and ranks 2012 as the second driest May since 1895. Scattered precipitation was received the last week of the month with some areas experiencing high winds and hail. Topsoil moisture ratings declined through the month and then went up slightly due to scattered showers at the end of the month. On June 3 topsoil moisture was rated only 35 percent adequate to surplus compared to 63 percent adequate to surplus a year earlier. Topsoil moisture in the West Central District was at 86 percent short to very short, followed by the Southwest at 85 percent short to very short. The wheat crop continued to progress two to three weeks ahead of normal as harvest began in southern Kansas the week of May 20. This harvest is the earliest on record with the second earliest in 1962 when 1 percent was harvested the week ending June 2. Harvest was 20 percent complete by June 3 with at least some wheat harvested in all districts. The Southeast and South Central Districts were leading the State with 50 percent and 44 percent harvested, respectively. The crop was 62 percent mature by June 3 compared to 8 percent last year and the 5-year average of 2 percent. On June 3, 40 percent of the wheat crop was reported to be in good to excellent condition, down 22 points from the beginning of May. Hot, windy conditions continued into June as temperatures were above normal the entire month. Statewide showers the second week of June only delayed harvest slightly as 80 percent of the crop was harvested by June 17 compared to the 5 year average of 7 percent. Harvest was 99 percent complete by July 1.

Total production was 382,200,000 bushels with a yield of 42 bushels per acre. Protein content averaged 12.4 percent with a test weight of 61.1 pounds per bushel and moisture content at 11.1 percent. The wheat graded 83 percent No. 1 and 16 percent No. 2. TAM 111 was again the most popular variety of wheat seeded in Kansas, at

12.6 percent of the planted acreage. Everest jumped up 14 spots to second at 8.0 percent. Other varieties included Armour on 7.5 percent of the acreage, Fuller on 5.5 percent, and TAM 112 on 5.2 percent. Blends of two or more varieties accounted for 9.0 percent of the acres planted. All Hard White varieties accounted for 2.2 of the State's wheat acreage. Danby was the leading Hard White variety, accounting for just over 50 percent of the State's white wheat.

2013 Crop: Planted acres 9,500,000; harvested acres 8,450,000; abandonment 11.1 percent of planted acres. Wheat seeding began the second week of September 2012 and was ahead of the 5-year average by mid-October. Ninety-eight percent of the wheat had been seeded by November 4. Wheat emergence was slightly behind average in mid-October and by November 25 was 97 percent emerged. At that time, wheat condition was rated 29 percent good to excellent, 46 percent fair, and 25 percent poor to very poor, compared to 47 percent good to excellent a year earlier. On September 9, topsoil moisture was 75 percent very short to short, 24 percent adequate, and 1 percent surplus. By late November, topsoil moisture was 76 percent very short to short, 24 percent adequate, and 1 percent surplus. Temperatures were mostly above normal the entire winter. The State received light precipitation during December and January. Snow brought much needed moisture toward the end of February. Wheat condition declined slightly during the winter and was rated 36 percent very poor to poor, 41 percent fair, and 23 percent good to excellent by the end of February compared to 11 percent very poor to poor, 37 percent fair, and 52 percent good to excellent the previous year. By February 24, topsoil moisture was rated 39 percent adequate to surplus, compared to 64 percent the previous year. Throughout March and April, precipitation was light and scattered while temperatures were below normal. In the second week of April, temperatures were below freezing in the western half of Kansas. These cool temperatures caused the wheat crop to develop behind average. The crop started jointing in March and was only 53 percent jointed by the end of April, compared to 100 percent the previous year and 78 percent for the average. By April 1, only 1 percent was headed, compared to 70 percent a year earlier and 19 percent average. Topsoil moisture changed very little in the spring and was rated 36 percent short to very short and 64 percent adequate to surplus by the end of April, compared to 21 percent very short to short and 79 percent adequate to surplus the previous year. The crop's condition was rated 27 percent good to excellent by the end of April compared to 62 percent last year. Temperatures in Kansas during May were above normal in the western half of the State and below normal in the eastern half. Most of the State remained in a drought with the western half in either extreme or exceptional drought. Topsoil moisture ratings remained steady throughout most of May while slightly increasing with the appearance of scattered showers at the end of the month. On June 2, topsoil moisture was rated 64 percent adequate to surplus compared to 35 percent the previous year. The wheat crop continued to progress behind normal as 93 percent of the crop was headed by the end of May, compared to the average of 98 percent. Wheat condition remained steady during May but took a slight decline in the last week. By June 2, 45 percent of the crop was reported to be in very poor to poor condition, compared to 39 percent at the beginning of May and 24 percent in the previous year. The State received only scattered showers with temperatures mostly above normal throughout June. This caused moisture condition to decline slightly although crop conditions changed very little by the end of the month. Harvest began in the third week of June and was in full swing by the very next week. Harvest was 57 percent complete by June 31, compared to 99 percent complete in the previous year and 67 percent complete for the average. Harvest made good progress during the first two weeks of July and was 98 percent complete by July 14, compared to 100 percent complete in the previous year and 97 percent average.

Total production was 321,100,000 bushels with a yield of 38 bushels per acre. Protein content averaged 12.2 percent with a test weight of 60.9 pounds per bushel and moisture content at 10.9 percent. The wheat graded 85 percent No. 1 and 14 percent No. 2. Everest became the most popular variety of wheat seeded in Kansas at 14.3 percent of planted acreage. TAM 111 fell to second with 10.8 percent of planted acreage but was the leading variety in all three Western Districts. Other varieties included Armour with 6.7 percent of planted acreage, TAM 112 with 5.1 percent, and Fuller with 4.2 percent. Blends of 2 or more varieties accounted for 8.8 percent of planted acreage and were used more extensively in the central, north central, and east central. Hard White varieties accounted for 2.1 percent of Kansas' white wheat with Danby remaining the leading Hard White variety accounting for just under 50 percent of the State's white wheat.

2014 Crop: Planted acres 9,600,000; harvested acres 8,800,000; abandonment of 8.3 percent of planted acres. Wheat seeding began the second week of September, and was ahead of average by mid-October. Ninety-six percent of the wheat had been seeded by November 3. Wheat emergence was slightly ahead average by mid-October and was 96 percent emerged by November 17. On November 24, wheat condition was rated 63 percent good to excellent, compared to 29 percent good to excellent last year. On September 8, topsoil moisture was 20 percent very short, 48 percent short, 31 percent adequate, and 1 percent surplus. By late November, topsoil moisture was at 8 percent very short, 22 percent short, 66 percent adequate, and 4 percent surplus. Temperatures were mostly below normal the entire winter. By the end of February, there were some concerns

regarding the potential for winterkill due to the extremely cold temperatures. The State received light precipitation during January, causing topsoil moisture condition ratings to decline. Precipitation during February was near normal, but only raised topsoil moisture condition slightly. By the end of February, topsoil moisture was rated 45 percent adequate to surplus, compared to 39 percent last year. Wheat condition declined during the winter, and was rated 22 percent very poor to poor, 44 percent fair, and 34 percent good to excellent by the end of February, compared to 36 percent very poor to poor, 41 percent fair, and 23 percent good to excellent last year. During most of March and April, precipitation was light with the largest amounts in the eastern part of the State and temperatures were below normal. Temperatures began to increase during the last half of April. The crop started jointing in March, and was only 50 percent jointed by the end of April, compared to 52 percent last year and 74 percent for the 5-year average. As of April 27, only 4 percent was heading, compared to 1 percent last year and 17 percent for the 5-year average. Top soil moisture supplies decreased all spring, and were rated 67 percent very short to short and 33 percent adequate to surplus by the end of April, compared to last year at 36 percent very short to short and 64 percent adequate to surplus. The crop condition was rated 21 percent good to excellent by the end of April, compared to 27 percent last year. Temperatures during May were mostly above normal, especially in the south central part of the State. Rainfall was mostly spotty and light, with the heaviest amounts in the eastern half of the State. Most of the State was still in a drought, with the western half in severe, extreme, or exceptional drought. Topsoil moisture ratings improved slightly during May and, by the end of the month, were rated 40 percent adequate to surplus, compared to 64 percent adequate to surplus a year earlier. The warm, dry conditions helped the crop to progress ahead of normal by mid month as 37 percent of the crop was turning color, compared to the 5-year average of 33 percent. Wheat condition declined all month and, by the end of May, 62 percent of the crop was reported to be in very poor to poor condition, compared to 47 percent at the beginning of the month and 45 percent last year. Harvest began the second week of June and was behind normal all month. Harvest was slowed the last week of the month by widespread rainfall, and was only 40 percent harvested by June 29, compared to 50 percent last year and 66 percent for the 5-year average. The crop progressed slightly behind average nearly all month. The State received widespread showers each week, and temperatures were cooler than normal the third and last week of the month. This caused moisture conditions to increase, but crop conditions changed very little by the end of the month. Harvest made good progress the first two weeks of July and was 95 percent complete by July 20 compared to 100 percent for both last year and the 5-year average.

Total production was 246,400,000 bushels with a yield of 28 bushels per acre. Protein content averaged 13.4 percent with a test weight of 60.5 pounds per bushel and a moisture content of 11.9 percent. The wheat graded 73 percent No. 1 and 26 percent No. 2. Everest remained the most popular variety of wheat seeded in Kansas at 14.3 percent of planted acreage. TAM 111 remained second, with 11.6 percent of planted acreage, but was the leading variety in all three Western Districts. Other varieties included T158 with 5.0 percent of planted acreage, TAM 112 with 4.6, and Armour with 4.2 percent. Blends of 2 or more varieties accounted for 10.4 percent of planted acreage and were used more extensively in the central, north central, and east central. Hard White varieties accounted for 2.8 percent of Kansas' white wheat. Danby remained the leading Hard White variety, accounting for just over 50 percent of the State's white wheat.

2015 Crop: Planted acres 9,200,000; harvested acres 8,700,000; abandonment of 5.4 percent of planted acres. Wheat seeding began the first week of September and was ahead of average through the month but then fell behind average until completed by the middle of November. Winter wheat emerged was slightly ahead of average all fall and was 95 percent emerged by November 23. Temperatures were mostly above normal in September, near normal most of October and finished below normal the last half of November. The final Crop Progress and Condition Report of the season rated winter wheat condition at 0 percent very poor, 4 percent poor, 35 percent fair, 55 percent good, and 6 percent excellent, compared to 63 percent good to excellent the previous year. Due to scattered showers during September and October topsoil was rated mostly adequate to short with the best ratings the last two weeks of October. By late November, topsoil moisture was at 13 percent very short, 33 percent short, 54 percent adequate, and 0 percent surplus. Temperatures were mostly above normal during December and January and near normal during February. The State received light precipitation throughout winter causing topsoil moisture condition ratings to decline slightly. By the end of February, topsoil moisture was rated 58 percent adequate to surplus, compared to 45 percent last year. Wheat condition declined slightly during the winter and was rated 12 percent very poor to poor, 44 percent fair and 44 percent good to excellent by the end of February compared to 22 percent very poor to poor, 44 percent fair and 34 percent good to excellent last year. Precipitation was light with the largest amounts in the eastern part of the State. Temperatures were above normal most of March and April. The crop progressed ahead of both last year and average and started jointing in early March. The crop was rated 78 percent jointed by the end of April compared to 54 percent last year and 68 percent for the average. As of April 26th, 18 percent was heading compared to 4 percent last year and 16 percent for the 5-year average. Top soil moisture supplies declined until late April when showers in the east shored them up. Topsoil moisture was rated 37 percent very short to short and 63 percent adequate to surplus by

the end of April compared to last year at 67 percent very short to short and 33 percent adequate to surplus. Despite the improved ratings over last year most of the State was rated abnormally dry or in drought. Some reports from the weekly crop progress indicated that the wheat was stressed due to drought and disease. The crop condition was rated 26 percent good to excellent by the end of April compared to 21 percent last year. Temperatures during May were mostly normal to below normal. The state received widespread rainfall throughout the month. Topsoil moisture ratings improved during May and by the end of the month were rated 91 percent adequate to surplus compared to 40 percent adequate to surplus a year earlier. The crop continued to head ahead of normal but the cooler temperatures slowed coloring to near normal. By the end of May, 34 percent of the crop was turning color compared to the 5-year average of 35. Wheat condition improved slightly and by the end of May only 29 percent of the crop was reported to be in very poor to poor condition, compared to 32 percent at the beginning of the month and 62 percent last year. Harvest began the first week of June but was stalled by wet conditions until the third week of June when 40 percent of the crop was harvested. Harvest was 48 percent completed by June 28 compared to 38 percent last year and 60 percent for the 5-year average. The State had mostly dry conditions except for the second week of the month and temperatures were mostly normal to above normal during June. Harvest made good progress the first two weeks of July and was 93 percent complete by July 12 compared to 87 percent last year and 94 percent for the 5 year average.

Total production was 321,900,000 bushels with a yield of 37 bushels per acre. Protein content averaged 12.7 percent with a test weight of 59.9 pounds per bushel and a moisture content of 11.2 percent. The wheat graded 53 percent No. 1 and 38 percent No. 2. Everest continued to be the leading variety of wheat seeded in Kansas, accounting for 15.8 percent of the State's 2015 wheat crop. Everest, developed by Kansas State University, was the most popular variety in the eastern two thirds of the State. TAM 111 also retained its position as second in the State with 9.1 percent of the acreage and is the leading variety in all three of the Western Districts. Other varieties included T158 with 5.1 percent of the planted acreage, WB Cedar with 4.9, and TAM 112 with 4.0 percent. Blends of 2 or more varieties accounted for 9.6 percent of planted acreage and were used more extensively in the central, north central, and east central. Hard White varieties accounted for 2.7 percent of Kansas' white wheat. Danby remained the leading Hard White variety, accounting for just under 50 percent of the State's white wheat.

2016 Crop: Planted acres 8,500,000; harvested acres 8,200,000; abandonment of 3.5 percent of planted acres. Wheat seeding began the first week of September and was near or behind average throughout the fall. Planting was complete by mid-November. Wheat emerged was also behind average until mid-November when it progressed slightly ahead of average. Temperatures were above normal all fall. Topsoil moisture conditions were above 50 percent adequate most of the fall except for the last three weeks of October when ratings were mostly short to very short. Precipitation the last week of October and November helped improve moisture conditions and by late November, topsoil moisture was at 6 percent very short, 17 percent short, 67 percent adequate, and 10 percent surplus. The final Crop Progress and Condition Report of the season rated winter wheat condition at 2 percent very poor, 8 percent poor, 42 percent fair, 42 percent good, and 6 percent excellent, compared to 61 percent good to excellent the previous year. Temperatures were mostly above normal all winter with some wheat breaking dormancy by the end of February. The State received some precipitation in December and January but rain was needed by the end of February to support growth and development. By the end of February, topsoil moisture was rated 64 percent adequate to surplus, compared to 58 percent last year. Wheat condition improved during the winter and was rated 6 percent very poor to poor, 35 percent fair and 59 percent good to excellent by the end of February compared to 12 percent very poor to poor and 44 percent fair and 44 percent good to excellent the previous year. Precipitation was light all spring until the last half of April when most of the state received much needed rain. Temperatures were above normal most of March and April. Temperatures dipped below normal the last two weeks of April in western Kansas. The crop progressed ahead of both last year and the average and started jointing in early March. The crop was rated 97 percent jointed by the end of April compared to 87 percent last year and 79 percent for the average. As of May 1, 49 percent was heading compared to 34 percent last year and 28 percent for the 5 year average. Top soil moisture supplies declined until late April when widespread rain improved them. Topsoil moisture was rated 11 percent very short to short and 89 percent adequate to surplus by the end of April compared to last year at 38 percent very short to short and 62 percent adequate to surplus. The crop condition was rated 52 percent good to excellent by the end of April compared to 27 percent last year.

Total production was 467,400,000 bushels with a yield of 57 bushels per acre, a new record yield. Protein content averaged 11.7 percent with a test weight of 60.5 pounds per bushel and a moisture content of 11.2 percent. The wheat graded 56 percent No. 1 and 41 percent No. 2. Despite its share dropping by over three percentage points, Everest retained its position as the leading variety of wheat seeded in Kansas for the third straight year, accounting for 12.2 percent of the State's 2016 wheat crop. Everest, developed by Kansas State University, was the most popular variety in the eastern two thirds of the State. T158 jumped from third to second with 5.8 percent of the State's acreage, surpassing last year's runner-up, TAM 111, at 5.7 percent. Other varieties included Winter Hawk with 4.7 percent of the planted acreage, WB Cedar with 4.5 percent, TAM 112 with 4.2 percent. Blends of 2 or more varieties accounted for 10.7 percent of the State's planted acreage and were used more extensively in the north central, east central and central areas of the State. Hard White varieties accounted for 3.1 percent of the State's acreage. Danby was the leading Hard White variety, accounting for slightly over 40 percent of the State's white wheat. The majority of the white wheat was planted in the southwestern portion of the State.

1866-1920

| Year | Area Planted | Area Harvested | Yield | Production | Price | Farm Value |
|------|--------------|----------------|---------|---------------|------------|-------------|
| | 1,000 Acres | | Bushels | 1,000 Bushels | Per Bushel | |
| 1866 | - | 68 | 19.0 | 1,292 | 1.33 | \$1,718,360 |
| 1867 | - | 89 | 12.5 | 1,112 | 1.32 | 1,467,840 |
| 1868 | - | 99 | 14.5 | 1,436 | 1.00 | 1,436,000 |
| 1869 | - | 151 | 16.0 | 2,416 | 0.63 | 1,522,080 |
| 1870 | - | 156 | 15.5 | 2,418 | 0.77 | 1,861,860 |
| 1871 | - | 169 | 16.0 | 2,704 | 1.02 | 2,758,080 |
| 1872 | - | 186 | 11.5 | 2,139 | 1.26 | 2,695,140 |
| 1873 | - | 310 | 14.0 | 4,340 | 0.92 | 3,992,800 |
| 1874 | - | 705 | 13.7 | 9,658 | 0.76 | 7,340,080 |
| 1875 | - | 735 | 17.0 | 12,495 | 0.76 | 9,496,200 |
| 1876 | - | 1,000 | 14.5 | 14,500 | 0.79 | 11,455,000 |
| 1877 | - | 1,021 | 13.5 | 13,784 | 0.80 | 11,027,200 |
| 1878 | - | 1,705 | 16.0 | 27,280 | 0.59 | 16,095,200 |
| 1879 | - | 1,861 | 9.3 | 17,307 | 0.89 | 15,403,230 |
| 1880 | - | 2,340 | 10.0 | 23,400 | 0.70 | 16,380,000 |
| 1881 | - | 2,180 | 9.5 | 20,710 | 1.05 | 21,745,500 |
| 1882 | - | 1,600 | 20.0 | 32,000 | 0.67 | 21,440,000 |
| 1883 | - | 1,220 | 17.5 | 21,350 | 0.78 | 16,653,000 |
| 1884 | - | 2,190 | 18.0 | 39,420 | 0.45 | 17,739,000 |
| 1885 | - | 1,370 | 10.5 | 14,385 | 0.65 | 9,350,250 |
| 1886 | - | 1,320 | 11.5 | 15,180 | 0.58 | 8,804,400 |
| 1887 | - | 1,240 | 9.5 | 11,780 | 0.61 | 7,185,800 |
| 1888 | - | 1,090 | 15.0 | 16,350 | 0.88 | 14,388,000 |
| 1889 | - | 1,583 | 19.2 | 30,394 | 0.55 | 16,716,700 |
| 1890 | - | 2,160 | 15.0 | 32,400 | 0.77 | 24,948,000 |
| 1891 | - | 3,660 | 16.0 | 58,560 | 0.73 | 42,748,800 |
| 1892 | - | 3,540 | 18.0 | 63,720 | 0.52 | 33,134,400 |
| 1893 | - | 3,490 | 9.0 | 31,410 | 0.42 | 13,192,200 |
| 1894 | - | 3,860 | 10.5 | 40,530 | 0.44 | 17,833,200 |
| 1895 | - | 2,390 | 8.0 | 19,120 | 0.45 | 8,604,000 |
| 1896 | - | 3,130 | 14.5 | 45,385 | 0.63 | 28,592,550 |
| 1897 | - | 3,050 | 17.0 | 51,850 | 0.74 | 38,369,000 |
| 1898 | - | 4,580 | 15.0 | 68,700 | 0.50 | 34,350,000 |
| 1899 | - | 3,804 | 10.2 | 38,801 | 0.52 | 20,176,520 |
| 1900 | - | 4,290 | 18.2 | 78,078 | 0.55 | 42,942,900 |
| 1901 | - | 5,260 | 17.0 | 89,420 | 0.59 | 52,757,800 |
| 1902 | - | 4,300 | 11.0 | 47,300 | 0.55 | 26,015,000 |
| 1903 | - | 5,850 | 15.8 | 92,430 | 0.59 | 54,533,700 |
| 1904 | - | 5,100 | 12.5 | 63,750 | 0.89 | 56,737,500 |
| 1905 | - | 5,580 | 14.0 | 78,120 | 0.71 | 55,465,200 |
| 1906 | - | 5,810 | 14.5 | 84,245 | 0.58 | 48,862,100 |
| 1907 | - | 6,880 | 11.0 | 75,680 | 0.82 | 62,057,600 |
| 1908 | - | 6,770 | 12.5 | 84,625 | 0.88 | 74,470,000 |
| 1909 | 6,488 | 5,974 | 13.0 | 77,451 | 0.98 | 75,902,000 |
| 1910 | 6,983 | 4,870 | 12.4 | 60,475 | 0.87 | 52,613,000 |
| 1911 | 7,373 | 5,300 | 10.7 | 56,799 | 0.86 | 48,847,000 |
| 1912 | 7,867 | 6,460 | 14.5 | 93,695 | 0.80 | 74,956,000 |
| 1913 | 7,791 | 7,250 | 12.0 | 86,790 | 0.78 | 67,696,000 |
| 1914 | 9,112 | 8,650 | 20.0 | 172,750 | 0.93 | 160,658,000 |
| 1915 | 9,493 | 8,520 | 12.5 | 106,478 | 0.97 | 103,284,000 |
| 1916 | 8,683 | 8,170 | 12.0 | 97,980 | 1.44 | 141,091,000 |
| 1917 | 9,608 | 3,730 | 11.5 | 42,785 | 2.12 | 90,704,000 |
| 1918 | 10,199 | 7,250 | 13.5 | 97,710 | 2.00 | 195,420,000 |
| 1919 | 11,671 | 11,624 | 13.2 | 153,311 | 2.14 | 328,086,000 |
| 1920 | 10,559 | 9,294 | 15.6 | 144,933 | 1.76 | 255,082,000 |

1921-1970

| Year | Area Planted | Area Harvested | Yield | Production | Price | Farm Value |
|------|--------------|----------------|---------|---------------|------------|-------------|
| | 1,000 Acres | | Bushels | 1,000 Bushels | Per Bushel | |
| 1921 | 11,470 | 10,554 | 12.7 | 133,964 | 1.03 | 137,983,000 |
| 1922 | 12,299 | 9,756 | 12.8 | 124,809 | 0.94 | 117,320,000 |
| 1923 | 11,601 | 8,299 | 10.1 | 83,804 | 0.90 | 75,424,000 |
| 1924 | 10,226 | 9,817 | 16.0 | 157,022 | 1.15 | 180,575,000 |
| 1925 | 10,941 | 8,755 | 9.2 | 80,539 | 1.48 | 119,198,000 |
| 1926 | 11,695 | 10,409 | 14.8 | 153,991 | 1.20 | 184,789,000 |
| 1927 | 12,750 | 10,202 | 11.2 | 114,216 | 1.24 | 141,628,000 |
| 1928 | 12,761 | 10,639 | 16.3 | 173,185 | 0.99 | 171,453,000 |
| 1929 | 13,142 | 12,550 | 12.4 | 155,563 | 0.99 | 154,007,000 |
| 1930 | 13,687 | 13,132 | 14.2 | 186,277 | 0.63 | 117,355,000 |
| 1931 | 13,898 | 13,623 | 18.5 | 251,885 | 0.33 | 83,122,000 |
| 1932 | 12,963 | 10,365 | 11.6 | 120,178 | 0.33 | 39,659,000 |
| 1933 | 13,231 | 7,361 | 9.1 | 66,931 | 0.71 | 47,521,000 |
| 1934 | 12,699 | 8,610 | 9.8 | 84,323 | 0.84 | 70,831,000 |
| 1935 | 13,456 | 6,888 | 9.3 | 64,055 | 0.89 | 57,009,000 |
| 1936 | 14,254 | 10,458 | 11.5 | 120,234 | 1.00 | 120,234,000 |
| 1937 | 17,110 | 13,172 | 12.0 | 158,052 | 1.01 | 159,633,000 |
| 1938 | 16,942 | 14,494 | 10.5 | 152,163 | 0.57 | 86,733,000 |
| 1939 | 13,703 | 9,574 | 12.0 | 114,858 | 0.66 | 75,806,000 |
| 1940 | 12,360 | 8,739 | 14.5 | 126,553 | 0.64 | 80,994,000 |
| 1941 | 13,091 | 11,799 | 14.7 | 173,332 | 0.94 | 162,932,000 |
| 1942 | 10,861 | 10,374 | 19.3 | 200,101 | 1.09 | 218,110,000 |
| 1943 | 10,741 | 10,159 | 14.2 | 144,241 | 1.37 | 197,610,000 |
| 1944 | 13,210 | 11,377 | 16.5 | 187,700 | 1.42 | 266,534,000 |
| 1945 | 14,148 | 13,416 | 15.5 | 207,939 | 1.49 | 309,829,000 |
| 1946 | 14,006 | 13,147 | 16.2 | 212,977 | 1.91 | 406,786,000 |
| 1947 | 15,404 | 14,855 | 19.3 | 286,702 | 2.25 | 645,080,000 |
| 1948 | 14,634 | 13,221 | 17.5 | 231,368 | 1.97 | 455,795,000 |
| 1949 | 16,244 | 14,279 | 11.0 | 157,069 | 1.89 | 296,860,000 |
| 1950 | 13,807 | 12,280 | 14.5 | 178,060 | 2.02 | 359,681,000 |
| 1951 | 14,773 | 9,701 | 13.0 | 126,113 | 2.13 | 268,621,000 |
| 1952 | 15,068 | 14,649 | 21.0 | 307,629 | 2.14 | 658,326,000 |
| 1953 | 14,315 | 11,573 | 12.5 | 144,662 | 2.11 | 305,237,000 |
| 1954 | 11,738 | 10,069 | 17.5 | 176,208 | 2.18 | 384,133,000 |
| 1955 | 10,799 | 8,559 | 15.0 | 128,385 | 2.06 | 264,473,000 |
| 1956 | 10,907 | 9,244 | 15.5 | 143,282 | 2.00 | 286,564,000 |
| 1957 | 7,199 | 5,269 | 19.0 | 100,111 | 1.96 | 196,218,000 |
| 1958 | 10,727 | 10,433 | 28.5 | 297,340 | 1.78 | 529,265,000 |
| 1959 | 10,727 | 10,329 | 20.5 | 211,744 | 1.78 | 376,904,000 |
| 1960 | 10,727 | 10,329 | 28.5 | 294,376 | 1.74 | 512,214,000 |
| 1961 | 10,727 | 10,329 | 26.5 | 273,718 | 1.79 | 489,955,000 |
| 1962 | 9,762 | 8,986 | 23.5 | 211,171 | 2.06 | 435,012,000 |
| 1963 | 10,641 | 8,627 | 21.5 | 185,480 | 1.86 | 344,993,000 |
| 1964 | 10,535 | 9,490 | 22.0 | 208,780 | 1.37 | 286,029,000 |
| 1965 | 11,272 | 10,059 | 23.5 | 236,386 | 1.35 | 319,121,000 |
| 1966 | 11,047 | 10,260 | 19.5 | 200,070 | 1.64 | 328,115,000 |
| 1967 | 13,146 | 11,081 | 20.0 | 221,620 | 1.35 | 299,187,000 |
| 1968 | 11,963 | 9,751 | 26.0 | 253,526 | 1.22 | 309,302,000 |
| 1969 | 10,767 | 9,849 | 31.0 | 305,319 | 1.19 | 363,330,000 |
| 1970 | 9,690 | 9,061 | 33.0 | 299,013 | 1.25 | 373,766,000 |

1971-2016

| Year | Area Planted | Area Harvested | Yield | Production | Price | Farm Value |
|------|--------------|----------------|---------|---------------|--------------------|-----------------------------|
| | 1,000 Acres | | Bushels | 1,000 Bushels | Per Bushel | |
| 1971 | 9,593 | 9,061 | 34.5 | 312,605 | 1.32 | 412,639,000 |
| 1972 | 10,300 | 9,400 | 33.5 | 314,900 | 1.68 | 529,032,000 |
| 1973 | 10,800 | 10,400 | 37.0 | 384,800 | 3.75 | 1,443,000,000 |
| 1974 | 12,000 | 11,600 | 27.5 | 319,000 | 3.86 | 1,231,340,000 |
| 1975 | 12,800 | 12,100 | 29.0 | 350,900 | 3.42 | 1,200,078,000 |
| 1976 | 12,900 | 11,300 | 30.0 | 339,000 | 2.59 | 878,010,000 |
| 1977 | 13,200 | 12,100 | 28.5 | 344,850 | 2.24 | 772,464,000 |
| 1978 | 11,300 | 10,000 | 30.0 | 300,000 | 2.89 | 867,000,000 |
| 1979 | 12,100 | 10,800 | 38.0 | 410,400 | 3.72 | 1,526,688,000 |
| 1980 | 13,000 | 12,000 | 35.0 | 420,000 | 3.78 | 1,587,600,000 |
| 1981 | 13,900 | 12,100 | 25.0 | 302,500 | 3.76 | 1,146,800,000 |
| 1982 | 14,100 | 13,100 | 35.0 | 458,500 | 3.41 | 1,563,485,000 |
| 1983 | 13,200 | 10,800 | 41.5 | 448,200 | 3.40 | 1,523,880,000 |
| 1984 | 13,300 | 11,200 | 38.5 | 431,200 | 3.32 | 1,431,584,000 |
| 1985 | 12,400 | 11,400 | 38.0 | 433,200 | 2.86 | 1,238,952,000 |
| 1986 | 11,500 | 10,200 | 33.0 | 336,600 | 2.25 | 757,350,000 |
| 1987 | 10,700 | 9,900 | 37.0 | 366,300 | 2.43 | 890,109,000 |
| 1988 | 10,200 | 9,500 | 34.0 | 323,000 | 3.58 | 1,156,340,000 |
| 1989 | 12,400 | 8,900 | 24.0 | 213,600 | 3.74 | 798,864,000 |
| 1990 | 12,400 | 11,800 | 40.0 | 472,000 | 2.51 | 1,184,720,000 |
| 1991 | 11,800 | 11,000 | 33.0 | 363,000 | 2.81 | 1,020,030,000 |
| 1992 | 12,000 | 10,700 | 34.0 | 363,800 | 3.13 | 1,138,694,000 |
| 1993 | 12,100 | 11,100 | 35.0 | 388,500 | 3.00 | 1,165,500,000 |
| 1994 | 11,900 | 11,400 | 38.0 | 433,200 | 3.32 | 1,438,224,000 |
| 1995 | 11,700 | 11,000 | 26.0 | 286,000 | 4.59 | 1,312,740,000 |
| 1996 | 11,800 | 8,800 | 29.0 | 255,200 | 4.63 | 1,181,576,000 |
| 1997 | 11,400 | 10,900 | 46.0 | 501,400 | 3.16 | 1,584,424,000 |
| 1998 | 10,700 | 10,100 | 49.0 | 494,900 | 2.53 | 1,252,097,000 |
| 1999 | 10,000 | 9,200 | 47.0 | 432,400 | 2.25 | 972,900,000 |
| 2000 | 9,800 | 9,400 | 37.0 | 347,800 | 2.65 | 921,670,000 |
| 2001 | 9,800 | 8,200 | 40.0 | 328,000 | 2.69 | 882,320,000 |
| 2002 | 9,700 | 8,200 | 33.0 | 270,600 | 3.41 | 922,746,000 |
| 2003 | 10,500 | 10,000 | 48.0 | 480,000 | 3.15 | 1,512,000,000 |
| 2004 | 10,000 | 8,500 | 37.0 | 314,500 | 3.25 | 1,022,125,000 |
| 2005 | 10,000 | 9,500 | 40.0 | 380,000 | 3.31 | 1,257,800,000 |
| 2006 | 9,800 | 9,100 | 32.0 | 291,200 | 4.56 | 1,327,872,000 |
| 2007 | 10,400 | 8,600 | 33.0 | 283,800 | 5.93 | 1,682,934,000 |
| 2008 | 9,700 | 9,000 | 40.0 | 360,000 | 6.94 | 2,498,400,000 |
| 2009 | 9,300 | 8,950 | 42.0 | 375,900 | 4.79 | 1,800,561,000 |
| 2010 | 8,300 | 8,000 | 45.0 | 360,000 | 5.14 | 1,850,400,000 |
| 2011 | 8,800 | 7,950 | 35.0 | 278,250 | 7.03 | 1,956,098,000 |
| 2012 | 9,400 | 9,100 | 42.0 | 382,200 | 7.48 | 2,858,856,000 |
| 2013 | 9,500 | 8,450 | 38.0 | 321,100 | 6.99 | 2,244,489,000 |
| 2014 | 9,600 | 8,800 | 28.0 | 246,400 | 6.07 | 1,495,648,000 |
| 2015 | 9,200 | 8,700 | 37.0 | 321,900 | ^{1/} 4.85 | ^{1/} 1,561,215,000 |
| 2016 | 8,500 | 8,200 | 57.0 | 467,400 | ^{2/} | ^{2/} |

^{1/} Preliminary. ^{2/} 2016 figures will be available February 2017.