

# Climate of Northwestern Kansas



## **NORTHWEST RESEARCH-EXTENSION CENTER**

Report of Progress 594

Agricultural Experiment Station Kansas State University, Manhattan

Walter R. Woods, Director

## CONTENTS

---

Physical Causes of Climate .....	1
Global Circulation Patterns .....	1
Topography.....	2
Solar Energy.....	2
History of Weather Observations at Colby .....	3
Automated Weather Stations .....	5
Data Availability .....	5
Climatological Records at Colby .....	7
Air Temperature .....	7
Precipitation .....	8
Evaporation .....	10

---

K.A.E.S. Contribution No. 90-400-S

## ABSTRACT

The climate of a region is an important natural resource. It determines the type of vegetation that predominates and the adjustments necessary for comfortable life styles. Through centuries of influence, it has played a major role in determining the types of soil that develop. Understanding climate and its variability is extremely important in predicting what it may be like in the future. Such an understanding is essential for evaluating activities that impact our environment. This report reviews the physical causes of climate and the history and types of weather data collected at Colby, Kansas. A series of tables and figures summarize nearly 100 years of weather observations.

*Northwest Research-Extension Center, Richard S. White, Head  
Kansas Agricultural Experiment Station, Walter R. Woods, Director  
Kansas State University*

## LIST OF TABLES

Table	Title	Page
1	Official observers of Colby weather stations .....	4
2	Average monthly, seasonal, and yearly maximum air temperatures ...	12
3	Number of days during which the maximum temperature equaled or exceeded the threshold value .....	14
4	Average monthly, seasonal, and yearly minimum air temperatures ...	16
5	Number of days during which the minimum temperature was less than or equal to the threshold value .....	18
6	Average monthly, seasonal, and yearly mean air temperatures .....	20
7	Record air temperatures, year of occurrence, and number of times each were recorded.....	22
8	100-degree days .....	30
9	"Freeze" dates and "freeze-free" season lengths .....	31
10	Probabilities of freeze dates and freeze-free periods .....	33
11	Growing-degree units by month and season .....	34
12	Average growing degree units by day and month .....	36
13	Average heating- and cooling-degree units .....	37
14	Monthly, seasonal, and yearly precipitation amounts .....	38
15	Number of days in the year with measurable precipitation equaling or exceeding threshold amounts .....	40
16	Probabilities that monthly precipitation will be equal to or less than the indicated amount .....	41
17	Monthly, winter, and yearly snowfall .....	42
18	Monthly and seasonal pan evaporation .....	44
19	Evapotranspiration .....	46

## LIST OF FIGURES

Figure	Title	Page
1	Average daily air temperatures, 1900-1989 .....	47
2	Average annual maximum, minimum, and mean air temperatures .....	48
3	"Freeze-free" growing seasons, 1900-1989 .....	49
4	Annual precipitation, amounts, 1893-1989 .....	50
5	April-through-September precipitation amounts, 1893-1989 .....	51
6	Average monthly precipitation .....	52
7	Number of days during the year when precipitation equaled or exceeded certain threshold amounts, 1900-1989 .....	53
8	Annual snowfall amounts 1900-1989 .....	54



# CLIMATE OF NORTHWESTERN KANSAS

L. Dean Bark and Herbert D. Sunderman  
KSU Climatologist Emeritus and NWREC Research Soil Scientist

This report is intended to define the climatic resources of northwestern Kansas as given by the records at Colby. It contains a number of listings of climatic data illustrating how conditions have varied since the late 1800s and, presumably, how they will vary in the next 100 years. These data should be useful in designing strategies for future operations and will provide material for comparing current conditions with those that have occurred in the past.

The city of Colby is located at 39° 23'N latitude and 101° 04'W longitude--about 130 miles from the geographical center of the United States and only 250 miles east of the Rocky Mountains. Then climate of northwest Kansas can be described as continental with large daily and annual ranges of temperature and a summer precipitation pattern. Since the records began in 1893, annual temperature has averaged 52°F and annual precipitation 18.65 inches.

These brief statements, although accurate, tell only part of the story. Seldom are there years with "average" weather. The variability from year to year is an important aspect of regional climate.

## Physical Causes of Climate

An area's climate reflects the various day-to-day weather patterns experienced in the region. The magnitude of expected deviations from the average is often as important as the average value. For vegetation to be continuously adapted to an area, it must be capable of surviving the extremes rather than just the average condition.

Except for microclimate (climate in the first 3 feet above the ground), local conditions do not affect the climate of a region very much. The weather of a region and, thus, the climate are largely determined by its position on our spinning planet.

## Global Circulation Patterns

**Jet Stream.** Air circulation within our atmosphere develops weather systems that constantly change and move over the surface of the earth. Because of the rate at which the earth spins on its axis and the fact that the surface of the earth near the equator receives more solar energy than the surface near the poles, the circulation is most intense in a meandering east-to-west stream in mid-latitudes in the northern hemisphere. This phenomenon is called the *jet stream*, and it initiates and steers large cyclones and anticyclones along its path. How frequently the jet stream passes over a specific location has a lot to do in determining the climate at that location. During the winter, northwestern Kansas is frequently under the track of the jet stream, whereas during the summer, the track shifts north along the Canadian border.

The jet stream pattern in mid-latitudes steers weather systems generally from west to east. Air arriving at a location has been influenced by the surface over which it has been passing prior to that time. For example, air reaching the west coast has spent days passing over the Pacific Ocean and arrives carrying a large amount of moisture. On the other hand, locations on the east coast do not normally experience this marine influence.

**Pressure Systems.** Another feature influencing Kansas weather is a region of semi-permanent high pressure located to the south of the path of the jet stream. The continental land masses tend to break this region into two systems, one located over the Atlantic Ocean and the other over the Pacific. Just as the jet stream does, these features of the circulation pattern also shift further northward in summer, when there is less contrast in temperature between the poles and the equator. The clockwise circulation around high pressure systems creates southerly winds in the western region of the system. These southerly winds pass across the Gulf of Mexico and bring considerable amounts of moisture to the continental interior east of the Rockies during the summer. These warm, moist air masses are often unstable and capable of producing severe thunderstorms. Because of this, a very large portion of the annual precipitation in this region occurs during the summer season. Southeast Kansas, the part of the state nearest the Gulf source of moisture, receives the most rainfall. Western Kansas, deep in the rain shadow of the Rockies and furthest removed from the Gulf, receives an average of about 20 inches less precipitation than does the Southeast.

### **Topography**

West-coast and Rocky Mountain chains are extreme examples of how topography influences climate. They lie across the path of the jet stream and have a considerable influence on the atmosphere passing over them. In general, air cools as it rises, and less moisture is required for it to become saturated. Because the air arriving from the Pacific is moist and is pushed upward by the mountains, it soon cools to the point that saturation occurs and clouds are formed. As it rises still higher, moisture as rain or snow may be lost from the moving air stream. As the air passes over the mountain crest, it descends and warms and clouds disappear. The western slopes of mountain chains are relatively moist regions compared to their eastern slopes. Western Kansas lies in the rain shadow of the Rocky Mountains, and almost all of the Pacific moisture has been lost from the air stream by the time it reaches Kansas.

### **Solar Energy**

Temperatures in a region depend on the amount of solar energy received and how it is distributed over the globe. These factors, in turn, are influenced by several variables. First, the earth's axis is not vertical to the plane of revolution about the sun. The axis tilts toward the sun during the summer and away from it during the winter. This tilt causes the mid-latitudes to experience marked temperature differences between the seasons. Surprisingly, temperatures are coldest in Kansas when the earth is nearest the sun and warmest when it's furthest away.

Second, land masses heat and cool much more rapidly than large lakes or oceans because less energy is required to change the temperature of soil than of water. For this reason, mid-continent and mid-latitude regions experience much larger ranges of temperatures than coastal regions or the tropics.

Third, elevation above sea level also influences the temperature of a region, as people who have vacationed in the mountains know. Northwest Kansas is over 3,000 feet above sea level compared to some parts of southeast Kansas at less than 1,000 feet elevation. The higher elevation accounts for greater nighttime cooling and lower minimum temperatures on cloudless nights in northwestern Kansas than in other parts of the state.

All of these factors combine in a rather complex way to influence the climate of a region—an influence that extends over very large areas unaffected by state boundaries. So, much of what can be said about the climate of Colby also applies to western Kansas, eastern Colorado, and western Nebraska.

## History of Weather Observations at Colby

Thomas Jefferson encouraged citizens of the new country to maintain weather records as a means of describing an important resource. His example produced some early records along the east coast, but weather observations did not come to the Plains until the 19th century. At that time, the Surgeon General suspected that there was a connection between the health of the army's soldiers and the weather. He ordered the physicians at each army post to take and maintain weather records. So it was that the earliest weather records in Kansas were started at Ft. Leavenworth (1836), Ft. Scott (1843), Ft. Wallace (1870), Ft. Atkinson (1850), Ft. Larned (1860), Ft. Dodge (1867), and Ft. Ellsworth (1866). Little use was made of these records; they were shipped to the War Department in Washington and stored. As the need for a military presence declined on the frontier, many of the outposts were abandoned along with their weather stations.

Invention of the telegraph provided a means for dispersing weather information at a speed that would eventually make weather forecasting possible. Control of the Army weather observation program then changed from the Surgeon General to the Chief Signal Officer. Volunteer observers were sought to keep weather records at their place of residence. Not surprisingly, the majority of the early observing stations in Kansas were along the route of the Union Pacific railroad, where there was easy access to the telegraph.

In 1886, the Chief Signal Officer assigned Sgt. T. B. Jennings to Topeka to extend the network of voluntary observers across the state. His efforts led to the establishment of a weather station in Colby on June 1, 1888, with C. E. Bennett as the observer (Table 1). Mr. Bennett ceased to function in this capacity on July 31, 1889, and the station was closed until being restarted by Charles Buschow on May 7, 1892. Daily weather records have been made continuously in Colby since that time.

The Colby Branch Experiment Station was established in 1914 with the express purpose of finding solutions to agricultural problems created by the weather of northwestern Kansas. At the time of its founding, the area was beset by soil blowing from cultivated fields and being deposited in drifts several feet deep along fences and in ditches. Since the official weather station was located downtown at 4th and Garfield, with G. H. Kinkel as observer, the early weather records kept at the Experiment Station were unofficial and did not become part of the weather archives.

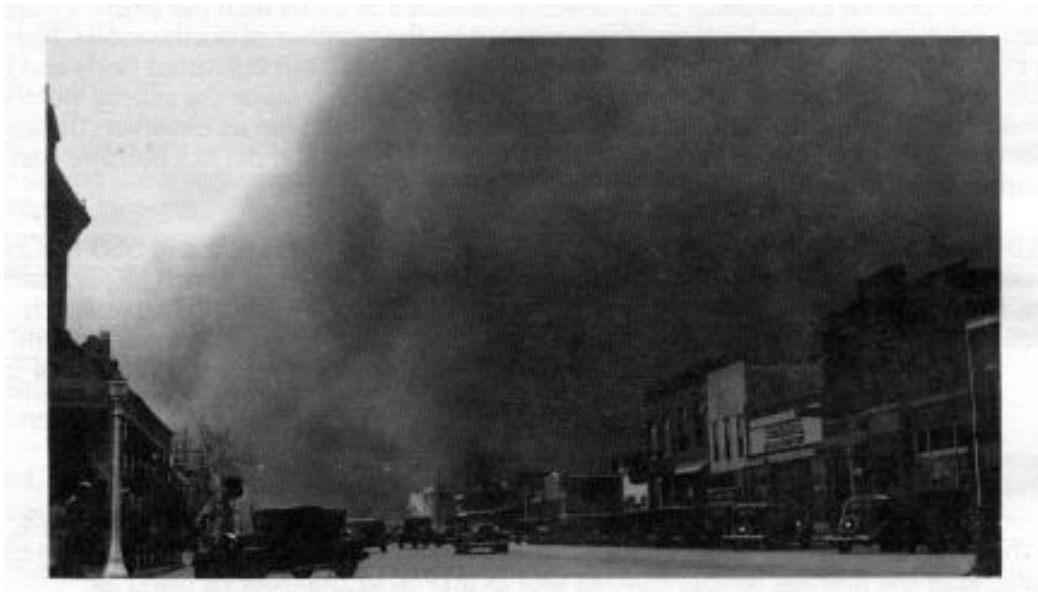
In 1935, J. B. Kuska became the official observer in Colby at his home at 585 N. Court. Mr. Kuska was the head of the USDA Dry Land project at the Colby Branch Experiment Station, so the official weather station in Colby became closely linked with the research activities. When Mr. Kuska retired as the weather observer in 1957, it was only natural to move the official weather station to the experiment station, where various members of the staff have continued the weather records begun before the turn of the century.

The several changes in location of the weather station should have little effect on continuity of the records, because all the locations were within a mile of one another. However, when the weather station was moved to the experiment station on March 28, 1957, the time of observation was changed from evening to morning. Such a change can noticeably alter the average temperature as well as any other calculations using air temperatures. Those searching for climatic changes or trends must be aware of this change in time of observation.

Table I. Official observers at the Colby weather station since its beginning in 1888.

Beginning	Ending	Observer	Location
6-01-1888	7-31-1889	C. E. Bennett	Unknown
5-07-1892	12-01-1905	C. Buschow	Unknown
12-01-1905	1-09-1911	R. M. Chelf	Unknown
1-09-1911	5-02-1911	E. V. Snell	Unknown
5-02-1911	9-30-1935	G. H. Kinkle	4th and Garfield
10-01-1935	4-01-1957	J. B. Kuska	585 N. Court
4-01-1957	8-31-1967	W. W. Harris	Experiment Station
9-01-1967	11-16-1970	R. I. Ibbetson	Experiment Station
11-17-1970	12-08-1971	G. E. Warrington	Experiment Station
12-09-1971	7-31-1972	M. D. Hinrichs	Experiment Station
8-01-1972	7-31-1975	J. Tuma	Experiment Station
8-01-1975	12-31-1975	D. Bordovsky	Experiment Station
1-01-1976	2-28-1985	H. D. Sunderman	Experiment Station
3-01-1985	Present	Staff members	NWREC <sup>1</sup>

<sup>1</sup> With a reorganization in 1986, the Colby Branch Experiment Station became a part of the Northwest Research-Extension Center.



*Dust storm approaching downtown Colby during the spring of 1935.*

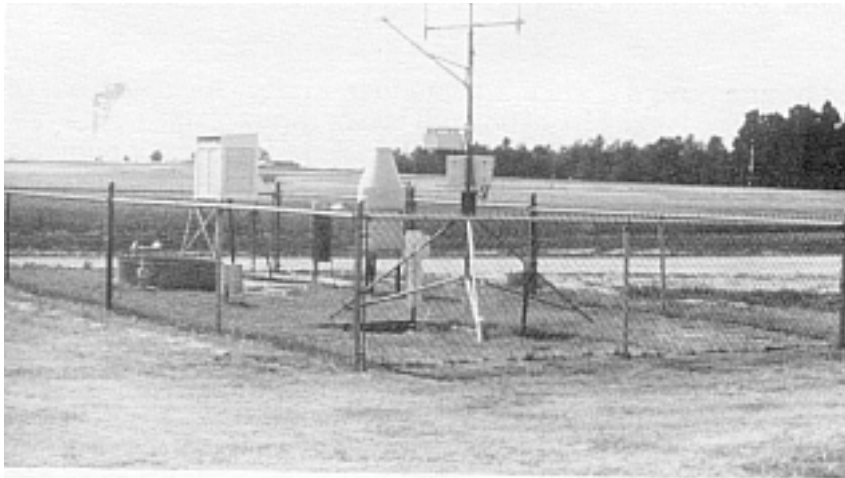


## Automated Weather Stations

Improvements in decision-making tools that rely on inputs of timely weather data have created a need for more types of more detailed weather data. In addition to the old standards of daily maximum and minimum temperatures and rainfall, weather elements such as solar radiation, soil temperatures, relative humidity, wind direction, and wind speed have become important. But manually collecting such data in the detail needed is physically and economically prohibitive.

Space-age technology has provided the instrumentation for specialized agricultural weather stations that can routinely make observations every few minutes and store the data for later retrieval. Under full automation, a remote computer can be programmed to call the weather station at a preselected time, collect the stored data, and then store it in its own memory for immediate use.

A network of these stations was established in 1980 at the Branch Stations and Experiment Fields of the Kansas Agricultural Experiment Station. Colby was one of the first stations in the network. These stations make hourly observations that provide information on the duration of the climatic elements above or below important threshold values during the day. Collection of the data from the network was automated in 1984, and the data set is almost complete since that time.



*Automated (foreground) and NOAA weather stations at the Northwest Research-Extension Center, 1987.*

## Data Availability

Observers at cooperative weather stations keep their data on standardized forms that are forwarded to the national weather service at the end of each month. These forms have varied over the years but have been essentially the same since 1893, when maximum and minimum thermometers became standard instruments. Copies of these completed forms are

available through the National Climatic Data Center (NCDC) in Asheville, North Carolina. Data taken prior to 1893 are stored in the National Archives in Washington, D.C. and are available on microfilm from NCDC. Observations taken since 1893 have been stored on microfiche and are also available from NCDC. In addition to reporting values for temperature and precipitation, these old records include interesting remarks made by the observers to better describe daily weather features.

The basic weather data from all the weather stations in Kansas are compiled and published monthly in "Climatological Data--Kansas". Subscriptions to the current issues can be obtained through the NCDC.

Because of the large volume, it is difficult to develop meaningful summaries from the records in manuscript form. Starting in 1948, the records were digitized as they were received. This simplified publication and made it possible for computers to create detailed summaries of the data. The Kansas Agricultural Experiment Station (KAES) entered into an agreement with the NCDC to digitize data for selected stations back to the beginning of their records. Included in this list were records obtained at Colby, St. Francis, Healy, and Tribune. The early records digitized by the KAES were sent to NCDC and combined with the more recent data, so complete records are now available in this form.

Digitized data can be obtained from NCDC or from the Weather Data Library in Umberger Hall at Kansas State University. The form may be either magnetic tape for mainframe computers or floppy disk for desktop computers. Current and certain types of longtime weather data can be obtained from the Northwest Research-Extension Center at Colby.



*View of the original, unofficial weather station at the Colby Branch Experiment Station, 1915.*

## **Climatological Records at Colby**

The complete weather record at Colby consists of so much data that it is difficult to use it for describing the local climate. Perhaps more importantly, publication requirements for a complete data set would be prohibitive. Summary tables and graphs reduce this volume to more manageable levels and are used here to illustrate the more interesting features. These summaries are shown in Tables 2-19 and Figures 1-8 appended to this report.

In a quest to reduce data sets to an absolute minimum, averages are sometimes calculated for an extended period of time. For the convenience of the reader, a number of the summary tables included in this report include monthly, seasonal, and yearly averages or totals. These are sometimes averaged or totaled over the entire length of the record or for just the last 20 years.

The reader is reminded that averages and totals can hide certain features that may have had a profound effect on the environment during that period. For example, the annual precipitation amount for a certain year may be near the longtime average, yet severe drought during a portion of that year may have caused a major reduction in crop yields. In other cases, a change in procedure may be the basis for an apparent change in the climate--for example, the change from morning to evening observation times and from sunken to raised pan evaporation measurements.

### **Air Temperature**

Air temperature is closely related to sunshine--higher during the daytime and lower at night; lower on cloudy days and higher on sunny days. Because of this diurnal range, thermometers have been designed to retain the maximum and the minimum readings that occur during a 24-hour period. In general, the maximum occurs in mid-afternoon and the minimum right at sunrise.

In addition to the day-night cycle of temperature, there is a pronounced annual cycle at this latitude as the sun's attitude varies above the horizon (Figure 1). The coldest part of the year is generally during the second week of January and the warmest during the third week of July. A lag occurs between the times of maximum and minimum solar radiation and the times of maximum and minimum temperatures. This is caused by the inertia in heating the land surface, which, in turn, heats the air above. A graphic summary of annual air temperatures is shown in Figure 2.

Average maximum air temperatures and number of days on which this temperature exceeded a certain threshold are shown in Tables 2 and 3, respectively. Equivalent data for minimum temperatures appear in Tables 4 and 5. Table 6 gives the mean temperatures for these same periods. The mean temperature is the average of the maximum and minimum temperatures.

The lowest temperature ever recorded at Colby was -32F on December 22, 1989, and the highest was 113F on July 25, 1940. Records for other dates are shown in Table 7. These values give a good indication of the extremes that are possible. When studying daily records, one should not assume that an unusual value is an indication of special conditions for that day. Given more years of observations, the extreme for that day will probably become quite similar to those of the neighboring days.

A temperature of 100 degrees or more always seems to have special significance, even though there is little to distinguish between the high 90s and the lower 100s. Table 8 lists the number of occurrence when temperature equaled or exceeded 100 degrees. Such temperatures are not an every-year occurrence. They occur much more frequently in dry

years when less of the sun's energy is used for evaporating moisture and more is available to warm the air.

Dates of occurrence of certain threshold temperatures are important in defining the growing season available for plant growth. Because various groups have different views of what constitutes a “killing freeze”, these dates are listed in Table 9 under five different freeze thresholds. Variability among years is illustrated in Figure 3 for thresholds of 32 and 28F. Dates are shown in terms of the day number of the year; January 1= 1, March 1 = 60, etc. The last freeze in the spring defines the beginning of the growing season and the first freeze in the fall marks the end of that season. The values are more useful when they are expressed as probabilities of occurrence (Table 10). These data indicate that an unprotected tomato plant set out on May 6 will likely be killed by a freezing temperature in 4 years out of 10.

Temperatures can also be used to derive other variables that relate to certain activities. One of these is the growing-degree unit that relates to the maturity of crops. Corn seed growers are now listing the growing-degree unit requirements of their hybrids instead of calendar days. Growing-degree units for corn are listed in Tables 11 and 12. Heating (HDU) and cooling (CDU) degree units (Table 13) are calculated similarly, but they relate to your utility bill. When it is cold in the winter (high values for HDU), fuel is used to warm the home, and in the summer, air conditioning uses more energy as the temperatures climb (high values for CDU).

## Precipitation

Moisture is a limiting factor for agriculture in all of the High Plains. The physical basis for this shortage was discussed in an earlier section. Yearly amounts average 18.65 inches but have ranged from a low of 6.62 to a high of 31.84 (Table 14). Seasonal (April-September) amounts average 14.55 inches but have ranged from 5.90 to 26.62. The variability of yearly and seasonal amounts is illustrated by Figures 4 and 5, respectively.

Precipitation includes both rain and snowfall, with the contribution of snow being the amount of water in a melted sample. As an approximation, an inch of snow will melt down to a tenth inch of water.



*View of runoff from rangeland south of NWREC after a severe thunderstorm on July 13, 1989.*

A comparison of the warm-season rainfall (April - September) with the annual total shows that most of the precipitation at Colby is received during the time when summer crops are growing most actively (Figure 6 and Table 14). Although only around 4 inches of moisture are received during the cool season, they make a significant contribution to soil moisture storage because very little is lost by evapotranspiration.

Measurable precipitation falls on an average of 72 days during the year (Table 15). A large number of these events produce very little precipitation, with only 23 producing as much as a quarter of an inch. Rainfall amounts exceeding 1 inch are infrequent, averaging between three and four times a year. A comparison of daily events exceeding 0.01, 0.25, and 1.00 inch are also shown in Figure 7. Table 16 lists the probabilities of receiving various amounts of precipitation during each month of the year. Such probabilities, based on our climatological experience, are the most reliable forms of forecast that can be made several months in advance.

Snowfall is also an important source of Precipitation. The amounts recorded at Colby are listed in Table 17. Snowfall has been observed at Colby as late as May and as early as September, but these cases are unusual. Note that although early-season snowfalls in October and November and late-season ones in April are infrequent, they can produce exceptional amounts. Warmer air at this time of year has a higher moisture content than the cold air of mid-winter.

Not only does snow provide needed moisture for this region, it also serves as an insulating blanket protecting the crowns of winter wheat from damage by extremely low temperatures.



*A winter scene at the Colby Branch Experiment Station, 1919.*

Unfortunately, high winds often accompany snowfall in northwestern Kansas. When this occurs, the snow is blown from bare fields (such as those seeded to wheat or clean tilled) and is piled in huge drifts wherever there is an obstruction to break the wind. Not only does this reduce the availability of moisture for crop production, it often disrupts traffic and other activities.

A recording rain gauge was installed at the Colby Branch Experiment Station on January 1, 1941. In addition to recording the amount received, this gauge also provides a time trace of the precipitation, so that rates of fall can be determined. These data can be found in the Hourly Precipitation Data publication circulated by the National Climatic Data Center. Such historical data are useful in designing drainage systems, such as storm sewers, culverts, and

waterways. When these records are combined with the area of a watershed, expected runoff can be calculated and used for designing water storage structures, such as terraces, ponds, lakes, and large reservoirs.

## Evaporation

If crops could utilize all of the precipitation that falls, the annual amounts at Colby would almost always be more than enough to raise good crops. Unfortunately, much of the moisture is lost before it can be utilized by the growing plant. Some of this loss is due to runoff when heavy rains fall on saturated soils, but, as mentioned earlier, heavy rains are infrequent in this area.

Another fraction of lost precipitation is that attributable to sublimation. This process is similar to evaporation except that frozen water or snow (solid phase) is converted to water vapor (gaseous phase) without ever going through the liquid phase. These losses have not been measured at the Colby weather stations but are known to occur and may occasionally be substantial.

The greatest loss of moisture is through evaporation from the soil surface and through the plants themselves, in a process called transpiration. The combination of these two processes is termed evapotranspiration. The contribution of transpiration has been recognized only for about the past 40 years. Prior to that time, water use was estimated by making measurements of evaporation from a pan of water. These measurements were made only during the warm season of the year, when there was little danger that the water in the pan would freeze.

Evaporation is influenced by wind speed, solar energy, humidity, and the wetness of the surface. Unlike the soil surface in the fields, which is generally dry, evaporation pans have an inexhaustible supply of water. For this reason, warm-season evaporation (total for April through September) is from 2 to more than 3 times the annual rainfall amount (Table 18).

Because there are many problems in interpreting pan evaporation data, it is not used as frequently as other climatic data. Notice that two different types of measuring pans were used at Colby and that their respective readings are quite different (Table 18). The pan in use from 1914 to 1965 was a Bureau of Plant Industry (BPI) design. It was 4 feet in diameter and buried in the soil, so that the water had a temperature similar to that of the soil.

In 1966, the BPI pan was replaced with the National Weather Service class A evaporation pan. It is 6 feet in diameter and mounted on a platform above ground, so that the air can circulate freely around it. In this case, the water has a temperature that is more similar to that of the air. The class A pan is the currently accepted method of measuring evaporation and is useful in estimating evaporation losses from lakes and reservoirs. One of the problems of maintaining these pans in a semi-arid region is that they are often the only watering hole in the area, and, thus, part of the loss is due to consumption by birds and other wildlife.

Because we now recognize the contribution of transpiration to water use, it has become more common to calculate the potential evapotranspiration from climatic variables. These values (Table 19) can be used with the rainfall record to keep a moisture budget for most crop production situations, for example, irrigation scheduling.



*Two examples of moisture-conserving cropping systems being researched at NWREC: ridge-till corn (above) and no-till wheat (below).*



Table 2. Average monthly, seasonal, and yearly maximum air temperatures (F) recorded at the Colby weather stations, 1893-1989.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1893	46.0	44.4	52.8	65.4	76.3	90.0	93.7	85.5	82.7	68.9	54.1	50.4	82.3	67.7
1894	41.6	36.1	59.8	70.3	79.7	88.1	94.2	91.9	81.3	72.7	58.4	45.4	84.3	68.5
1895	36.3	35.9	55.2	70.9	77.9	82.6	84.0	87.6	85.8	65.3	51.5	41.7	81.5	64.7
1896	48.0	52.7	51.1	70.7	77.4	89.2	91.1	90.7	76.2	65.5	46.8	52.4	82.6	67.7
1897	39.4	47.2	50.3	63.3	77.5	85.9	92.6	86.8	84.8	68.2	55.0	39.2	81.8	65.9
1898	42.9	52.0	54.3	66.3	70.1	84.6	90.8	93.4	79.1	63.1	51.0	40.7	80.7	65.8
1899	44.0	29.5	50.0	68.9	79.5	88.1	89.0	95.3	86.1	74.0	60.4	42.7	84.5	67.5
1900	49.2	40.0	57.0	61.8	78.0	88.6	93.2	96.6	81.8	77.5	57.1	51.7	83.3	69.4
1901	45.7	38.1	52.3	61.0	76.0	90.9	100.6	92.2	79.9	72.3	59.7	44.5	83.4	67.8
1902	43.6	45.0	56.9	68.8	78.4	84.2	91.3	91.1	77.2	71.6	55.9	35.8	81.8	66.7
1903	44.1	34.0	49.8	67.4	70.3	77.8	90.4	87.6	81.1	72.0	55.7	51.0	79.1	65.1
1904	43.6	50.5	62.4	66.5	74.7	80.1	89.1	88.5	85.1	72.6	63.4	47.3	80.7	68.7
1905	50.4	30.8	58.0	63.1	69.9	86.1	86.2	92.5	82.7	65.1	58.2	47.1	80.1	65.8
1906	50.5	51.3	37.8	70.0	77.1	83.9	86.0	88.8	81.2	65.3	51.5	52.9	81.2	66.4
1907	37.2	53.0	66.3	63.5	70.7	86.1	92.8	90.6	83.5	73.1	55.1	41.0	81.2	67.7
1908	45.1	45.1	60.4	70.4	74.1	84.6	87.8	88.7	85.6	67.6	55.0	41.1	81.9	67.1
1909	42.5	47.8	51.7	64.8	75.5	83.9	88.6	93.7	81.1	70.9	56.7	27.8	81.3	65.4
1910	38.9	46.1	73.8	71.6	71.0	86.3	95.2	88.7	82.8	76.7	59.3	48.6	82.6	69.9
1911	50.1	51.1	64.1	68.0	78.4	94.2	94.2	92.5	87.8	64.1	54.1	39.1	85.9	69.8
1912	30.9	41.9	37.2	66.5	79.4	80.1	89.5	87.6	75.1	69.5	59.3	47.1	79.7	63.7
1913	41.8	37.9	54.2	70.8	77.8	82.5	92.7	97.0	75.4	65.0	60.0	34.6	82.7	65.8
1914	46.0	44.3	55.1	69.2	73.2	87.7	88.4	89.7	85.2	72.0	65.0	33.5	82.2	67.4
1915	41.9	48.9	38.4	68.4	70.3	77.1	82.2	79.0	78.0	74.8	60.4	45.3	75.8	63.7
1916	36.1	51.0	64.4	63.4	75.5	81.9	96.0	91.5	82.5	69.5	54.8	40.7	81.8	67.3
1917	44.5	50.3	53.6	61.7	67.1	86.8	94.5	86.4	82.2	64.3	61.6	44.5	79.8	66.5
1918	34.5	52.3	62.1	55.0	78.2	92.5	91.0	93.8	77.0	69.9	51.4	41.7	81.3	66.6
1919	36.3	35.4	51.5	60.2	71.2	81.3	92.0	93.1	84.7	61.7	48.6	41.4	80.4	63.1
1920	45.4	47.6	60.2	56.9	70.6	80.5	91.3	86.4	82.6	73.4	52.4	42.1	78.1	65.8
1921	46.2	51.6	66.0	68.9	76.5	83.8	91.7	91.8	85.5	76.7	59.0	47.8	83.0	70.5
1922	40.7	47.3	54.0	61.8	74.7	88.8	92.5	94.2	87.8	74.9	54.3	45.9	83.3	68.1
1923	50.8	45.5	53.4	64.7	68.6	81.1	89.2	87.1	80.2	58.4	58.0	42.4	78.5	65.0
1924	41.8	45.7	41.4	67.9	70.7	86.7	90.0	91.0	76.9	73.3	58.7	31.4	80.5	64.6
1925	35.1	53.2	61.3	70.0	74.1	90.4	95.1	90.8	82.5	55.3	55.5	45.5	83.8	67.4
1926	44.7	54.9	57.2	64.5	77.5	87.0	94.9	96.0	79.8	73.6	50.4	40.6	83.3	68.4
1927	44.3	47.8	49.5	68.7	79.8	80.7	90.3	83.8	83.3	77.5	57.9	39.0	81.1	66.9
1928	47.1	45.8	57.7	64.1	75.7	74.0	87.6	89.5	84.8	69.9	53.2	45.0	79.3	66.2
1929	37.1	32.4	59.1	68.4	71.6	84.5	94.4	93.7	75.6	66.3	41.2	48.0	81.4	64.4
1930	27.5	60.3	55.4	70.2	71.7	83.5	97.6	92.1	83.3	63.8	54.2	44.0	83.1	67.0
1931	51.1	54.0	49.4	64.8	73.0	90.3	92.7	90.4	90.0	75.0	54.6	38.7	83.5	68.7
1932	33.0	48.1	48.6	69.2	79.1	84.2	98.0	90.2	82.7	68.8	57.2	37.8	83.9	66.4
1933	52.2	46.3	60.0	66.9	72.9	94.1	93.6	86.2	85.4	72.6	59.6	54.9	83.2	70.4
1934	50.3	48.7	59.8	71.1	86.2	92.3	101.4	94.6	79.8	77.7	59.5	46.5	87.6	72.3
1935	52.4	49.1	62.1	64.5	65.0	83.2	99.7	95.5	84.4	69.2	49.1	42.5	82.1	68.1
1936	38.1	34.1	58.8	66.4	77.1	91.3	99.4	97.2	83.1	67.8	58.1	46.8	85.8	68.2
1937	30.8	47.6	50.2	67.7	78.7	84.4	96.1	97.2	84.5	70.5	54.9	44.5	84.8	67.3
1938	47.3	50.6	62.1	67.3	74.2	86.7	94.6	97.9	87.0	79.6	56.4	49.5	84.6	71.1
1939	49.3	41.6	55.4	66.3	82.4	89.2	98.0	92.2	88.2	74.0	59.3	52.8	86.1	70.7
1940	25.3	39.9	54.3	64.7	76.1	89.4	96.1	88.1	82.3	76.9	50.2	47.1	82.8	65.9
1941	42.7	44.6	51.8	63.1	77.5	31.6	88.7	91.0	82.2	65.6	60.3	44.7	80.7	66.2
1942	35.9	39.1	53.8	67.3	72.9	80.3	95.8	90.4	79.5	69.2	56.1	44.0	81.0	65.4
1943	45.7	55.6	54.2	69.8	70.8	86.1	96.8	97.5	82.5	71.1	57.0	44.2	83.9	69.3
1944	46.9	42.0	46.7	55.0	76.8	83.3	87.8	90.3	83.1	71.5	53.5	40.8	79.4	64.8
1945	43.3	44.2	63.4	60.3	73.2	76.9	91.4	90.8	81.9	74.0	60.0	42.2	79.1	66.8

Continued



Table 2 concluded.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1946	49.6	57.0	62.3	74.7	71.7	87.2	94.6	90.5	82.7	65.1	48.0	51.4	83.6	69.6
1947	45.7	42.9	48.7	61.8	70.1	79.5	91.1	94.8	88.2	77.1	47.2	42.3	80.9	65.8
1948	40.6	41.4	46.0	73.3	76.1	82.8	89.9	89.6	86.4	72.5	47.5	40.5	83.0	65.6
1949	28.5	43.7	51.7	64.3	74.6	83.2	91.0	87.6	77.8	65.7	62.9	48.5	79.8	65.0
1950	43.4	53.3	53.8	64.0	73.0	88.2	84.7	82.4	76.0	75.8	54.1	50.1	78.1	66.6
1951	42.5	49.9	52.6	61.5	74.5	74.9	84.4	88.1	76.4	66.3	52.0	41.5	76.6	63.7
1952	48.1	50.1	45.3	62.6	73.0	93.9	91.8	91.0	85.9	71.0	49.5	41.1	83.0	66.9
1953	55.0	52.5	59.3	61.4	73.2	90.9	90.5	86.6	86.3	72.4	53.1	39.4	81.5	68.4
1954	39.2	59.6	51.2	72.0	68.3	89.8	95.9	90.3	87.2	65.8	58.9	48.3	83.9	68.9
1955	36.5	39.5	54.7	69.4	77.1	79.0	96.3	93.4	82.0	71.8	50.8	40.6	82.9	65.9
1956	41.5	41.3	57.9	63.1	79.2	93.6	91.1	90.5	85.7	74.4	51.2	49.8	83.9	68.3
1957	33.5	51.2	48.5	57.6	67.3	79.6	92.7	90.2	76.6	62.5	47.5	52.2	77.3	63.3
1958	45.0	38.8	31.9	56.9	74.7	82.5	84.5	89.6	83.7	70.9	53.6	43.1	78.7	62.9
1959	38.9	38.8	49.9	62.0	73.5	88.8	89.6	92.6	76.8	61.7	50.1	48.1	80.6	64.2
1960	34.4	29.9	40.8	66.3	71.6	81.7	88.4	91.0	83.5	70.3	56.4	41.1	80.4	63.0
1961	42.5	49.1	51.6	58.0	67.7	83.0	90.8	88.0	73.8	68.5	46.5	36.7	76.9	63.0
1962	35.9	48.9	48.6	65.7	80.3	79.3	88.1	90.5	75.3	70.6	54.2	46.7	79.9	65.3
1963	30.0	50.9	54.6	70.0	77.0	90.3	95.3	90.9	81.2	78.6	56.9	36.1	84.1	67.7
1964	48.4	39.1	48.3	61.9	77.6	83.4	95.5	89.0	80.1	71.7	53.9	45.9	81.3	66.2
1965	47.4	42.4	40.8	68.3	78.7	80.1	89.8	85.9	65.9	69.9	56.7	43.6	78.1	64.1
1966	32.4	35.5	56.3	59.7	76.6	84.3	92.1	84.3	77.7	67.3	53.4	39.6	79.1	63.3
1967	44.7	49.1	58.7	65.5	67.4	77.9	85.6	86.9	77.6	70.9	52.4	40.4	76.8	64.8
1968	41.6	46.0	60.2	63.9	68.0	87.4	89.3	85.2	80.4	71.0	49.5	33.6	79.0	64.7
1969	35.9	40.0	40.1	66.5	73.8	78.8	90.9	86.9	80.3	55.6	54.5	42.5	79.5	62.2
1970	39.6	53.3	43.6	61.5	78.4	83.8	91.5	92.5	77.3	60.7	50.4	49.3	80.8	65.2
1971	41.8	40.9	51.2	62.1	68.6	88.9	87.2	88.6	77.3	68.5	51.9	41.0	78.8	64.0
1972	40.1	48.3	63.5	63.3	71.7	86.0	85.5	85.6	79.0	63.5	40.8	31.8	78.5	63.3
1973	36.8	43.9	49.6	56.9	69.2	85.3	87.2	90.6	70.6	68.1	48.6	41.6	76.6	62.4
1974	32.5	48.9	55.4	63.4	77.1	83.4	94.4	81.8	74.5	68.7	51.7	41.8	79.1	64.5
1975	42.5	39.5	46.5	61.7	73.4	79.4	90.3	89.0	76.8	71.8	49.9	40.7	78.4	63.5
1976	41.2	53.5	51.5	63.3	68.8	85.4	90.0	90.9	77.1	61.0	50.3	46.9	79.3	65.0
1977	34.1	52.6	54.0	65.3	75.5	86.3	90.1	84.0	82.7	68.8	53.0	45.0	80.7	66.0
1978	26.9	26.5	50.9	65.7	69.5	83.2	93.2	88.7	84.2	69.7	46.6	38.0	80.8	61.9
1979	25.7	40.2	52.9	64.0	69.5	81.3	88.4	84.8	83.9	71.9	44.7	48.3	78.7	63.0
1980	32.9	38.5	44.3	59.0	70.0	87.8	96.7	91.5	81.2	69.0	55.8	49.7	81.0	64.7
1981	46.4	45.4	52.2	69.7	65.7	86.7	88.5	85.1	81.7	63.6	55.2	43.8	79.6	65.3
1982	36.6	39.4	52.4	62.1	69.7	74.7	88.6	88.1	78.2	65.7	50.0	44.1	76.9	62.5
1983	36.1	43.6	47.7	54.1	66.6	78.5	93.2	95.4	84.5	67.9	50.5	22.7	78.7	61.7
1984	35.8	46.2	47.0	54.3	71.3	84.7	91.6	90.8	74.9	59.0	54.1	40.3	77.9	62.5
1985	32.8	36.5	56.4	68.1	74.9	84.0	91.0	84.2	74.6	63.0	40.3	36.0	79.5	61.8
1986	53.0	47.5	61.7	68.0	73.4	85.9	91.9	87.5	78.8	64.2	51.7	43.9	80.9	67.3
1987	42.8	48.9	48.7	64.6	74.1	87.5	89.1	85.5	80.0	68.5	52.9	42.9	80.1	65.5
1988	32.3	42.1	54.4	61.9	75.0	91.2	90.6	90.6	79.7	66.0	55.8	49.0	81.5	65.7
1989	48.9	34.8	53.9	68.9	73.7	78.1	89.3	85.1	76.6	69.8	56.5	38.9	78.6	64.5
1893 through 1989:														
Avg.	41.2	45.1	53.4	65.0	74.0	84.8	91.6	89.9	81.1	69.2	53.9	43.3	81.1	66.0
Max.	55.0	60.3	73.8	74.7	86.2	94.2	101.4	97.9	90.0	79.6	65.0	54.9	87.6	72.3
Min.	25.3	26.5	31.9	54.1	65.0	74.0	82.2	79.0	65.9	55.3	40.3	22.7	75.8	61.7
1970 through 1989:														
Avg.	39.9	43.5	51.9	62.9	71.8	84.1	90.4	88.0	78.7	66.5	50.5	41.8	79.3	64.0
Max.	53.0	53.5	63.5	69.7	78.4	91.2	96.7	95.4	84.5	71.9	56.5	49.7	81.5	67.3
Min.	25.7	26.5	43.6	54.1	65.7	74.7	85.5	81.8	70.6	59.0	40.3	22.7	76.6	61.7

<sup>1</sup>Middle six months of the year.

Table 3. Number of days during which the maximum temperature equaled or exceeded the threshold value at the Colby weather stations, 1900-1989.

Year	Threshold value, °F										
	10	20	30	40	50	60	70	80	90	100	110
----- number of days -----											
1900	365	360	352	336	298	245	189	140	78	22	0
1901	365	359	345	318	279	233	191	131	76	30	0
1902	365	362	342	321	284	237	179	115	53	12	0
1903	365	363	350	322	280	226	169	102	48	4	0
1904	365	364	352	338	304	263	190	119	44	3	0
1905	357	352	344	319	285	217	171	116	40	7	0
1906	365	362	348	318	287	237	179	121	43	1	0
1907	364	361	345	321	290	247	183	130	65	6	0
1908	365	364	359	328	276	226	190	127	55	3	0
1909	363	352	332	307	274	228	180	126	56	2	0
1910	365	362	355	335	302	253	206	137	70	16	0
1911	363	361	349	336	299	247	188	136	92	29	0
1912	364	360	342	310	254	219	165	112	46	7	0
1913	364	361	336	304	277	225	170	120	70	18	0
1914	365	359	349	327	284	237	191	139	52	2	0
1915	365	364	352	315	270	234	176	89	6	0	0
1916	362	354	338	317	283	243	184	123	70	16	0
1917	365	361	348	324	295	229	161	113	51	14	0
1918	362	356	337	314	282	230	180	129	71	16	0
1919	362	355	342	293	248	203	152	114	61	11	0
1920	365	363	349	328	279	224	167	116	48	2	0
1921	365	365	359	342	314	256	204	139	75	8	0
1922	364	363	351	332	286	234	177	132	74	17	0
1923	364	363	359	337	293	220	147	104	36	1	0
1924	362	355	343	301	266	228	169	112	52	11	0
1925	365	365	353	330	289	228	167	124	71	18	0
1926	364	364	358	332	279	229	180	134	74	22	0
1927	364	362	350	326	285	229	179	125	58	8	0
1928	365	363	359	331	282	231	174	112	47	1	0
1929	364	359	339	304	263	219	164	111	65	17	0
1930	360	351	349	321	290	240	184	123	63	18	0
1931	365	363	350	323	290	235	183	143	80	18	0
1932	361	351	343	308	273	239	191	139	57	16	0
1933	362	362	358	350	327	261	187	130	75	13	0
1934	365	361	356	334	305	257	202	152	91	36	1
1935	365	364	360	333	286	234	174	118	70	31	0
1936	365	355	339	313	279	233	180	131	89	47	1
1937	362	360	337	311	280	229	181	131	83	23	0
1938	365	363	357	341	308	252	196	145	81	27	1
1939	364	363	352	334	298	248	198	152	90	18	0
1940	362	350	335	302	269	232	186	130	66	19	1
1941	365	363	350	319	283	237	169	109	58	2	0
1942	363	359	346	319	271	218	168	115	60	11	0
1943	363	361	357	339	291	248	189	124	78	27	0
1944	365	365	350	307	263	215	170	121	48	2	0
1945	365	363	350	323	286	231	174	117	58	13	0
1946	365	363	361	345	303	246	181	123	65	25	0
1947	365	361	349	316	265	211	167	117	68	19	0

Continued

Table 3 concluded.

Year	Threshold value, °F										
	10	20	30	40	50	60	70	80	90	100	110
	number of days										
1948	363	356	336	301	264	229	194	126	58	5	0
1949	363	357	343	311	279	239	174	107	44	2	0
1950	365	358	352	339	299	238	174	113	32	5	0
1951	361	356	352	316	282	223	160	82	30	1	0
1952	365	362	350	316	273	223	177	127	73	20	0
1953	365	365	361	331	300	235	178	136	64	10	0
1954	365	364	355	332	291	240	177	133	79	19	1
1955	365	364	340	308	267	224	180	118	76	15	0
1956	365	361	346	329	287	229	189	143	78	14	0
1957	364	361	347	321	264	201	147	95	47	8	0
1958	365	363	333	297	250	207	168	114	39	3	0
1959	363	356	347	314	260	203	156	117	62	13	0
1960	364	350	330	291	251	219	167	119	52	6	0
1961	363	358	344	313	262	206	148	99	48	10	0
1962	359	352	344	318	286	231	174	114	44	2	0
1963	362	349	335	316	287	237	193	144	70	15	0
1964	365	361	351	320	272	218	170	115	65	19	0
1965	364	360	341	319	278	216	167	95	38	8	0
1966	363	349	329	299	264	215	163	112	44	5	0
1967	365	363	350	316	279	218	169	99	32	4	0
1968	362	357	343	312	272	223	163	113	49	6	0
1969	364	363	348	286	241	199	153	101	41	8	0
1970	364	362	343	314	272	205	157	114	68	10	0
1971	365	358	343	311	266	218	164	110	52	8	1
1972	358	348	336	307	265	214	163	113	44	0	0
1973	363	356	342	308	256	202	147	100	44	6	0
1974	360	353	343	323	274	220	164	98	44	5	0
1975	365	358	338	300	256	217	170	99	49	2	0
1976	364	357	347	323	283	220	159	104	52	6	0
1977	364	355	348	328	280	231	178	113	42	2	0
1978	361	337	310	284	244	208	168	114	62	14	0
1979	360	353	333	302	254	215	164	115	47	4	0
1980	362	356	338	297	254	213	170	117	70	21	0
1981	364	360	351	327	284	221	160	103	42	6	0
1982	360	353	337	314	270	210	145	91	32	1	0
1983	356	353	330	286	242	202	148	113	66	8	0
1984	364	357	349	309	252	194	145	110	53	4	0
1985	360	349	324	294	250	205	159	107	48	9	0
1986	365	362	353	332	297	240	181	112	50	7	0
1987	365	361	353	312	271	229	176	112	49	3	0
1988	363	357	343	312	265	222	176	122	64	14	0
1989	357	350	336	310	276	223	171	104	34	2	0
1900 through 1989											
Avg.	363	359	346	318	277	227	173	118	58	11	0
Max.	365	365	361	350	327	263	206	152	92	47	1
Min.	356	337	310	284	241	194	145	82	6	0	0
1970 through 1989:											
Avg.	362	355	340	310	266	215	163	109	51	7	0
Max.	365	362	353	332	297	240	181	122	70	21	1
Min.	356	337	310	284	242	194	145	91	32	0	0

Table 4. Average monthly, seasonal, and yearly minimum air temperatures (F) recorded at the Colby weather stations, 1893-1989.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1893	16.5	10.9	19.4	29.9	38.5	55.6	59.4	56.2	50.7	36.3	20.7	18.0	48.4	34.5
1894	9.3	6.5	24.7	36.2	46.5	54.0	58.9	58.6	49.0	35.7	25.2	15.1	50.9	35.1
1895	11.0	9.0	21.2	37.5	44.1	52.6	57.0	56.9	50.6	32.3	22.9	17.5	49.8	34.5
1896	20.3	20.7	20.3	37.4	48.7	53.5	60.7	58.6	46.8	33.1	18.4	22.1	51.0	36.8
1897	13.9	17.5	22.5	34.3	45.3	54.6	59.3	57.8	54.0	39.2	23.7	14.2	50.9	36.5
1898	14.9	17.6	20.3	37.0	43.8	55.9	57.7	58.3	46.5	31.6	18.5	11.8	49.9	34.6
1899	11.6	2.0	17.8	31.5	44.2	52.9	58.9	59.6	49.6	36.4	25.8	17.5	49.5	34.2
1900	17.9	12.8	25.6	36.4	45.4	57.0	59.1	60.8	51.2	37.8	20.8	15.9	51.7	36.9
1901	12.4	11.4	23.1	35.7	43.4	56.6	62.5	59.6	50.0	38.2	23.8	15.7	51.3	36.2
1902	12.8	15.6	27.7	36.2	50.4	53.8	58.3	60.9	45.3	37.7	25.3	12.7	50.8	36.5
1903	17.4	10.0	23.5	33.5	44.2	50.6	59.7	58.5	47.1	35.6	24.4	16.1	48.9	35.2
1904	10.6	13.4	24.8	32.2	44.1	53.3	58.1	57.4	49.1	39.3	23.2	16.6	49.0	35.3
1905	12.8	6.8	31.3	32.9	43.6	56.8	55.4	58.5	52.1	29.3	26.4	14.4	49.9	35.2
1906	18.4	17.8	17.8	39.4	45.5	49.7	56.3	58.4	50.8	35.8	27.0	22.1	50.0	36.7
1907	15.2	18.3	31.3	30.2	40.4	53.4	60.8	59.9	51.1	38.2	24.2	17.4	49.3	36.8
1908	20.5	20.9	28.1	36.1	44.3	56.9	59.2	59.4	53.0	37.9	25.7	18.2	51.5	38.4
1909	15.6	17.6	24.9	32.1	43.2	56.8	63.0	62.3	49.2	37.3	29.1	9.0	51.1	36.8
1910	17.2	14.0	33.5	35.7	42.6	56.6	61.6	57.9	52.4	39.3	26.6	18.1	51.1	38.1
1911	15.7	16.0	27.3	34.4	45.8	58.9	59.7	57.7	54.6	34.4	18.8	11.2	51.9	36.3
1912	6.8	23.4	17.9	37.1	47.9	53.5	62.5	59.4	47.7	38.0	26.8	19.9	51.4	36.8
1913	13.8	11.3	22.9	37.3	48.0	56.1	64.2	62.7	50.3	35.8	30.5	18.5	53.1	37.8
1914	27.8	15.3	25.2	36.7	48.3	60.8	62.3	60.1	52.7	40.0	26.3	9.9	53.5	38.9
1915	14.4	23.3	20.2	42.0	42.7	53.5	58.6	55.3	51.2	38.4	28.2	18.7	50.5	37.3
1916	9.6	17.7	27.2	33.9	43.4	51.8	63.5	59.7	47.7	36.5	23.1	8.6	50.0	35.3
1917	12.5	16.8	20.3	32.9	40.3	52.7	61.2	57.2	53.2	32.6	31.2	13.9	49.6	35.5
1918	8.3	20.4	31.0	33.5	47.2	58.7	61.1	61.6	46.4	44.0	25.8	18.8	51.4	38.2
1919	14.9	17.3	28.5	37.5	44.5	55.1	62.3	59.7	55.2	36.1	21.9	15.9	52.4	37.5
1920	19.1	20.8	23.7	31.1	46.7	55.9	59.9	54.4	50.7	40.3	24.5	17.8	49.8	37.2
1921	21.7	23.8	34.1	34.5	47.2	57.1	62.5	60.0	52.6	39.1	25.5	18.6	52.3	39.8
1922	10.8	12.4	24.1	36.5	46.5	57.6	61.4	62.5	53.6	38.5	28.5	18.7	53.0	37.7
1923	20.9	15.0	20.9	36.4	45.8	58.8	61.5	58.9	50.6	38.4	28.3	18.9	52.0	38.0
1924	12.0	22.0	20.7	35.1	39.9	56.0	58.0	61.1	48.4	42.0	26.2	9.1	49.8	35.9
1925	9.7	26.7	30.6	40.0	47.3	60.8	63.5	59.5	55.9	33.2	27.1	19.6	54.5	39.5
1926	21.6	25.2	25.1	33.2	50.0	55.2	62.7	62.2	53.2	41.3	26.3	18.9	52.8	39.7
1927	18.9	22.2	27.5	40.6	49.2	55.2	60.9	57.6	52.6	40.2	28.5	9.4	52.7	38.6
1928	20.7	20.4	29.3	33.6	47.2	52.2	61.0	58.8	48.1	39.7	27.9	21.5	50.2	38.5
1929	12.1	11.1	28.6	36.1	46.8	56.2	64.3	61.2	49.8	40.5	21.1	21.0	52.4	37.6
1930	5.2	28.2	23.0	40.8	45.9	55.3	61.9	62.9	52.6	40.2	25.8	21.2	53.2	38.6
1931	19.9	26.1	22.3	35.8	42.8	59.6	61.2	57.7	57.1	42.2	27.5	21.6	52.4	39.5
1932	16.1	23.8	20.3	38.5	48.0	55.7	64.5	63.1	50.8	35.4	25.8	10.3	53.4	37.8
1933	19.8	12.2	29.2	36.2	45.9	62.0	63.6	60.5	55.9	39.0	30.1	24.3	54.0	40.0
1934	20.7	21.6	26.3	38.2	53.2	59.6	66.5	64.9	47.2	41.3	30.4	19.7	54.9	40.9
1935	19.6	22.4	31.5	34.0	44.5	55.2	66.4	63.3	52.2	39.5	25.3	21.6	52.6	39.7
1936	16.1	4.6	27.7	35.1	51.9	60.9	66.7	64.6	54.5	37.2	25.3	22.0	55.6	39.1
1937	3.5	18.6	25.2	35.1	49.5	57.4	63.8	65.4	53.5	40.5	26.0	17.7	54.1	38.1
1938	19.2	20.9	32.4	37.2	47.5	58.1	63.9	65.1	54.7	43.9	22.1	19.2	54.4	40.5
1939	23.2	10.9	27.2	37.3	49.5	56.4	64.7	60.2	55.0	38.8	25.6	23.9	53.9	39.6
1940	3.9	21.6	28.0	36.5	45.3	56.9	64.5	59.6	55.1	41.4	23.3	23.1	53.0	38.4
1941	20.3	21.1	26.1	38.1	50.6	55.1	61.3	59.8	52.2	41.3	25.7	19.4	52.9	39.4
1942	13.1	17.1	25.8	39.5	43.2	55.4	59.6	60.5	47.5	40.3	26.3	20.4	51.0	37.5
1943	14.9	21.2	20.8	39.9	43.4	56.9	63.7	63.9	49.2	34.6	24.1	18.1	52.8	37.7
1944	16.4	19.9	21.9	32.4	48.5	56.5	60.0	59.4	48.8	38.4	26.8	19.1	50.9	37.5
1945	20.0	24.1	29.3	34.0	43.5	50.5	62.4	60.7	49.0	37.3	25.0	13.1	50.0	37.5

Continued

Table 4 concluded.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season	Year
1946	16.1	19.1	31.9	41.3	42.3	56.2	61.5	60.4	53.2	38.8	26.3	21.2	52.5	39.1
1947	16.2	14.3	22.3	35.2	44.6	52.9	61.4	63.3	52.1	44.1	22.9	18.8	51.6	37.5
1948	13.9	14.6	18.4	39.3	45.9	56.0	62.5	62.2	53.7	36.5	25.4	19.9	53.3	37.5
1949	7.1	18.4	27.2	37.3	50.6	58.1	62.8	59.4	49.2	38.4	29.5	15.6	52.9	37.9
1950	9.2	21.5	21.8	32.1	43.9	55.8	59.0	57.7	51.2	41.8	23.2	20.1	50.0	36.5
1951	14.2	20.0	18.7	32.2	47.3	51.7	61.5	60.5	49.1	38.7	22.7	14.8	50.4	36.0
1952	17.7	21.5	22.4	35.6	46.8	62.2	62.6	61.9	52.0	35.3	23.0	18.4	53.5	38.4
1953	23.7	18.3	28.7	32.0	44.5	59.6	63.2	60.5	51.9	43.3	30.5	20.4	52.0	39.9
1954	18.8	30.7	24.1	39.9	45.7	60.7	68.4	64.0	56.2	40.3	30.5	21.1	55.8	41.7
1955	16.7	15.3	21.7	39.5	49.0	54.8	66.3	63.6	53.6	42.0	23.3	17.9	54.5	38.8
1956	17.4	17.9	26.0	33.1	50.8	61.7	62.8	61.2	52.7	43.7	27.3	22.1	53.7	39.9
1957	8.6	23.3	26.4	36.2	47.6	56.1	64.9	62.6	49.1	43.0	26.1	21.9	52.8	38.9
1958	16.0	18.4	16.4	34.7	50.5	57.0	60.3	60.3	53.0	37.1	23.8	19.1	52.6	37.3
1959	11.7	16.7	24.9	34.8	47.1	59.4	58.3	62.9	47.5	35.6	19.6	19.5	51.7	36.6
1960	12.8	12.7	18.1	38.5	45.6	56.5	60.0	59.9	52.1	40.2	24.2	16.1	52.1	36.5
1961	14.6	20.3	27.3	31.5	45.1	56.0	62.0	60.8	47.3	34.5	22.2	12.5	50.5	36.2
1962	10.0	18.4	20.3	35.6	50.8	55.8	61.4	60.2	50.4	39.8	27.6	19.4	52.4	37.6
1963	4.4	20.7	28.3	38.1	49.2	60.0	64.7	62.0	56.3	45.0	24.8	11.4	55.1	38.8
1964	15.3	16.2	20.8	36.0	46.7	53.9	64.7	58.9	52.6	35.6	24.9	12.6	52.1	36.6
1965	14.1	12.4	14.2	39.7	47.7	57.4	62.6	58.6	45.3	40.2	29.2	18.2	51.9	36.8
1966	8.4	14.8	25.7	32.3	43.6	55.9	64.7	55.9	49.9	34.6	23.9	13.5	50.4	35.4
1967	17.8	17.1	25.4	36.6	41.8	54.0	59.9	55.5	47.9	33.5	22.6	12.6	49.3	35.5
1968	11.1	15.3	24.1	32.0	40.9	55.9	61.1	58.9	47.9	36.1	25.0	10.5	49.5	35.0
1969	13.9	20.1	16.6	38.3	48.5	51.1	63.5	61.9	53.1	35.1	25.3	19.6	52.7	37.3
1970	10.8	17.3	20.7	32.1	47.1	54.4	61.2	61.5	46.6	34.5	24.4	13.8	50.5	35.5
1971	12.7	15.6	24.3	35.5	43.8	58.4	59.0	58.5	45.2	37.0	26.2	19.5	50.1	36.4
1972	9.7	14.8	24.9	34.5	45.6	56.8	59.4	56.7	49.6	36.1	23.6	10.3	50.4	35.3
1973	14.6	19.9	31.7	31.7	43.4	54.4	60.3	60.2	48.9	37.8	25.7	16.9	49.8	37.2
1974	10.7	18.0	25.0	34.8	47.8	54.5	63.0	56.5	43.4	38.9	25.2	12.5	50.0	36.0
1975	15.1	12.3	19.7	34.3	44.8	54.2	61.0	60.1	47.9	32.9	21.8	21.1	50.4	35.6
1976	14.5	22.6	23.4	38.1	42.1	54.1	62.2	58.3	50.2	31.2	19.5	16.3	50.8	36.1
1977	6.2	17.9	23.8	39.0	51.3	59.8	64.3	59.7	50.8	34.9	24.2	15.2	54.2	37.4
1978	5.3	7.3	23.6	37.4	45.4	57.2	63.3	57.1	50.6	35.3	25.5	12.8	51.8	35.2
1979	3.4	13.6	28.1	36.7	43.8	55.1	63.1	57.9	50.4	36.8	21.8	19.8	51.2	36.0
1980	14.3	17.4	22.1	34.3	44.3	58.0	64.6	61.0	50.7	33.6	23.3	19.4	52.2	37.0
1981	14.9	15.0	27.2	40.4	45.2	58.2	62.8	58.1	50.0	38.8	28.8	19.8	52.5	38.4
1982	9.6	12.1	25.4	31.2	46.6	52.6	62.1	61.6	50.8	35.3	22.6	17.7	50.8	35.8
1983	20.3	24.4	27.4	32.0	41.2	53.7	62.9	64.0	50.9	38.1	26.4	2.7	50.8	37.1
1984	13.1	22.4	23.4	33.1	47.3	55.4	61.5	60.2	48.6	38.1	25.0	14.9	51.0	37.0
1985	11.7	13.9	26.8	37.5	48.2	51.0	60.7	57.0	48.4	34.3	18.9	12.7	50.5	35.1
1986	19.8	18.6	28.5	35.7	45.1	57.2	61.3	58.6	52.2	38.2	22.3	17.3	51.7	37.9
1987	15.9	23.8	23.3	34.0	49.6	56.7	60.2	58.0	46.3	32.2	26.1	16.4	50.8	36.9
1988	7.7	15.4	22.3	31.0	46.9	60.2	60.4	59.6	48.2	34.2	24.2	16.7	51.1	35.6
1989	13.3	8.4	21.0	32.1	45.8	52.0	59.7	58.2	46.8	33.9	22.1	9.1	49.1	33.5
1893 through 1989:														
Avg.	14.3	17.4	24.6	35.6	46.0	56.0	61.9	60.0	50.6	37.7	25.0	16.9	51.6	37.1
Max.	27.8	30.7	34.1	42.0	53.2	62.2	68.4	65.4	57.1	45.0	31.2	24.3	55.8	41.7
Min.	3.4	2.0	14.2	29.9	38.5	49.7	55.4	54.4	43.4	29.3	18.4	2.7	48.4	33.5
1970 through 1939:														
Avg.	12.2	16.5	24.6	34.8	45.8	55.7	61.6	59.1	48.8	35.6	23.9	15.2	51.0	36.2
Max.	20.3	24.4	31.7	40.4	51.3	60.2	64.6	64.0	52.2	38.9	28.8	21.1	54.2	38.3
Min.	3.4	7.3	19.7	31.0	41.2	51.0	59.0	56.5	43.4	31.2	18.9	2.7	49.1	33.5

<sup>1</sup>Middle six months of the year.

Table 5. Number of days during which the minimum temperature was less than or equal to the threshold value at the Colby weather stations, 1900-1989.

Year	Threshold values (°F)									
	-20	-10	0	10	20	30	40	50	60	70
----- number of days -----										
1900	0	2	9	33	78	151	197	257	320	365
1901	0	5	16	31	80	151	208	251	320	361
1902	0	4	13	29	31	136	209	260	328	365
1903	0	1	13	33	82	157	212	272	333	365
1904	0	0	8	37	90	154	204	256	348	365
1905	2	9	14	36	85	155	209	257	340	365
1906	0	0	3	25	76	140	199	270	347	364
1907	0	0	5	20	77	153	213	261	329	364
1908	0	0	3	16	62	148	198	243	325	365
1909	0	2	16	40	73	153	211	254	310	364
1910	0	1	7	24	65	128	200	251	320	365
1911	1	3	13	32	84	159	205	247	319	363
1912	2	7	17	28	63	143	209	259	327	364
1913	0	0	11	41	83	134	199	251	311	361
1914	0	2	11	24	63	138	192	242	310	363
1915	0	1	4	21	73	136	200	262	345	365
1916	0	5	24	43	84	147	218	265	314	364
1917	0	3	17	35	81	155	217	270	332	363
1918	1	6	15	37	61	125	193	249	312	364
1919	1	4	13	31	71	140	202	254	318	364
1920	0	3	5	18	63	154	205	256	339	365
1921	0	0	1	12	43	127	195	241	318	365
1922	0	1	11	37	81	145	202	248	311	364
1923	0	0	7	20	71	156	197	245	317	365
1924	0	6	20	37	79	150	214	270	320	365
1925	0	1	8	22	62	128	193	240	305	364
1926	0	0	3	11	49	142	199	239	316	364
1927	0	1	12	31	67	113	193	249	319	365
1928	0	1	2	14	58	123	200	261	335	365
1929	0	2	11	37	74	145	196	251	310	364
1930	0	3	12	24	64	137	189	240	314	363
1931	0	0	2	15	51	133	197	242	305	365
1932	1	2	16	33	74	142	193	246	304	363
1933	2	4	6	16	51	125	191	238	302	363
1934	0	0	1	6	57	127	189	239	299	352
1935	0	1	4	11	40	133	200	255	308	360
1936	1	2	17	40	71	145	194	234	284	353
1937	0	4	12	37	75	144	198	249	292	359
1938	0	0	6	18	61	131	182	228	296	359
1939	0	0	5	19	64	129	189	243	303	362
1940	0	4	15	30	64	132	185	251	314	362
1941	0	0	4	14	53	139	188	240	318	365
1942	1	5	9	20	56	142	208	251	328	363
1943	0	4	7	21	71	140	201	260	299	364
1944	0	0	3	21	71	147	208	250	324	365
1945	0	0	3	23	57	142	208	265	323	364
1946	0	0	3	19	50	127	195	254	306	363
1947	0	0	7	32	77	145	193	259	313	363

Continued

Table 5 concluded.

Year	Threshold values (°F)									
	-20	-10	0	10	20	30	40	50	60	70
	----- number of days -----									
1948	1	5	13	37	75	140	200	234	309	364
1949	0	0	13	35	76	131	192	242	319	365
1950	1	3	13	31	72	144	199	258	333	365
1951	1	2	11	32	86	153	205	251	325	365
1952	0	0	8	26	70	149	200	255	294	360
1953	0	0	2	10	53	129	195	243	314	363
1954	0	1	2	15	47	112	184	239	281	348
1955	0	0	2	35	82	136	183	243	294	357
1956	0	0	3	18	59	137	190	231	300	364
1957	0	1	7	21	67	141	182	248	304	360
1958	0	0	7	31	71	152	202	243	313	365
1959	1	3	9	29	82	149	213	258	317	363
1960	2	7	16	40	83	139	195	251	320	364
1961	0	2	11	27	72	155	218	262	317	364
1962	0	6	15	32	73	137	190	245	320	365
1963	0	7	19	38	75	135	182	230	292	362
1964	0	0	4	25	103	158	211	263	315	359
1965	0	2	6	39	86	137	197	249	327	365
1966	0	2	15	35	89	162	213	265	326	365
1967	0	1	4	31	88	171	215	267	345	365
1968	0	2	10	42	96	150	220	267	325	365
1969	0	0	10	27	69	146	199	245	317	364
1970	0	0	5	28	96	167	221	259	321	363
1971	0	4	9	20	75	150	210	264	331	363
1972	0	6	19	41	85	151	209	255	333	365
1973	0	2	7	25	52	140	214	263	331	365
1974	0	6	13	38	71	142	209	263	326	365
1975	0	0	7	37	93	160	217	264	323	364
1976	0	0	10	26	71	163	210	265	324	365
1977	0	0	16	31	93	144	195	239	308	361
1978	0	4	21	51	89	144	212	252	325	363
1979	0	4	17	40	76	153	204	259	321	365
1980	0	2	11	28	78	151	207	254	311	365
1981	1	3	10	23	61	131	196	252	322	362
1982	2	5	16	31	91	155	206	262	318	363
1983	0	9	13	32	67	151	210	261	303	365
1984	2	4	7	24	62	162	209	250	324	364
1985	0	4	18	44	80	151	211	259	331	365
1986	0	0	4	14	63	144	202	258	324	365
1987	0	0	1	20	71	161	204	256	333	365
1988	0	5	16	38	81	160	210	256	317	364
1989	2	11	24	40	103	163	218	267	329	365
1900 through 1989:										
Avg.	0	2	10	28	72	144	202	252	318	363
Max.	2	11	24	51	103	171	221	272	348	365
Min.	0	0	1	6	40	112	182	228	281	348
1970 through 1989:										
Avg.	0	3	12	32	78	152	209	258	323	364
Max.	2	11	24	51	103	167	221	267	333	365
Min.	0	0	1	14	52	131	195	239	303	361

Table 6. Average monthly, seasonal, and yearly mean air temperatures (F) recorded at the Colby weather stations, 1893-1989.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1893	31.2	27.6	36.1	47.7	57.4	72.8	76.5	70.9	66.7	52.6	37.4	34.2	65.3	50.9
1894	25.5	21.3	42.3	53.3	63.1	71.0	76.5	75.3	65.2	54.2	41.8	30.3	67.4	51.6
1895	23.6	22.4	38.2	54.2	61.0	67.6	70.5	72.3	68.2	48.8	37.2	29.6	65.6	49.5
1896	34.1	36.7	35.7	54.1	63.1	71.4	75.9	74.7	61.5	49.3	32.6	37.3	66.8	52.2
1897	26.6	32.3	36.4	48.8	61.4	70.3	75.9	72.3	69.4	53.7	39.3	26.7	66.4	51.1
1898	28.9	34.8	37.3	51.7	56.9	70.2	74.2	75.9	62.8	47.4	34.8	26.3	65.3	50.1
1899	27.8	15.7	33.9	50.2	61.9	70.5	74.0	77.4	67.9	55.2	43.1	30.1	67.0	50.6
1900	33.6	26.4	41.3	49.1	61.7	72.8	76.2	78.7	66.5	57.7	39.0	33.8	67.5	53.1
1901	29.1	24.8	37.7	48.4	59.7	73.8	81.6	75.9	65.0	55.3	41.8	30.1	67.4	52.0
1902	28.2	30.3	42.3	52.5	64.4	69.0	74.8	76.0	61.3	54.7	40.6	24.3	66.3	51.6
1903	30.8	22.0	36.7	50.5	57.3	64.2	75.1	73.1	64.1	53.8	40.1	33.6	64.0	50.2
1904	27.1	32.0	43.6	49.4	59.4	66.7	73.6	73.0	67.1	56.0	43.3	32.0	64.9	52.0
1905	31.6	18.8	44.7	48.0	56.8	71.5	70.8	75.5	67.4	47.2	42.3	30.8	65.0	50.5
1906	34.5	34.6	27.8	54.7	61.3	66.8	71.2	73.6	66.0	50.6	39.3	37.5	65.6	51.5
1907	26.2	35.7	48.8	46.9	55.6	69.8	76.8	75.3	67.3	55.7	39.7	29.2	65.3	52.3
1908	32.8	33.0	44.3	53.3	59.2	70.8	73.5	74.1	69.3	52.8	40.4	29.7	66.7	52.8
1909	29.1	32.7	38.3	48.5	59.4	70.4	75.8	78.0	65.2	54.1	42.9	18.4	66.2	51.1
1910	28.1	30.1	53.7	53.7	56.8	71.5	78.4	73.3	67.6	58.0	43.0	33.4	66.9	54.0
1911	32.9	33.6	45.7	51.2	62.1	76.6	77.0	75.1	71.2	49.3	36.5	25.2	68.9	53.1
1912	18.9	32.7	27.6	51.8	63.7	66.8	76.0	73.5	61.4	53.8	43.1	33.5	65.5	50.2
1913	27.8	24.6	38.6	54.1	62.9	69.3	78.5	79.9	62.9	50.4	45.3	26.6	67.9	51.8
1914	36.9	29.8	40.2	53.0	60.8	74.3	75.4	74.9	69.0	56.0	45.7	21.7	67.9	53.2
1915	28.2	36.1	29.3	55.2	56.5	65.3	70.4	67.2	64.6	56.6	44.3	32.0	63.2	50.5
1916	22.9	34.4	45.8	48.7	59.5	66.9	79.8	75.6	65.1	53.0	39.0	24.7	65.9	51.3
1917	28.5	33.6	37.0	47.3	53.7	69.8	77.9	71.8	67.7	48.5	46.4	29.2	64.7	51.0
1918	21.4	36.4	46.6	44.3	62.7	75.6	76.1	77.7	61.7	57.0	38.6	30.3	66.3	52.4
1919	25.6	26.4	40.0	48.9	57.9	68.2	77.2	76.4	70.0	48.9	35.3	28.7	66.4	50.3
1920	32.3	34.2	42.0	44.0	58.7	68.2	75.6	70.4	66.7	56.9	38.5	30.0	63.9	51.5
1921	34.0	37.7	50.1	51.7	61.9	70.5	77.1	75.9	69.1	57.9	42.3	33.2	67.7	55.1
1922	25.8	29.9	39.1	49.2	60.6	73.2	77.0	78.4	70.7	56.7	41.4	32.3	68.2	52.9
1923	35.9	30.3	37.2	50.6	57.2	70.0	75.4	73.0	65.4	48.4	43.2	30.7	65.2	51.5
1924	26.9	33.9	31.1	51.5	55.3	71.4	74.0	76.1	62.7	57.7	42.5	20.3	65.1	50.3
1925	22.4	40.0	46.0	55.0	60.7	75.6	79.3	75.2	69.2	44.3	41.3	32.6	69.2	53.5
1926	33.2	40.1	41.2	48.9	63.8	71.1	78.8	79.1	66.5	57.5	38.4	29.8	68.0	54.1
1927	31.6	35.0	38.5	54.7	64.5	68.0	75.6	70.7	68.0	58.9	43.2	24.2	66.9	52.7
1928	33.9	33.1	43.5	48.9	61.5	63.1	74.3	74.2	66.5	54.8	40.6	33.3	64.7	52.4
1929	24.6	21.8	43.9	52.3	59.2	70.4	79.4	77.5	62.7	53.4	31.2	34.5	66.9	51.0
1930	16.4	44.3	39.2	55.5	58.8	69.4	79.8	77.5	68.0	52.0	40.0	32.6	68.2	52.8
1931	35.5	40.1	35.9	50.3	57.9	75.0	77.0	74.1	73.6	58.6	41.1	30.2	68.0	54.1
1932	24.6	36.0	34.5	53.9	63.6	70.0	81.3	76.7	66.8	52.1	41.5	24.1	68.7	52.1
1933	36.0	29.3	44.6	51.6	59.4	78.1	78.6	73.4	70.7	55.8	44.9	39.6	68.6	55.2
1934	35.5	35.2	43.1	54.7	69.7	76.0	84.0	79.8	63.5	59.5	45.0	33.1	71.3	56.6
1935	36.0	35.8	46.8	49.3	54.8	69.2	83.1	79.4	68.3	54.4	37.2	32.1	67.3	53.9
1936	27.1	19.4	43.3	50.8	64.5	76.1	83.1	80.9	68.8	52.5	41.7	34.4	70.7	53.6
1937	17.2	33.1	37.7	51.4	64.1	70.9	80.0	81.3	69.0	55.5	40.5	31.1	69.4	52.7
1938	33.3	35.8	47.3	52.3	60.9	72.4	79.3	81.5	70.9	61.8	39.3	34.4	69.5	55.8
1939	36.3	26.3	41.3	51.8	66.0	72.8	81.4	76.2	71.6	56.4	42.5	38.4	70.0	55.2
1940	14.6	30.8	41.2	50.6	60.7	73.2	80.3	73.9	68.7	59.2	36.8	35.1	67.9	52.1
1941	31.5	32.9	39.0	50.6	64.1	68.4	75.0	75.4	67.2	53.5	43.0	32.1	66.8	52.8
1942	24.5	28.1	39.8	53.4	58.1	67.9	77.7	75.5	63.5	54.8	41.2	32.2	66.0	51.4
1943	30.3	38.4	37.5	54.9	57.1	71.5	80.3	80.7	65.9	52.9	40.6	31.2	68.4	53.5
1944	31.7	31.0	34.3	43.7	62.7	69.9	73.9	74.9	66.0	55.0	40.2	30.0	65.2	51.2
1945	31.7	34.2	46.4	47.2	58.4	63.7	76.9	75.8	65.5	55.7	42.5	27.7	64.6	52.2

Continued



Table 6 concluded.

Year	Jan	Feb	Mar	Apr	Mar	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1946	32.9	38.1	47.1	58.0	57.0	71.7	78.1	75.5	68.0	52.0	37.2	36.3	68.0	54.3
1947	31.0	28.6	35.5	48.5	57.4	66.2	76.3	79.1	70.2	60.6	35.1	30.6	66.3	51.6
1948	27.3	28.0	32.2	56.3	61.0	69.4	76.2	75.9	70.1	54.5	36.5	30.2	68.1	51.5
1949	17.8	31.1	39.5	50.8	62.6	70.7	76.9	73.5	63.5	52.1	46.2	32.1	66.3	51.4
1950	26.3	37.4	37.8	48.1	58.5	72.0	71.9	70.1	63.6	58.8	38.7	35.1	64.0	51.5
1951	28.4	35.0	35.7	46.9	60.9	63.3	73.0	74.3	62.8	52.5	37.4	28.2	63.5	49.9
1952	32.9	35.8	33.9	49.1	59.9	78.1	77.2	76.5	69.0	53.2	36.3	29.8	68.3	52.7
1953	39.4	35.4	44.0	46.7	58.9	75.3	76.9	73.6	69.1	57.9	41.8	29.9	66.7	54.1
1954	29.0	45.2	37.7	56.0	57.0	75.3	82.2	77.2	71.7	53.1	44.7	34.7	69.9	55.3
1955	26.6	27.4	38.2	54.5	63.1	66.9	81.3	78.5	67.8	56.9	37.1	29.3	68.7	52.4
1956	29.5	29.6	42.0	48.1	65.0	77.7	77.0	75.9	69.2	59.1	39.3	36.0	68.8	54.1
1957	21.1	37.3	37.5	46.9	57.5	67.9	78.8	76.4	62.9	52.8	36.8	37.1	65.0	51.1
1953	30.5	28.6	24.2	45.8	62.6	69.8	72.4	75.0	68.4	54.0	38.7	31.1	65.6	50.1
1959	25.3	27.8	37.4	48.4	60.3	74.1	74.0	77.8	62.2	48.7	34.9	33.8	66.1	50.4
1960	23.6	21.3	29.5	52.4	58.6	69.1	74.2	75.5	67.8	55.3	40.3	28.6	66.3	49.7
1961	28.6	34.7	39.5	44.8	56.4	69.5	76.4	74.4	60.6	51.5	34.4	24.6	63.7	49.6
1962	23.0	33.7	34.5	50.7	65.6	67.6	74.8	75.4	62.9	55.2	40.9	33.1	66.1	51.5
1963	17.2	35.8	41.5	54.1	63.1	75.2	80.0	76.5	68.8	61.8	40.9	23.8	69.6	53.2
1964	31.9	27.7	34.6	49.0	62.2	68.7	80.1	74.0	66.4	53.7	39.4	29.3	66.7	51.4
1965	30.8	27.4	27.5	54.0	63.2	68.8	76.2	72.3	55.6	55.1	43.0	30.9	65.0	50.5
1966	20.4	25.2	41.0	46.0	60.1	70.1	78.4	70.1	63.8	51.0	38.7	26.6	64.8	49.3
1967	31.3	33.1	42.1	51.1	54.6	66.0	72.8	71.2	62.8	52.2	37.5	26.5	63.1	50.1
1968	26.4	30.7	42.2	48.0	54.5	71.7	75.2	72.1	64.2	53.6	37.3	22.1	64.2	49.8
1969	24.9	30.1	28.4	52.4	61.2	65.0	77.2	74.4	66.7	45.4	39.9	31.1	66.1	49.7
1970	25.2	35.3	32.2	46.8	62.8	69.1	76.4	77.0	62.0	47.6	37.4	31.6	65.7	50.3
1971	27.3	28.3	37.8	48.8	56.2	73.7	73.1	73.6	61.3	52.8	39.1	30.3	64.4	50.2
1972	24.9	31.6	44.2	48.9	58.7	71.4	72.5	71.2	64.3	49.8	32.2	21.1	64.5	49.3
1973	25.7	31.9	40.7	44.3	56.3	69.9	73.8	75.4	59.8	53.0	37.2	29.3	63.2	49.8
1974	21.6	33.5	40.2	49.1	62.5	69.0	78.7	69.2	59.0	53.8	38.5	27.2	64.6	50.2
1975	28.8	25.9	33.1	48.0	59.1	66.8	75.7	74.6	62.4	52.4	35.9	30.9	64.4	49.5
1976	27.9	38.1	37.5	50.7	55.5	69.8	76.1	74.6	63.7	46.1	34.9	31.6	65.0	50.5
1977	20.2	35.3	38.9	52.2	63.4	73.1	77.2	71.9	66.8	51.9	38.6	30.1	67.4	51.7
1978	16.1	16.9	37.3	51.6	57.5	70.2	78.3	72.9	67.4	52.5	36.1	25.4	66.3	48.6
1979	14.6	26.9	40.5	50.4	56.7	68.2	75.8	71.4	67.2	54.4	33.3	34.1	64.9	49.5
1980	23.6	28.0	33.2	46.7	57.2	72.9	80.7	76.3	66.0	51.3	39.6	34.6	66.6	50.9
1981	30.7	30.2	39.7	55.1	55.5	72.5	75.7	71.6	65.9	51.2	42.0	31.8	66.0	51.9
1982	23.1	25.8	38.9	46.7	58.2	63.7	75.4	74.9	64.5	50.5	36.3	30.9	63.9	49.1
1983	28.2	34.0	37.6	43.1	53.9	66.1	78.1	79.7	67.7	53.0	38.5	12.7	64.8	49.4
1984	24.5	34.3	35.2	43.7	59.3	70.1	76.6	75.5	61.8	48.6	39.6	27.6	64.5	49.7
1985	22.3	25.2	41.6	52.8	61.6	67.5	75.9	70.6	61.5	48.7	29.6	24.4	65.0	48.5
1986	36.4	33.1	45.1	51.9	59.3	71.6	76.6	73.1	65.5	51.2	37.0	30.6	66.3	52.6
1987	29.4	36.4	36.0	49.3	61.9	72.1	74.7	71.8	63.2	50.4	39.5	29.7	65.5	51.2
1988	20.0	28.8	38.4	46.5	61.0	75.7	75.5	75.1	64.0	50.1	40.0	32.9	66.3	50.7
1989	31.1	21.6	37.4	50.5	59.8	65.1	74.5	71.6	61.7	51.8	39.3	23.9	63.8	49.0
1893 through 1989:														
Avg.	27.7	31.2	39.0	50.3	60.0	70.4	76.8	74.9	65.9	53.6	39.5	30.1	66.3	51.6
Max.	39.4	45.2	53.7	58.0	69.7	78.1	84.0	81.5	73.6	61.8	46.4	39.6	71.3	56.6
Min.	14.6	15.7	24.2	43.1	53.7	63.1	70.4	67.2	55.6	44.3	29.6	12.7	63.1	48.5
1970 through 1989:														
Avg.	25.1	30.0	38.3	48.8	58.8	69.9	76.0	73.6	63.8	51.0	37.2	28.5	65.1	50.1
Max.	36.4	38.1	45.1	55.1	63.4	75.7	80.7	79.7	67.7	54.4	42.0	34.6	67.4	52.6
Min.	14.6	16.9	32.2	43.1	53.9	63.7	72.5	69.2	59.0	46.1	29.6	12.7	63.2	48.5

<sup>1</sup>Middle six months of the year.

Table 7. Record air temperatures, year of occurrence, and number of times each was recorded at the Colby weather stations, 1893-1989.

Month	Day	Daily maximum				Daily minimum							
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Jan	1	71	1939	1	4	1911	1	31	1897	1	-18	1901	1
Jan	2	69	1922	1	0	1911	1	35	1918	1	-17	1942	2
Jan	3	67	1964	1	6	1968	1	38	1927	1	-22	1911	1
Jan	4	70	1956	2	2	1959	1	37	1893	1	-24	1959	1
Jan	5	72	1927	1	2	1974	1	36	1893	1	-22	1942	1
Jan	6	67	1902	1	4	1940	1	34	1927	1	-24	1912	1
Jan	7	73	1948	1	-2	1937	1	35	1893	1	-19	1988	1
Jan	8	71	1965	1	2	1937	1	36	1923	1	-18	1988	1
Jan	9	70	1916	1	6	1988	2	33	1939	1	-13	1973	1
Jan	10	73	1928	1	3	1962	1	35	1953	1	-10	1988	2
Jan	11	70	1953	1	-2	1918	1	32	1928	1	-22	1918	1
Jan	12	81	1953	1	-4	1963	1	42	1953	1	-28	1912	1
Jan	13	70	1928	1	2	1963	1	36	1953	1	-20	1905	1
Jan	14	68	1900	1	6	1979	1	42	1952	1	-15	1979	1
Jan	15	70	1943	1	0	1930	1	33	1914	1	-15	1979	1
Jan	16	72	1894	1	-1	1930	1	32	1896	1	-15	1930	1
Jan	17	71	1950	1	-4	1930	1	34	1906	1	-17	1930	1
Jan	18	73	1920	1	-3	1943	1	37	1934	1	-23	1984	1
Jan	19	70	1911	2	4	1962	1	33	1906	1	-21	1984	1
Jan	20	71	1950	1	3	1978	1	32	1921	1	-18	1984	2
Jan	21	72	1950	1	8	1978	1	32	1950	1	-19	1984	1
Jan	22	77	1943	1	6	1962	1	32	1943	1	-17	1966	1
Jan	23	75	1967	1	12	1940	1	34	1909	1	-12	1915	1
Jan	24	68	1981	1	2	1949	1	31	1980	1	-26	1894	1
Jan	25	71	1970	2	7	1957	1	32	1953	1	-12	1957	1
Jan	26	74	1920	1	9	1897	1	34	1914	1	-20	1950	1
Jan	27	73	1982	1	5	1972	1	30	1914	1	-15	1963	2
Jan	28	67	1986	1	2	1966	1	33	1934	1	-14	1948	1
Jan	29	72	1920	1	0	1951	1	36	1914	1	-13	1951	1
Jan	30	66	1971	1	6	1966	1	37	1896	1	-14	1918	1
Jan	31	71	1911	1	2	1985	1	33	1925	1	-18	1918	2
	Max	81			12			42			-10		
	Min	66			-4			30			-28		
Feb	1	70	1953	1	2	1905	1	36	1911	1	-21	1951	1
Feb	2	71	1963	2	-3	1905	1	36	1934	1	-15	1902	1
Feb	3	70	1909	1	-4	1905	1	37	1927	1	-17	1989	1
Feb	4	75	1962	1	-3	1989	1	35	1925	1	-23	1899	1
Feb	5	77	1904	2	-7	1989	1	35	1954	1	-22	1899	1
Feb	6	73	1963	1	5	1989	2	38	1918	1	-22	1982	1
Feb	7	72	1943	1	3	1933	1	35	1928	1	-20	1895	1
Feb	8	76	1943	1	-4	1933	1	36	1954	1	-23	1936	1
Feb	9	71	1954	1	1	1933	1	36	1945	1	-22	1933	1
Feb	10	77	1951	1	8	1905	1	46	1976	1	-13	1933	1
Feb	11	76	1951	1	-5	1905	1	36	1908	1	-24	1899	1
Feb	12	83	1911	1	-2	1905	1	37	1961	1	-31	1899	1
Feb	13	79	1962	1	14	1895	1	42	1962	1	-20	1905	1
Feb	14	74	1945	2	5	1909	1	38	1954	1	-9	1936	1
Feb	15	76	1967	1	10	1936	2	42	1954	1	-13	1895	1
Feb	16	72	1898	1	12	1938	2	37	1934	1	-11	1903	2
Feb	17	72	1961	2	10	1936	1	35	1931	1	-13	1978	1
Feb	18	81	1970	1	22	1944	1	34	1907	1	-10	1978	1
Feb	19	77	1930	1	12	1955	1	35	1935	1	-1	1894	1

Continued

Table 7 continued.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Feb	20	75	1930	1	13	1894	1	34	1930	1	-4	1918	1
Feb	21	74	1972	2	14	1894	1	35	1930	1	-7	1978	1
Feb	22	76	1943	1	15	1957	1	44	1906	1	-4	1914	2
Feb	23	78	1918	1	11	1960	1	37	1918	1	-6	1914	2
Feb	24	76	1958	1	7	1965	1	44	1951	1	-12	1960	1
Feb	25	77	1917	1	12	1960	2	36	1954	1	-20	1960	1
Feb	26	76	1986	1	13	1960	1	38	1895	1	-9	1960	1
Feb	27	77	1904	1	11	1962	1	40	1948	1	-10	1960	1
Feb	28	80	1932	1	8	1922	1	39	1902	1	-17	1960	1
Feb	29	80	1972	1	12	1960	1	40	1932	1	-16	1960	1
	Max	83			22			46			-1		
	Min	70			-7			34			-31		
Mar	1	81	1972	1	15	1962	2	40	1932	1	-14	1960	1
Mar	2	90	1935	1	13	1980	1	40	1938	1	-11	1943	1
Mar	3	80	1974	1	15	1960	1	38	1973	1	-22	1960	1
Mar	4	84	1921	1	10	1989	1	42	1894	1	-18	1960	1
Mar	5	83	1910	1	7	1960	1	45	1983	1	-9	1960	1
Mar	6	77	1934	1	18	1989	2	37	1902	1	-19	1948	1
Mar	7	89	1901	1	10	1932	1	38	1893	1	-13	1920	1
Mar	8	82	1899	1	12	1932	1	38	1902	1	-4	1967	1
Mar	9	86	1904	1	15	1932	1	43	1904	1	-5	1969	1
Mar	10	82	1989	1	6	1948	1	41	1955	1	-5	1948	2
Mar	11	87	1989	1	19	1948	1	44	1954	1	-20	1948	1
Mar	12	84	1972	1	12	1906	1	48	1946	1	-3	1969	1
Mar	13	78	1946	1	21	1906	1	46	1938	1	2	1951	1
Mar	14	82	1935	1	21	1937	2	44	1946	1	-11	1895	1
Mar	15	79	1935	1	16	1906	1	47	1905	1	-2	1912	1
Mar	16	81	1908	1	11	1906	1	46	1930	1	0	1895	1
Mar	17	83	1916	1	21	1906	1	42	1933	1	-6	1906	1
Mar	18	90	1921	1	14	1923	1	50	1903	1	-3	1958	1
Mar	19	90	1921	2	21	1965	1	43	1907	1	-3	1923	1
Mar	20	88	1907	1	25	1965	1	44	1918	1	-14	1965	1
Mar	21	89	1907	1	25	1983	1	50	1907	1	-4	1965	1
Mar	22	87	1910	1	22	1952	1	52	1920	1	2	1898	1
Mar	23	88	1910	1	29	1983	1	52	1910	1	-1	1898	1
Mar	24	85	1907	1	16	1965	1	49	1928	1	-2	1974	1
Mar	25	86	1907	1	13	1965	1	46	1948	1	2	1965	1
Mar	26	94	1907	1	15	1965	1	54	1910	1	1	1965	1
Mar	27	82	1989	2	10	1931	1	49	1896	1	-1	1931	1
Mar	28	88	1988	1	22	1970	1	46	1925	1	0	1899	1
Mar	29	90	1943	1	15	1987	1	53	1933	1	4	1987	1
Mar	30	91	1943	1	23	1987	1	53	1967	1	-4	1987	1
Mar	31	91	1946	1	28	1985	1	46	1925	1	0	1901	1
	Max	94			29			54			4		
	Min	77			6			37			-22		
Apr	1	87	1940	1	20	1936	1	55	1963	1	-4	1936	1
Apr	2	86	1921	1	20	1975	1	55	1963	1	-1	1936	1
Apr	3	88	1929	2	27	1945	1	48	1907	1	11	1975	1
Apr	4	89	1929	1	31	1983	1	49	1969	1	12	1977	1
Apr	5	86	1932	1	33	1983	2	56	1929	1	15	1968	1
Apr	6	88	1893	1	36	1983	1	48	1907	1	8	1936	1
Apr	7	86	1952	2	25	1938	1	52	1927	1	14	1961	1

Continued

Table 7 continued.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Apr	8	89	1978	1	28	1973	1	56	1906	1	14	1914	1
Apr	9	93	1930	1	29	1973	1	53	1978	1	14	1973	1
Apr	10	90	1899	2	30	1973	1	60	1945	1	5	1989	1
Apr	11	89	1977	1	25	1900	1	57	1896	1	7	1989	1
Apr	12	89	1899	1	31	1957	1	53	1941	1	11	1940	1
Apr	13	87	1936	1	30	1957	1	55	1938	1	14	1928	1
Apr	14	86	1940	1	32	1983	1	54	1898	1	13	1893	1
Apr	15	86	1913	1	34	1945	1	57	1898	1	12	1905	1
Apr	16	90	1963	1	39	1973	1	50	1894	1	15	1951	1
Apr	17	88	1946	1	35	1905	1	53	1894	1	17	1907	1
Apr	18	92	1948	1	43	1953	2	56	1979	1	18	1953	2
Apr	19	92	1946	1	37	1941	1	58	1979	1	19	1953	1
Apr	20	95	1902	1	32	1966	1	52	1936	1	19	1966	2
Apr	21	89	1989	1	40	1959	1	58	1932	1	13	1899	1
Apr	22	93	1937	1	40	1944	1	54	1913	1	16	1899	1
Apr	23	98	1989	1	43	1931	1	58	1939	1	26	1988	1
Apr	24	94	1906	1	35	1931	1	59	1939	1	25	1958	1
Apr	25	92	1989	1	36	1919	1	57	1938	1	24	1910	1
Apr	26	91	1927	2	41	1973	2	59	1914	1	23	1907	1
Apr	27	91	1989	1	34	1932	1	62	1975	1	22	1924	1
Apr	28	97	1910	1	37	1917	1	53	1901	1	23	1965	2
Apr	29	89	1934	2	39	1917	1	58	1910	1	16	1908	1
Apr	30	89	1967	4	35	1893	1	61	1955	1	5	1907	1
	Max	97			43			62			26		
	Min	86			20			48			-4		
May	1	94	1928	1	38	1954	1	64	1938	1	17	1909	2
May	2	97	1902	1	38	1954	1	60	1959	1	20	1967	2
May	3	96	1965	1	44	1907	1	60	1912	1	22	1907	1
May	4	92	1924	1	39	1967	1	58	1949	1	26	1917	2
May	5	96	1936	1	39	1967	1	60	1936	1	26	1944	1
May	6	96	1916	1	41	1967	1	62	1896	1	27	1944	1
May	7	94	1934	2	41	1978	1	61	1896	1	24	1917	1
May	8	95	1934	2	49	1981	2	61	1934	1	27	1975	2
May	9	98	1911	1	50	1936	1	64	1934	1	30	1909	1
May	10	92	1893	1	45	1979	1	67	1956	1	27	1981	1
May	11	92	1967	2	45	1979	1	58	1963	1	26	1979	1
May	12	99	1962	1	51	1953	2	62	1963	1	27	1953	1
May	13	99	1962	1	42	1966	1	65	1962	1	26	1966	1
May	14	97	1941	1	46	1983	1	65	1915	1	26	1953	1
May	15	97	1931	1	43	1920	1	65	1911	1	25	1907	1
May	16	93	1944	1	52	1914	1	63	1962	1	28	1945	1
May	17	102	1927	1	49	1980	1	60	1902	1	29	1976	2
May	18	96	1893	1	45	1930	1	59	1927	1	30	1942	1
May	19	97	1934	1	40	1915	1	60	1937	1	28	1894	1
May	20	96	1956	4	40	1915	1	67	1974	1	29	1931	1
May	21	97	1934	1	45	1931	1	63	1907	1	29	1915	1
May	22	98	1939	1	50	1968	2	65	1927	1	29	1931	1
May	23	98	1939	1	53	1988	2	62	1932	1	29	1893	1
May	24	98	1953	2	50	1968	1	67	1939	1	34	1966	2
May	25	98	1967	1	51	1976	1	64	1967	1	36	1946	1
May	26	98	1967	2	50	1950	1	63	1912	1	26	1901	1
May	27	100	1895	1	55	1918	1	63	1929	1	22	1907	1
May	28	100	1895	1	51	1973	1	62	1937	1	33	1947	1
May	29	100	1934	1	57	1930	1	68	1956	1	32	1947	1

Continued

Table 7 continued.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
May	30	98	1989	2	52	1964	1	64	1934	1	36	1906	1
May	31	92	1955	3	54	1964	1	64	1923	1	36	1964	1
	Max	102			57			68			36		
	Min	92			38			58			17		
Jun	1	96	1899	1	45	1919	1	64	1902	1	36	1917	1
Jun	2	98	1911	1	53	1967	1	64	1911	1	33	1969	3
Jun	3	97	1953	1	51	1962	1	67	1958	1	36	1951	1
Jun	4	98	1958	3	48	1919	1	70	1925	1	38	1916	1
Jun	5	98	1960	3	53	1945	1	69	1925	1	39	1970	2
Jun	6	100	1933	1	54	1943	1	70	1934	1	36	1894	1
Jun	7	103	1969	1	63	1945	1	67	1914	1	35	1916	1
Jun	8	102	1911	1	60	1960	2	69	1911	1	40	1906	1
Jun	9	105	1985	2	50	1979	1	68	1893	1	39	1966	1
Jun	10	105	1902	1	54	1979	1	70	1954	1	41	1979	1
Jun	11	104	1918	1	56	1975	1	72	1952	1	35	1903	1
Jun	12	105	1950	1	55	1969	2	69	1956	1	41	1985	2
Jun	13	103	1952	1	50	1927	1	70	1952	1	37	1947	1
Jun	14	103	1952	2	60	1927	1	70	1952	1	40	1969	1
Jun	15	109	1946	1	53	1969	1	73	1907	1	35	1989	1
Jun	16	107	1946	1	56	1961	1	68	1907	1	40	1981	1
Jun	17	103	1939	1	61	1969	1	70	1910	1	44	1945	1
Jun	18	107	1936	1	59	1920	1	72	1954	1	42	1895	1
Jun	19	105	1988	2	60	1948	2	78	1936	1	39	1985	1
Jun	20	106	1988	1	66	1902	1	72	1954	1	42	1946	1
Jun	21	106	1988	1	68	1942	1	71	1936	1	35	1902	1
Jun	22	106	1988	1	58	1942	1	70	1910	1	43	1985	2
Jun	23	105	1943	4	68	1942	1	72	1937	1	45	1916	1
Jun	24	107	1943	1	62	1967	1	74	1954	1	43	1940	1
Jun	25	110	1971	1	66	1967	1	70	1963	1	44	1958	1
Jun	26	108	1936	1	64	1958	1	71	1901	1	42	1958	1
Jun	27	106	1971	2	68	1985	1	73	1934	1	39	1904	1
Jun	28	105	1933	1	61	1895	1	73	1934	1	41	1985	1
Jun	29	106	1970	2	65	1951	1	76	1933	1	44	1908	1
Jun	30	107	1933	1	65	1959	1	75	1961	1	41	1918	1
	Max	110			68			78			45		
	Min	96			45			64			33		
Jul	1	106	1963	2	72	1924	1	70	1911	1	47	1989	1
Jul	2	104	1973	2	63	1940	2	74	1954	1	43	1924	1
Jul	3	107	1934	1	69	1915	2	74	1957	1	44	1924	1
Jul	4	109	1969	1	66	1972	1	72	1936	1	42	1915	1
Jul	5	106	1911	1	63	1967	1	72	1964	1	46	1931	2
Jul	6	108	1964	1	65	1967	1	75	1913	1	49	1924	2
Jul	7	106	1973	1	67	1960	1	71	1954	1	44	1908	1
Jul	8	106	1957	1	72	1929	1	72	1897	1	46	1952	1
Jul	9	107	1978	2	71	1895	1	73	1901	1	38	1905	1
Jul	10	108	1938	1	59	1895	1	75	1954	1	42	1905	1
Jul	11	110	1954	1	60	1951	1	72	1936	1	46	1905	2
Jul	12	106	1954	4	62	1951	1	72	1954	1	47	1975	1
Jul	13	111	1934	1	66	1987	1	79	1938	1	44	1987	1
Jul	14	109	1934	1	70	1952	1	80	1913	1	45	1943	1
Jul	15	108	1925	1	74	1973	2	73	1934	1	47	1898	1
Jul	16	107	1932	1	69	1972	1	73	1954	1	50	1917	1
Jul	17	107	1930	1	74	1958	1	73	1982	1	49	1900	1

Continued

Table 7 continued.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Jul	18	107	1936	2	71	1979	1	74	1932	1	51	1911	1
Jul	19	107	1926	1	69	1914	1	71	1977	1	50	1902	1
Jul	20	108	1934	2	72	1988	2	80	1936	1	43	1900	1
Jul	21	106	1943	2	63	1973	1	74	1934	1	45	1894	1
Jul	22	107	1934	1	71	1895	1	74	1934	1	51	1989	3
Jul	23	105	1940	3	68	1947	1	73	1934	1	51	1904	1
Jul	24	111	1936	1	68	1947	1	74	1963	1	50	1911	1
Jul	25	113	1940	1	76	1965	1	76	1936	1	48	1911	1
Jul	26	107	1894	1	68	1977	1	72	1955	1	53	1900	1
Jul	27	108	1931	1	66	1977	1	80	1914	1	51	1950	1
Jul	28	109	1943	1	73	1968	1	73	1917	1	52	1969	1
Jul	29	105	1947	2	65	1899	1	72	1917	1	51	1971	1
Jul	30	109	1935	1	70	1982	2	73	1955	1	43	1971	1
Jul	31	108	1935	2	62	1903	1	74	1945	1	44	1925	1
	Max	113			76			80			53		
	Min	104			59			70			38		
Aug	1	108	1935	1	69	1968	1	75	1964	1	46	1925	1
Aug	2	107	1938	3	68	1927	1	74	1938	1	50	1927	1
Aug	3	108	1916	2	70	1933	1	75	1938	1	45	1974	1
Aug	4	106	1918	1	62	1978	1	74	1954	1	49	1894	1
Aug	5	107	1934	1	62	1948	1	73	1934	1	51	1894	1
Aug	6	109	1934	1	67	1974	2	74	1916	1	46	1974	1
Aug	7	108	1935	1	70	1954	1	74	1938	1	51	1974	2
Aug	8	109	1934	1	74	1989	2	70	1909	1	44	1989	1
Aug	9	110	1938	1	70	1927	1	77	1938	1	49	1989	1
Aug	10	106	1947	3	67	1960	1	70	1934	1	47	1985	1
Aug	11	109	1935	1	58	1982	2	70	1936	1	46	1931	1
Aug	12	107	1943	2	67	1982	1	73	1919	1	48	1964	1
Aug	13	107	1936	1	68	1946	1	70	1938	1	40	1920	1
Aug	14	103	1937	2	64	1975	1	72	1936	1	44	1920	1
Aug	15	105	1935	1	55	1979	1	73	1937	1	49	1979	2
Aug	16	106	1929	1	60	1979	1	71	1937	1	50	1979	1
Aug	17	106	1902	1	68	1957	1	69	1902	1	48	1944	1
Aug	18	106	1936	1	70	1981	1	72	1934	1	42	1927	1
Aug	19	105	1986	1	69	1956	1	72	1935	1	45	1960	1
Aug	20	104	1900	1	59	1956	1	70	1948	1	43	1908	1
Aug	21	106	1899	1	67	1951	1	69	1910	1	46	1964	1
Aug	22	106	1938	1	69	1945	1	75	1899	1	39	1904	1
Aug	23	106	1943	1	65	1987	1	72	1926	1	41	1964	1
Aug	24	108	1943	1	63	1987	1	73	1948	1	41	1928	1
Aug	25	103	1926	2	61	1972	1	72	1940	1	41	1910	1
Aug	26	107	1926	1	67	1969	1	71	1955	1	41	1910	1
Aug	27	105	1899	1	66	1980	1	70	1936	1	44	1967	1
Aug	28	107	1899	1	63	1974	1	71	1937	1	39	1911	1
Aug	29	102	1947	2	61	1946	1	68	1928	1	41	1976	1
Aug	30	104	1922	1	64	1968	1	70	1939	1	40	1915	1
Aug	31	104	1926	2	61	1910	1	70	1934	1	41	1944	1
	Max	110			74			77			51		
	Min	102			55			68			39		
Sep	1	105	1911	1	62	1965	1	70	1964	1	40	1908	1
Sep	2	104	1939	1	54	1974	1	73	1964	1	39	1962	1
Sep	3	105	1947	1	59	1972	1	70	1939	1	32	1974	1
Sep	4	107	1899	1	54	1961	1	68	1899	1	36	1974	1

Continued

Table 7 continued.

Month	Daily maximum							Daily minimum					
	Day	High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Sep	5	108	1931	1	63	1962	1	69	1946	1	40	1962	1
Sep	6	105	1931	2	51	1929	1	70	1899	1	39	1956	1
Sep	7	102	1959	1	48	1929	1	79	1913	1	28	1898	1
Sep	8	103	1971	2	52	1929	1	70	1912	1	34	1909	1
Sep	9	101	1931	2	59	1907	1	70	1964	1	34	1941	1
Sep	10	102	1964	2	40	1898	1	67	1930	1	32	1898	1
Sep	11	106	1911	1	46	1898	1	67	1931	1	36	1894	1
Sep	12	104	1911	1	45	1989	1	71	1939	1	28	1902	1
Sep	13	100	1955	1	41	1989	1	70	1939	1	31	1974	1
Sep	14	100	1935	2	47	1970	1	72	1939	1	28	1904	1
Sep	15	98	1955	3	52	1970	2	67	1939	1	33	1961	1
Sep	16	98	1955	1	48	1973	1	70	1931	1	28	1903	1
Sep	17	99	1947	2	43	1973	1	69	1955	1	26	1903	1
Sep	18	99	1932	2	43	1971	1	71	1947	1	35	1912	2
Sep	19	103	1920	1	49	1971	1	68	1925	1	31	1971	1
Sep	20	101	1980	1	48	1965	1	64	1940	1	32	1943	2
Sep	21	97	1986	1	45	1965	1	64	1956	1	23	1983	1
Sep	22	97	1939	1	52	1925	1	66	1929	1	24	1983	1
Sep	23	97	1938	1	46	1971	1	67	1937	1	29	1989	1
Sep	24	95	1979	2	43	1965	1	63	1915	1	29	1989	1
Sep	25	96	1966	2	46	1955	1	63	1915	1	21	1926	1
Sep	26	95	1901	1	38	1927	1	59	1946	1	21	1942	1
Sep	27	96	1904	2	44	1965	1	63	1904	1	26	1908	1
Sep	28	98	1921	1	39	1945	1	64	1956	1	29	1976	1
Sep	29	95	1931	1	38	1985	1	62	1925	1	25	1895	1
Sep	30	97	1938	1	36	1985	1	64	1893	1	21	1985	1
	Max	108			63			79			40		
	Min	95			36			59			21		
Oct	1	96	1899	1	44	1959	1	63	1971	1	21	1985	1
Oct	2	93	1938	1	40	1959	1	63	1910	1	25	1985	1
Oct	3	94	1916	1	42	1902	1	64	1954	1	26	1899	1
Oct	4	95	1967	2	52	1950	1	58	1897	1	30	1903	1
Oct	5	96	1900	1	40	1988	1	61	1922	1	23	1932	1
Oct	6	92	1932	2	41	1988	1	57	1947	1	20	1952	1
Oct	7	95	1916	1	43	1988	1	58	1918	1	20	1952	1
Oct	8	91	1979	1	38	1970	1	57	1905	1	19	1894	1
Oct	9	91	1928	1	36	1970	1	60	1904	1	24	1970	1
Oct	10	96	1920	1	35	1985	1	62	1931	1	25	1970	2
Oct	11	90	1955	2	39	1987	1	60	1924	1	17	1896	1
Oct	12	92	1989	1	34	1986	1	58	1956	1	19	1909	1
Oct	13	94	1975	1	30	1969	1	60	1956	1	22	1977	1
Oct	14	94	1921	1	34	1969	1	62	1913	1	24	1893	1
Oct	15	93	1921	1	38	1966	1	58	1935	1	20	1966	2
Oct	16	94	1921	1	36	1966	1	61	1938	1	21	1976	2
Oct	17	96	1926	1	38	1984	1	56	1938	1	19	1922	1
Oct	18	90	1927	1	39	1925	1	54	1920	1	22	1898	1
Oct	19	90	1903	1	38	1930	2	54	1918	1	17	1989	1
Oct	20	92	1947	1	37	1972	1	57	1920	1	8	1905	1
Oct	21	93	1921	1	33	1930	1	57	1941	1	13	1905	1
Oct	22	87	1899	1	35	1936	1	57	1914	1	12	1905	1
Oct	23	89	1927	2	33	1906	1	51	1963	1	7	1917	1
Oct	24	86	1921	1	38	1916	1	58	1899	1	19	1980	1
Oct	25	87	1940	3	35	1919	1	49	1897	1	16	1975	2
Oct	26	92	1922	1	30	1919	1	51	1971	1	18	1898	1
Oct	27	86	1933	2	22	1925	1	53	1940	1	10	1925	1

Continued

Table 7 continued.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Oct	28	88	1943	1	30	1925	1	51	1912	1	12	1910	2
Oct	29	89	1937	1	24	1917	1	55	1922	1	7	1917	2
Oct	30	88	1950	1	30	1971	1	55	1901	1	4	1952	1
Oct	31	87	1950	1	27	1972	1	49	1933	1	12	1905	1
	Max	96			52			64			30		
	Min	86			22			49			4		
Nov	1	79	1914	1	31	1972	1	52	1938	1	13	1935	1
Nov	2	85	1931	2	30	1951	1	45	1903	1	0	1951	1
Nov	3	82	1915	2	31	1935	1	46	1903	1	4	1899	1
Nov	4	80	1945	2	27	1967	1	45	1918	1	11	1967	1
Nov	5	84	1945	1	29	1973	2	52	1918	1	8	1967	1
Nov	6	83	1915	1	27	1959	1	45	1944	1	9	1961	1
Nov	7	84	1980	2	25	1936	1	48	1915	1	10	1938	1
Nov	8	82	1931	1	34	1929	1	43	1977	1	9	1896	1
Nov	9	80	1914	1	27	1950	1	46	1931	1	13	1913	1
Nov	10	87	1927	1	21	1985	1	50	1922	1	0	1898	1
Nov	11	78	1902	1	21	1986	2	43	1912	1	2	1911	1
Nov	12	76	1971	1	18	1940	1	41	1894	1	0	1911	1
Nov	13	78	1932	1	15	1916	1	43	1928	1	-5	1940	1
Nov	14	78	1894	1	15	1959	1	40	1906	1	-10	1940	1
Nov	15	81	1941	1	23	1909	1	46	1917	1	4	1920	1
Nov	16	81	1941	1	27	1955	1	47	1917	1	-1	1955	1
Nov	17	80	1943	1	18	1959	1	43	1934	1	2	1894	1
Nov	18	76	1981	2	25	1958	2	43	1941	1	-5	1903	1
Nov	19	78	1897	1	19	1900	1	43	1913	1	4	1937	1
Nov	20	78	1989	1	19	1978	1	43	1899	1	5	1929	1
Nov	21	69	1955	1	16	1978	1	40	1917	1	-5	1898	1
Nov	22	75	1924	1	15	1931	1	38	1917	1	-5	1929	1
Nov	23	79	1925	1	16	1895	1	45	1905	1	-2	1941	1
Nov	24	75	1915	1	24	1918	1	40	1944	1	0	1950	1
Nov	25	76	1910	1	22	1952	1	52	1909	1	7	1931	1
Nov	26	77	1960	1	18	1975	1	56	1909	1	-3	1975	1
Nov	27	78	1904	1	8	1919	2	37	1922	1	-5	1952	1
Nov	28	71	1960	3	11	1976	1	43	1949	1	-11	1896	1
Nov	29	75	1932	1	22	1985	2	43	1962	1	-7	1896	1
Nov	30	75	1932	1	14	1985	1	45	1962	1	1	1983	1
	Max	87			34			56			13		
	Min	69			8			37			-11		
Dec	1	80	1917	1	9	1985	1	40	1913	1	-1	1985	2
Dec	2	75	1926	1	9	1985	1	35	1913	1	-6	1985	1
Dec	3	68	1988	1	8	1897	1	34	1910	1	-5	1919	1
Dec	4	74	1946	2	13	1972	1	40	1913	1	-4	1902	1
Dec	5	77	1939	1	11	1909	1	35	1918	1	-8	1909	1
Dec	6	82	1939	1	7	1972	1	35	1939	1	-14	1972	1
Dec	7	76	1923	1	8	1972	1	36	1925	1	-14	1909	1
Dec	8	70	1940	1	10	1978	1	40	1938	1	-12	1917	1
Dec	9	78	1939	1	0	1932	1	34	1939	1	-20	1919	1
Dec	10	67	1957	1	5	1972	1	39	1939	1	-17	1972	1
Dec	11	79	1939	1	5	1932	1	34	1939	1	-15	1932	1
Dec	12	68	1921	2	5	1961	1	45	1939	1	-21	1932	1
Dec	13	78	1921	1	10	1961	1	38	1921	1	-14	1961	1
Dec	14	72	1988	1	5	1926	1	33	1924	1	-16	1901	1
Dec	15	70	1946	1	18	1975	2	37	1946	1	-12	1989	1

Continued



Table 7 concluded.

Month	Day	Daily maximum						Daily minimum					
		High	Year	No.	Low	Year	No.	High	Year	No.	Low	Year	No.
Dec	16	68	1939	1	6	1989	1	38	1980	1	-10	1989	2
Dec	17	76	1939	1	7	1924	1	37	1939	1	-14	1897	1
Dec	18	76	1980	1	4	1983	1	41	1939	1	-11	1983	1
Dec	19	71	1979	1	6	1924	1	32	1913	1	-18	1989	1
Dec	20	73	1894	1	3	1983	1	33	1894	1	-13	1924	1
Dec	21	72	1933	1	-6	1983	1	34	1933	1	-15	1983	1
Dec	22	69	1933	1	-6	1983	1	35	1955	1	-32	1989	1
Dec	23	74	1901	1	2	1983	1	35	1933	1	-30	1989	1
Dec	24	83	1964	1	-4	1983	1	44	1955	1	-15	1983	1
Dec	25	75	1950	1	1	1983	1	36	1950	1	-14	1983	1
Dec	26	64	1971	1	9	1983	1	36	1928	1	-8	1962	1
Dec	27	73	1928	1	14	1894	1	38	1919	1	-10	1894	1
Dec	28	74	1980	1	14	1983	2	35	1984	1	-16	1894	1
Dec	29	65	1923	1	9	1983	1	35	1897	1	-11	1954	1
Dec	30	73	1921	1	12	1978	1	31	1956	1	-9	1911	1
Dec	31	73	1904	1	1	1968	1	41	1896	1	-21	1898	1
	Max	83			18			45			-1		
	Min	64			-6			31			-32		

Table 8. Number of days the recorded maximum air temperature equaled or exceeded 100F by month and year at the Colby weather stations.

Year	Number of 100-degree days						Year	May	Jun	Jul	Aug	Sep	Total
	May	Jun	Jul	Aug	Sep	Total							
1893	0	2	5	0	0	7	1943	0	4	9	14	0	27
1894	0	1	8	2	0	11	1944	0	0	0	2	0	2
1895	2	1	0	0	3	6	1945	0	0	7	4	2	13
1896	0	1	0	6	0	7	1946	0	4	11	8	2	25
1897	0	0	5	0	0	5	1947	0	0	6	9	4	19
1898	0	0	2	5	0	7	1948	0	0	0	4	1	5
1899	0	2	1	9	4	16	1949	0	0	1	1	0	2
1900	0	2	10	10	0	22	1950	0	5	0	0	0	5
1901	0	8	18	4	0	30	1951	0	0	1	0	0	1
1902	0	2	4	6	0	12	1952	0	7	6	7	0	20
1903	0	0	2	1	1	4	1953	0	5	5	0	0	10
1904	0	0	1	1	1	3	1954	0	3	10	5	1	19
1905	0	0	1	6	0	7	1955	0	0	9	5	1	15
1906	0	0	0	1	0	1	1956	0	3	5	5	1	14
1907	0	0	6	0	0	6	1957	0	0	5	3	0	8
1908	0	1	0	1	1	3	1958	0	1	2	0	0	3
1909	0	0	0	2	0	2	1959	0	0	2	8	3	13
1910	0	3	8	5	0	16	1960	0	0	1	5	0	6
1911	0	7	8	10	4	29	1961	0	3	6	1	0	10
1912	0	0	2	4	1	7	1962	0	0	0	2	0	2
1913	0	0	7	11	0	18	1963	0	4	8	3	0	15
1914	0	0	0	2	0	2	1964	0	0	9	6	4	19
1915	0	0	0	0	0	0	1965	0	0	6	2	0	8
1916	0	0	7	7	2	16	1966	0	0	5	0	0	5
1917	0	3	8	2	1	14	1967	0	0	4	0	0	4
1918	0	5	3	8	0	16	1968	0	3	3	0	0	6
1919	0	0	6	4	1	11	1969	0	2	3	3	0	8
1920	0	0	1	0	1	2	1970	0	1	3	6	0	10
1921	0	0	2	6	0	8	1971	0	5	2	0	1	8
1922	0	1	9	5	2	17	1972	0	0	0	0	0	0
1923	0	0	1	0	0	1	1973	0	1	3	2	0	6
1924	0	2	6	3	0	11	1974	0	2	3	0	0	5
1925	0	4	13	1	0	18	1975	0	0	0	1	1	2
1926	0	3	7	12	0	22	1976	0	1	3	2	0	6
1927	1	2	4	0	1	8	1977	0	0	2	0	0	2
1928	0	0	1	0	0	1	1978	0	2	9	3	0	14
1929	0	1	10	5	1	17	1979	0	2	2	0	0	4
1930	0	0	15	3	0	18	1980	0	2	14	4	1	21
1931	0	3	8	1	6	18	1981	0	3	2	1	0	6
1932	0	1	14	1	0	16	1982	0	0	1	0	0	1
1933	0	7	5	1	0	13	1983	0	0	3	5	0	8
1934	1	3	21	11	0	36	1984	0	0	2	1	1	4
1935	0	1	15	13	2	31	1985	0	3	4	1	1	9
1936	0	11	19	16	1	47	1986	0	1	5	1	0	7
1937	0	4	7	12	0	23	1987	0	0	1	2	0	3
1938	0	3	7	16	1	27	1988	0	9	3	2	0	14
1939	0	2	12	2	2	18	1989	0	0	2	0	0	2
1940	0	4	13	2	0	19							
							Avg.	0.0	1.7	5.2	3.6	0.6	11.1
1941	0	0	1	0	1	2	Max.	2	11	21	16	6	47
1942	0	0	10	1	0	11	Min.	0	0	0	0	0	0

Table 9. Date of last “freeze” in the spring, the first in the fall, and the resultant length of the “season” recorded at the Colby weather stations, 1900-89.

Year	Reference temperature, F										Length of “season”				
	Last in spring					First in fall					Length of “season”				
	32	28	24	20	16	32	28	24	20	16	32-32	28-28	24-24	20-20	16-16
----- day of					the year					----- days					
1900	140	103	103	101	101	280	280	281	312	318	140	177	173	211	217
1901	146	146	96	90	90	263	289	289	307	307	117	143	193	217	217
1902	116	101	97	90	76	255	255	309	318	320	139	154	212	228	244
1903	123	120	120	120	86	259	259	281	315	321	136	139	161	195	235
1904	135	135	108	103	88	258	258	299	299	299	123	123	191	196	211
1905	137	111	111	105	105	274	283	284	288	293	137	172	173	183	188
1906	126	104	82	80	79	279	283	297	303	322	153	179	215	223	243
1907	147	147	147	120	120	285	306	312	314	315	138	159	165	194	195
1908	129	120	120	120	120	271	271	297	316	316	142	151	177	196	196
1909	129	121	121	121	72	284	285	285	285	318	155	164	164	164	246
1910	137	123	115	69	55	293	293	294	301	301	156	170	179	232	246
1911	123	122	104	104	60	281	292	292	304	305	158	170	188	200	245
1912	135	109	109	84	84	269	269	296	329	332	134	160	187	245	248
1913	105	103	102	36	86	264	292	294	302	302	159	189	192	216	216
1914	133	102	101	99	98	286	288	288	312	312	153	186	187	213	214
1915	141	90	89	85	85	278	278	316	316	318	137	188	227	231	233
1916	137	118	100	100	99	272	293	293	294	294	135	175	193	194	195
1917	128	128	127	98	98	281	281	281	296	296	153	153	154	198	198
1918	130	120	82	82	60	298	300	304	323	327	168	180	222	241	267
1919	115	107	100	67	67	283	283	299	301	301	168	176	199	234	234
1920	121	118	104	96	95	270	274	301	302	316	149	156	197	206	221
1921	123	119	107	100	100	276	305	313	323	323	153	186	206	223	223
1922	119	101	101	101	87	281	290	290	290	317	162	189	189	189	230
1923	136	114	98	98	90	286	292	294	303	333	150	178	196	205	243
1924	136	118	118	92	80	273	305	311	311	312	137	187	193	219	232
1925	121	121	78	72	72	283	292	292	292	300	162	171	214	220	228
1926	118	115	95	93	93	268	268	268	308	322	150	153	173	215	229
1927	112	111	111	80	80	269	306	310	319	320	157	195	199	239	240
1928	113	106	105	105	104	269	296	296	307	325	156	190	191	202	221
1929	136	102	101	91	60	295	297	304	314	317	159	195	203	223	257
1930	139	92	91	91	88	290	303	311	320	320	151	211	220	229	232
1931	142	114	111	90	90	301	303	304	304	304	159	189	193	214	214
1932	137	102	90	81	81	279	279	279	303	320	142	177	189	222	239
1933	105	104	104	104	96	281	298	309	309	310	176	194	205	205	214
1934	111	110	89	89	83	264	301	318	330	332	153	191	229	241	249
1935	125	108	102	66	66	283	296	296	304	305	158	188	194	238	239
1936	113	98	98	97	97	281	295	296	296	296	168	197	198	199	199
1937	117	117	99	87	87	295	307	318	321	322	178	190	219	234	235
1938	128	99	99	99	65	293	296	296	296	296	165	197	197	197	231
1939	111	111	101	101	96	283	301	301	303	307	172	190	200	202	211
1940	136	109	103	103	103	289	289	310	315	315	153	180	207	212	212
1941	111	111	110	76	76	280	301	310	312	325	169	190	200	236	249
1942	138	100	99	88	59	269	269	269	299	326	131	169	170	211	267
1943	136	109	80	80	80	263	288	288	299	320	127	179	208	219	240
1944	127	127	109	109	89	285	286	308	321	321	158	159	199	212	232
1945	136	136	95	95	94	271	272	295	313	313	135	136	200	218	219
1946	131	82	69	67	67	266	284	314	314	314	135	202	245	247	247
1947	149	106	87	74	74	297	301	309	309	311	148	195	222	235	237
1948	133	99	93	87	73	285	285	285	314	325	152	186	192	227	252

Continued

Table 9 concluded.

Year	Reference temperature, F										Length of "season"				
	Last in spring					First in fall					32-32	28-28	24-24	20-20	16-16
	32	28	24	20	16	32	28	24	20	16					
----- day of the year -----										-----					
1949	105	105	94	91	91	293	295	304	325	325	183	190	210	234	234
1950	147	120	120	103	79	296	307	307	313	313	149	187	187	210	234
1951	127	112	106	106	106	271	295	304	306	306	144	183	198	200	200
1952	132	105	101	101	83	280	280	280	280	315	148	175	179	179	232
1953	134	134	110	110	102	277	310	312	324	325	143	176	202	214	223
1954	123	123	93	93	88	288	300	304	306	306	165	177	211	213	218
1955	118	97	97	87	87	296	303	306	312	319	178	206	209	225	232
1956	121	120	120	76	76	295	308	313	313	321	174	188	193	237	245
1957	104	104	102	99	66	297	298	299	313	323	193	194	197	214	257
1958	118	114	89	79	79	274	283	305	321	322	156	169	216	242	243
1959	112	112	103	103	103	274	290	300	300	309	162	178	197	197	206
1960	121	121	90	78	77	293	305	314	314	314	172	184	224	236	237
1961	114	107	107	99	97	268	292	296	307	307	154	185	189	208	210
1962	121	99	92	92	92	289	298	309	312	322	168	199	217	220	230
1963	120	94	94	74	74	301	305	305	305	317	181	211	211	231	243
1964	106	105	99	99	86	271	279	293	324	326	165	174	194	225	240
1965	130	118	118	89	86	267	308	308	331	349	137	190	190	242	263
1966	133	133	111	110	83	274	288	288	288	306	141	155	177	178	223
1967	135	124	122	122	77	270	283	298	304	307	135	159	176	182	230
1968	120	115	105	105	96	280	296	312	312	316	160	181	207	207	220
1969	119	118	90	89	88	285	285	313	318	318	166	167	223	229	230
1970	135	114	106	94	88	269	281	282	319	327	134	167	176	225	239
1971	132	99	99	96	96	262	302	303	310	310	130	203	204	214	214
1972	128	107	95	92	92	292	293	298	319	319	164	186	203	227	227
1973	133	106	106	100	100	300	305	321	324	325	167	199	215	224	225
1974	107	107	106	84	84	246	288	288	318	318	139	181	182	234	234
1975	128	123	94	93	93	267	274	298	298	298	139	146	204	205	205
1976	138	128	91	81	73	272	290	290	299	317	134	162	199	218	244
1977	112	95	95	94	94	284	284	285	285	314	172	189	190	191	220
1978	124	115	85	79	64	264	279	279	319	323	140	164	194	240	259
1979	131	131	96	86	63	277	305	305	310	327	146	174	209	224	264
1980	119	106	105	105	84	285	285	298	298	321	166	179	193	193	237
1981	134	130	78	70	69	292	296	313	324	324	158	166	235	254	255
1982	126	112	112	112	99	284	293	293	293	307	158	181	181	181	208
1983	136	135	105	97	81	264	264	264	314	327	128	129	159	217	246
1984	121	120	95	78	69	268	272	305	323	324	147	152	210	245	255
1985	114	95	95	91	90	267	268	272	314	323	153	173	177	223	233
1986	118	106	105	79	51	284	285	312	313	314	166	179	207	234	263
1987	113	112	94	93	90	279	284	284	284	321	166	172	190	191	231
1988	124	117	102	78	78	275	301	301	301	320	151	184	199	223	242
1989	126	126	121	101	101	266	292	292	292	304	140	166	171	191	203
1900 through 1989:															
Avg.	126	113	101	93	85	279	290	298	309	316	153	177	197	216	231
Max.	149	147	147	122	120	301	310	321	331	349	193	211	245	254	267
Min.	104	82	69	66	51	246	255	264	280	293	117	123	154	164	188
1970 through 1989:															
Avg.	125	114	99	90	83	275	287	294	308	318	150	173	195	218	235
Max.	138	135	121	112	101	300	305	321	324	327	172	203	235	254	264
Min.	107	95	78	70	51	246	264	264	284	298	128	129	159	181	203

Table 10. Probabilities for freeze dates and freeze-free periods at the KSU Northwest Research-Extension Center.

PROBABILITIES OF:									
Temp., °F	a later spring freeze date (month/day) than indicated								
	.90	.80	.70	.60	.50	.40	.30	.20	.10
36	4/30	5/05	5/08	5/11	5/14	5/17	5/20	5/23	5/28
32	4/21	4/25	4/28	5/01	5/03	5/06	5/08	5/11	5/15
28	4/08	4/13	4/17	4/20	4/23	4/26	4/29	5/03	5/08
24	3/30	4/03	4/06	4/09	4/11	4/13	4/16	4/19	4/23
20	3/20	3/25	3/29	4/01	4/04	4/07	4/10	4/13	4/18
16	3/12	3/17	3/21	3/24	3/27	3/30	4/02	4/05	4/10
an earlier fall freeze date (month/day) than indicated									
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/12	9/17	9/21	9/24	9/27	9/30	10/03	10/07	10/12
32	9/19	9/25	9/29	10/02	10/06	10/09	10/12	10/17	10/22
28	10/06	10/11	10/14	10/17	10/20	10/22	10/25	10/29	11/02
24	10/13	10/18	10/21	10/24	10/27	10/30	11/02	11/05	11/10
20	10/21	10/26	10/30	11/02	11/05	11/08	11/12	11/16	11/21
16	10/31	11/04	11/08	11/10	11/13	11/15	11/18	11/21	11/26
a longer freeze-free period (days) than indicated									
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	158	150	145	140	135	131	126	120	112
32	176	169	163	159	155	151	146	141	133
28	199	192	187	183	179	175	171	166	159
24	216	210	205	202	198	195	191	187	181
20	239	230	225	220	215	210	205	199	191
16	252	244	239	234	230	226	221	216	209

Source: NOAA Climatology of the United States No. 20.

Table 11. Monthly growing-degree units calculated<sup>1</sup> from data collected at Colby weather stations, 1900-89.

Year	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1900	149	197	442	620	688	726	514	416	3751
1901	128	204	410	638	753	702	484	349	3665
1902	130	278	475	538	672	695	417	340	3543
1903	90	268	331	444	677	667	473	340	3289
1904	201	251	387	507	666	654	513	358	3534
1905	150	207	316	616	611	682	535	270	3385
1906	39	314	435	519	618	664	496	250	3334
1907	266	219	333	571	712	683	530	359	3671
1908	183	313	389	588	672	684	558	280	3664
1909	87	237	400	576	750	745	497	327	3617
1910	369	322	329	584	734	648	521	414	3919
1911	220	276	435	670	704	662	564	240	3769
1912	26	255	468	493	735	666	406	313	3361
1913	136	332	447	557	764	755	428	251	3667
1914	118	301	389	676	723	694	570	350	3820
1915	14	282	335	478	627	546	461	382	3123
1916	251	215	386	531	767	682	495	307	3633
1917	133	193	268	558	730	635	517	239	3271
1918	209	102	452	657	708	733	411	332	3602
1919	90	181	331	546	734	704	573	211	3369
1920	206	139	341	535	700	596	507	366	3390
1921	254	284	438	574	741	692	566	395	3942
1922	113	185	399	628	720	750	576	386	3757
1923	104	227	314	589	724	670	480	170	3277
1924	18	269	315	597	664	715	429	368	3373
1925	189	300	393	686	757	698	544	151	3717
1926	140	247	449	570	753	744	513	375	3790
1927	70	280	471	507	710	616	541	423	3616
1928	157	228	396	413	704	682	505	310	3393
1929	170	279	359	562	767	722	403	269	3529
1930	135	306	360	560	738	748	545	255	3645
1931	95	238	364	664	714	661	636	389	3759
1932	98	300	465	580	782	752	500	290	3766
1933	189	258	365	712	760	662	588	352	3884
1934	179	314	574	671	813	767	480	426	4223
1935	205	224	241	556	812	751	514	311	3613
1936	150	279	468	653	812	769	555	299	3984
1937	97	262	465	571	772	796	567	324	3852
1938	200	294	400	618	769	791	580	461	4111
1939	139	265	512	621	786	706	601	373	4000
1940	115	240	409	619	763	679	546	415	3784
1941	109	210	458	526	704	698	510	263	3476
1942	107	265	367	526	704	706	458	303	3433
1943	160	299	329	577	774	771	497	328	3734
1944	59	108	450	569	693	700	502	337	3416
1945	225	199	373	419	726	700	494	372	3505
1946	221	370	343	588	736	667	546	248	3717
1947	90	181	315	492	703	752	567	421	3520
1948	101	349	422	555	744	717	581	352	3819
1949	105	240	415	579	746	669	444	251	3447
1950	128	215	355	595	648	611	427	400	3378

Continued

Table 11 concluded.

Year	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1951	116	191	407	425	672	682	433	263	3186
1952	57	208	365	719	733	718	556	326	3681
1953	161	188	374	654	741	683	546	352	3697
1954	99	338	309	683	831	753	612	261	3883
1955	128	296	446	505	810	763	511	352	3810
1956	175	206	492	714	741	694	543	399	3963
1957	67	165	288	528	782	724	426	217	3195
1958	0	126	421	566	660	696	555	330	3352
1959	82	206	377	649	668	738	409	203	3331
1960	68	253	352	542	679	693	527	326	3438
1961	86	155	301	541	718	693	384	291	3168
1962	76	244	492	521	718	698	417	320	3483
1963	137	305	444	666	784	731	561	433	4060
1964	69	198	435	535	780	669	469	337	3490
1965	21	281	462	557	731	634	269	309	3263
1966	153	177	416	568	770	595	439	285	3402
1967	198	249	284	480	641	617	432	320	3220
1968	195	223	280	586	702	635	458	326	3402
1969	30	251	392	454	755	694	502	144	3221
1970	55	200	465	549	714	712	416	195	3303
1971	111	193	293	629	664	672	396	314	3270
1972	228	210	355	611	650	611	442	240	3345
1973	57	157	307	559	668	705	345	283	3080
1974	145	220	447	534	757	574	367	294	3336
1975	73	219	365	508	718	675	420	343	3320
1976	121	210	298	560	727	681	440	201	3236
1977	116	254	437	649	747	644	528	292	3665
1978	122	243	328	556	749	626	515	307	3445
1979	90	245	318	523	723	618	528	337	3379
1980	54	173	323	613	780	702	480	307	3430
1981	100	297	269	620	719	630	492	220	3345
1982	100	194	323	422	718	700	461	249	3165
1983	81	124	262	489	750	774	537	290	3306
1984	43	109	358	585	730	705	404	179	3112
1985	131	279	402	505	704	604	411	214	3249
1986	201	277	359	596	722	659	488	238	3539
1987	99	240	396	617	690	607	454	290	3391
1988	143	202	406	657	699	689	448	263	3505
1989	173	276	375	458	683	639	439	318	3360
1900 through 1989:									
Avg.	127	237	383	571	724	688	492	310	3532
Max.	369	370	574	719	831	796	636	461	4223
Min.	0	102	241	413	611	546	269	144	3080
1970 through 1989:									
Avg.	112	216	354	562	715	661	450	269	3339
Max.	228	297	465	657	780	774	537	343	3665
Min.	43	109	262	422	650	574	345	179	3080

<sup>1</sup> Calculated by the NOAA method for corn:

$$GDU = (MaxT + MinT)/2 - 50$$

where, daily maximums above 86 are input as 86 and daily minimums below 50 are input as 50.

Table 12. Average daily growing-degree units calculated from data collected at the Colby weather stations, 1900-89.

Day	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	1.9	5.3	7.7	13.8	22.7	23.1	19.5	13.0
2	2.9	5.3	9.4	13.9	23.8	23.0	18.5	13.7
3	2.2	5.7	9.4	15.3	23.2	23.1	19.0	13.1
4	1.3	4.0	9.6	17.8	22.8	22.8	17.0	12.1
5	1.7	4.9	11.8	17.8	22.4	23.0	17.2	12.0
6	2.1	6.9	10.4	16.8	23.0	23.0	18.4	9.3
7	2.1	8.0	10.9	18.3	22.6	23.5	19.3	11.6
8	2.5	6.7	11.5	18.1	23.5	22.8	20.1	13.0
9	2.8	5.5	10.6	15.8	23.6	22.9	18.9	11.9
10	3.3	6.2	10.2	17.5	23.6	21.8	17.0	11.9
11	3.2	6.4	10.8	19.2	23.4	20.3	17.1	11.8
12	3.1	5.5	11.1	18.0	23.6	21.0	16.5	11.2
13	3.5	5.8	11.0	19.6	23.4	22.4	16.3	11.2
14	2.4	6.6	10.9	20.0	23.0	21.9	14.9	9.6
15	2.3	7.8	12.4	19.4	23.4	20.5	14.5	9.7
16	2.9	8.7	11.7	19.1	22.7	21.3	15.2	9.9
17	2.9	9.2	11.2	17.7	24.2	22.0	13.2	8.6
18	4.0	7.5	12.6	19.1	24.1	22.0	14.9	7.8
19	4.7	7.8	12.9	20.1	24.2	21.3	15.5	7.4
20	3.4	8.4	13.8	20.5	23.6	21.5	14.7	9.2
21	2.5	8.2	13.7	20.4	22.8	21.4	12.2	8.7
22	3.7	8.4	13.6	19.6	22.5	21.2	12.1	9.1
23	3.3	9.0	12.2	20.9	22.9	21.6	12.3	8.2
24	3.8	8.8	12.6	20.4	24.0	21.7	12.1	7.6
25	4.2	9.3	14.0	20.7	24.2	21.0	12.5	7.2
26	4.3	8.2	14.6	20.7	23.8	21.7	12.9	7.2
27	5.0	9.1	13.9	22.0	23.9	21.8	13.1	6.9
28	5.3	8.3	14.2	22.5	23.7	20.9	12.6	5.8
29	5.4	8.9	15.6	23.9	24.2	21.4	12.9	6.0
30	4.5	8.5	15.4	23.4	24.0	21.1	13.1	5.7
31	5.4		15.4		24.1	20.2		5.9
Total	102.6	218.9	375.1	572.3	726.9	677.2	463.5	296.5



Table 13. Longtime average heating- and cooling-degree units to selected base temperatures as calculated from data collected at the Colby weather stations.

Base temp.	Heating-degree units <sup>1</sup>												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
below													
65	1212	949	871	468	202	45	0	0	117	385	810	1091	6150
60	1057	809	716	326	109	15	0	0	52	251	660	936	4931
57	964	725	633	245	65	8	0	0	28	185	570	843	4266
55	902	669	574	197	43	0	0	0	18	149	510	781	3843
50	747	542	435	104	13	0	0	0	6	72	364	626	2909
	Cooling-degree units <sup>2</sup>												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
above													
55	0	0	13	29	188	470	667	598	312	83	0	0	2360
57	0	0	0	17	149	413	605	536	262	58	0	0	2049
60	0	0	0	8	100	330	512	443	196	31	0	0	1620
65	0	0	0	0	37	210	361	293	111	10	0	0	1022
70	0	0	0	0	11	121	220	158	48	0	0	0	558

Source: NOAA Climatology of the United States No. 20.

<sup>1</sup> Daily HDU = BaseT - [(MaxT + MinT)/2]

<sup>2</sup> Daily CDU = [(MaxT + MinT)/2] - BaseT

Table 14. Monthly, seasonal, and yearly precipitation amounts (inches) recorded at the Colby weather stations, 1893-1989.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1893	0.00	0.15	0.03	0.52	2.07	1.69	2.47	1.35	0.94	0.24	0.18	0.05	9.04	9.69
1894	0.41	0.90	0.30	0.77	1.14	3.19	1.76	0.07	1.15	0.38	0.06	0.60	8.08	10.73
1895	0.34	0.63	0.15	1.13	3.14	4.38	5.87	1.04	0.75	0.35	0.70	0.48	16.31	18.96
1896	0.46	0.10	0.48	4.11	2.13	5.39	2.00	2.83	1.47	1.62	0.25	0.16	17.93	21.00
1897	0.22	0.65	2.13	4.06	1.73	4.74	1.83	4.84	3.19	5.50	0.18	0.47	20.39	29.54
1898	0.04	0.02	0.24	1.11	4.51	2.85	1.35	0.64	3.00	0.55	0.35	0.42	13.46	15.08
1899	0.31	0.29	0.56	0.34	1.82	3.16	4.41	0.19	0.75	0.00	2.12	0.35	10.67	14.30
1900	0.00	1.21	0.50	4.95	0.20	3.15	2.52	1.49	2.04	0.10	0.23	0.39	14.35	16.78
1901	0.20	0.81	2.25	2.45	0.85	1.75	0.54	3.58	1.46	0.64	0.07	0.26	10.63	14.86
1902	0.31	0.36	0.81	0.67	3.46	1.92	3.26	6.29	2.50	1.69	0.03	0.82	18.10	22.12
1903	0.22	1.94	0.71	2.40	3.00	2.19	5.59	3.04	0.64	0.43	0.97	0.00	16.86	21.13
1904	0.00	0.00	0.34	3.78	2.42	7.11	3.19	3.00	1.60	1.78	0.00	0.56	21.10	23.78
1905	0.44	0.44	0.60	3.30	1.72	2.94	2.06	1.90	1.59	0.98	0.95	0.00	13.51	16.92
1906	0.50	0.15	1.52	4.90	1.67	2.29	1.90	2.62	1.25	1.92	0.53	0.35	14.63	19.60
1907	0.13	0.09	0.69	1.00	1.13	2.16	0.82	2.67	2.06	1.17	0.29	0.78	9.84	12.99
1908	0.08	0.65	0.04	0.19	1.76	4.74	2.08	1.67	1.00	1.09	1.36	0.06	11.44	14.72
1909	0.09	0.34	1.16	0.35	1.45	5.60	2.98	0.45	1.97	0.70	2.26	0.56	12.80	17.91
1910	0.18	0.17	0.13	0.62	2.26	0.71	0.25	1.25	0.96	0.03	0.00	0.06	6.05	6.62
1911	0.26	0.56	0.00	2.12	1.19	1.15	1.25	1.31	1.28	1.18	0.15	0.84	8.30	11.29
1912	0.13	0.85	1.66	0.98	1.00	3.34	3.29	4.48	3.03	0.76	0.30	0.20	16.12	20.02
1913	0.65	0.53	0.93	2.35	5.07	2.85	0.59	0.62	2.69	0.29	0.56	4.36	14.17	21.49
1914	0.05	0.45	0.21	1.21	2.89	2.69	5.22	2.12	0.51	0.95	0.00	0.51	14.64	16.81
1915	0.38	1.49	1.50	3.95	5.06	4.72	7.77	4.04	0.91	1.03	0.48	0.51	26.45	31.84
1916	0.55	0.05	0.33	2.01	1.33	3.60	1.76	1.83	0.41	0.66	0.21	0.37	10.94	13.11
1917	0.12	0.20	0.56	2.00	1.56	2.42	2.70	5.99	3.78	0.32	0.42	0.20	18.45	20.27
1918	0.77	1.79	1.34	1.40	2.35	0.34	1.74	2.05	2.33	3.15	0.40	2.71	10.21	20.37
1919	0.00	1.57	0.59	3.17	2.05	2.76	3.19	0.40	2.19	0.91	1.63	0.19	13.76	18.65
1920	0.23	0.31	0.46	4.49	2.74	5.55	4.09	3.19	2.56	2.71	0.27	1.31	22.62	27.91
1921	1.15	0.03	0.66	2.61	1.85	3.21	4.15	2.39	2.86	0.45	0.18	0.40	17.07	19.94
1922	0.11	0.25	1.85	5.40	2.38	1.64	2.73	1.38	0.27	0.05	2.88	0.00	13.80	18.94
1923	0.02	0.11	0.83	3.16	6.44	3.45	3.50	3.86	1.97	3.30	0.12	0.77	22.38	27.53
1924	0.18	1.90	2.00	0.38	1.49	0.74	1.74	3.18	1.97	0.95	0.18	2.14	9.50	16.85
1925	0.15	0.21	0.50	1.56	3.47	0.91	1.37	2.56	2.03	0.95	0.55	0.23	11.90	14.49
1926	0.40	0.10	0.40	1.07	2.05	1.71	0.76	1.92	1.10	0.25	1.27	0.43	8.61	11.46
1927	0.28	1.14	1.77	3.45	0.46	3.92	1.82	2.17	2.58	0.58	0.21	0.43	14.40	18.81
1928	0.02	0.83	1.75	0.75	4.66	5.54	3.40	1.35	0.28	1.67	1.08	0.05	15.98	21.38
1929	0.00	0.65	0.10	3.28	4.11	2.14	1.08	1.42	3.34	2.07	1.67	0.08	15.37	19.94
1930	0.28	0.46	0.16	2.48	4.88	3.42	1.91	4.30	0.66	5.12	1.81	0.09	17.65	25.57
1931	0.00	1.70	2.32	1.36	1.34	1.93	2.93	1.37	0.38	0.92	1.48	0.35	9.31	16.08
1932	0.55	0.55	0.41	1.98	1.52	4.03	3.52	0.77	0.72	0.43	0.21	0.40	12.54	15.09
1933	0.00	0.17	0.86	2.25	3.29	0.17	3.08	5.93	0.67	0.25	0.51	0.96	15.39	18.14
1934	0.10	1.17	0.65	0.37	0.97	1.80	0.47	1.33	0.96	0.09	0.45	0.24	5.90	8.60
1935	0.00	0.32	0.42	0.33	3.41	3.88	0.30	1.36	1.76	0.11	1.19	0.15	11.04	13.23
1936	0.20	0.30	0.15	1.14	3.92	0.56	0.30	1.66	2.90	0.48	0.02	0.43	10.48	12.06
1937	0.33	0.19	1.56	1.19	1.61	3.43	1.65	1.46	1.62	1.57	0.05	0.26	10.96	14.92
1938	0.21	0.11	1.67	1.18	4.57	2.98	5.55	0.85	1.06	0.06	0.16	0.02	16.19	18.42
1939	0.36	0.87	2.99	1.67	2.44	2.16	1.54	1.60	0.55	0.00	0.18	1.02	9.96	15.38
1940	0.47	0.19	2.42	0.85	1.90	1.09	1.53	3.74	1.65	0.60	0.82	0.35	10.76	15.61
1941	0.81	0.21	0.74	3.82	3.03	5.04	11.04	0.72	2.97	0.88	0.29	1.15	26.62	30.70
1942	0.46	0.70	1.26	5.27	0.92	4.19	1.19	2.21	1.41	2.20	0.52	0.77	15.19	21.10
1943	0.10	0.36	0.48	2.22	1.93	3.28	0.85	3.00	0.37	0.84	0.10	0.32	11.65	13.85
1944	1.83	0.51	1.68	6.36	1.78	5.47	7.14	0.71	0.50	0.95	1.48	0.38	21.96	28.79
1945	0.81	0.27	0.16	3.07	3.24	3.74	1.74	5.29	1.17	0.26	0.17	0.09	18.25	20.01

Continued

Table 14 concluded.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Season <sup>1</sup>	Year
1946	0.11	0.02	2.69	0.05	4.56	4.61	3.69	1.01	0.72	7.59	3.04	0.03	14.64	28.12
1947	0.36	0.39	0.92	2.08	3.11	5.83	0.87	0.92	0.43	0.41	0.71	0.73	13.24	16.76
1948	0.35	0.44	2.04	0.50	2.74	3.76	2.26	5.06	1.27	0.32	1.25	0.36	15.59	20.35
1949	0.55	0.41	2.39	1.21	5.02	6.47	4.98	4.34	0.21	1.55	0.10	0.07	22.23	27.30
1950	0.20	1.26	0.68	0.94	1.87	1.41	3.70	4.99	0.61	0.23	0.03	0.13	13.52	16.05
1951	0.33	0.33	0.24	1.13	4.96	6.87	4.88	1.78	1.81	0.44	0.37	0.11	21.43	23.25
1952	0.12	0.27	1.54	2.31	2.83	0.18	4.22	0.99	0.45	0.08	0.73	0.18	10.98	13.90
1953	0.00	0.20	1.28	2.68	1.66	2.16	1.34	4.56	0.29	2.09	2.01	1.46	12.69	19.73
1954	0.13	0.13	0.76	0.46	3.72	0.90	1.75	1.98	0.29	1.76	0.05	0.53	9.10	12.46
1955	0.78	0.68	0.38	2.01	2.10	2.64	0.36	0.23	1.36	0.33	0.06	0.28	8.70	11.21
1956	0.47	0.34	0.46	0.76	1.17	1.55	1.56	1.00	0.05	0.76	0.41	0.15	6.09	8.68
1957	0.39	0.56	2.93	2.12	4.15	6.69	2.96	3.00	3.81	1.65	0.53	0.11	22.73	28.90
1958	0.47	0.93	3.58	1.59	2.62	1.98	7.67	2.19	0.07	0.23	0.94	0.40	16.12	22.67
1959	0.85	0.38	1.71	0.98	0.84	2.23	2.11	2.46	2.44	2.40	0.05	0.49	11.06	16.94
1960	2.20	2.90	0.70	1.34	2.20	5.55	2.61	0.88	0.64	1.49	0.19	1.14	13.22	21.84
1961	0.01	0.08	1.15	1.04	4.54	4.26	2.14	2.39	0.96	0.32	1.15	0.47	15.33	18.51
1962	0.17	0.20	1.31	0.58	4.23	7.18	4.36	2.44	2.39	1.60	0.39	0.28	21.18	25.13
1963	0.70	0.19	1.84	0.05	0.70	2.06	4.83	2.60	4.13	0.10	0.37	0.27	14.37	17.84
1964	0.00	0.88	0.84	1.28	3.46	1.08	1.84	0.13	2.09	0.13	0.22	0.08	9.88	12.03
1965	0.41	0.51	0.98	0.21	2.03	6.01	5.24	4.23	4.28	3.03	0.00	0.50	22.00	27.43
1966	0.36	0.32	0.10	0.56	0.60	2.71	3.93	0.71	3.85	0.68	0.10	0.42	12.36	14.34
1967	0.07	0.00	0.14	0.65	2.83	3.20	1.10	0.67	1.76	0.30	0.19	0.26	10.21	11.17
1968	0.03	0.13	0.00	0.79	2.43	5.09	1.82	5.30	0.44	1.66	0.40	0.92	15.87	19.01
1969	0.07	0.51	0.94	1.76	1.87	2.58	3.54	2.68	0.17	2.85	0.09	0.29	12.60	17.35
1970	0.04	0.01	0.83	1.02	4.73	2.93	1.76	2.08	2.21	1.12	0.41	0.00	14.73	17.14
1971	0.27	1.04	0.39	3.73	2.86	2.13	2.51	0.85	1.47	1.11	1.33	0.13	13.55	17.87
1972	0.17	0.02	0.27	1.01	3.93	4.47	3.16	1.97	0.93	0.30	1.50	0.49	15.47	18.22
1973	0.61	0.05	3.49	2.17	3.15	2.43	5.34	0.49	5.69	0.70	0.74	0.60	19.27	25.46
1974	0.12	0.10	0.59	2.76	2.12	5.59	1.06	2.49	0.73	0.98	0.27	0.36	14.75	17.17
1975	0.10	0.03	0.65	1.12	4.35	8.95	5.26	1.40	0.30	0.01	2.07	0.03	21.38	24.27
1976	0.14	0.11	0.78	3.12	1.38	0.44	1.17	0.21	3.43	0.89	0.15	0.04	9.75	11.86
1977	0.17	0.02	0.77	2.99	5.69	3.61	2.68	4.98	0.60	0.17	0.25	0.29	20.55	22.22
1978	0.24	0.81	0.11	1.44	4.35	3.67	1.53	1.16	0.11	0.76	0.92	0.44	12.26	15.54
1979	0.47	0.03	2.58	0.54	4.57	3.78	7.66	2.67	0.05	1.15	0.87	0.90	19.27	25.27
1980	0.83	0.66	2.42	1.36	2.34	1.46	2.42	2.01	1.18	0.72	0.06	0.04	10.77	15.50
1981	0.69	0.30	3.38	3.50	8.92	0.15	3.15	1.44	0.72	0.42	2.03	0.01	17.88	24.71
1982	0.20	0.42	1.09	1.03	5.31	5.68	3.11	3.31	1.78	2.66	0.26	1.37	20.22	26.22
1983	0.11	1.21	1.87	2.15	3.67	1.77	2.38	0.53	0.61	0.15	1.04	0.28	11.11	15.77
1984	0.45	0.63	2.67	3.46	2.85	2.37	0.63	2.88	0.39	4.24	0.15	0.52	12.58	21.24
1985	0.38	0.36	0.59	2.30	3.11	0.80	6.92	2.56	2.15	2.08	0.45	0.41	17.84	22.11
1986	0.00	0.26	0.70	1.07	5.18	1.75	1.83	1.11	2.87	2.00	0.37	0.32	13.81	17.46
1987	0.20	0.67	2.16	1.08	4.12	3.50	4.99	1.13	0.22	0.00	1.03	0.35	15.04	19.45
1988	1.01	0.21	0.32	2.01	4.52	0.88	2.06	3.35	2.42	0.05	0.43	0.14	15.24	17.40
1989	0.09	0.27	0.42	0.71	4.40	4.32	3.71	1.77	1.65	0.60	0.00	0.27	16.56	18.21
1893 through 1989:														
Avg.	0.32	0.51	1.07	1.89	2.86	3.17	2.87	2.23	1.52	1.12	0.62	0.47	14.55	18.65
Max.	2.20	2.90	3.58	6.36	8.92	8.95	11.04	6.29	5.69	7.59	3.04	4.36	26.62	31.84
Min.	0.00	0.00	0.00	0.05	0.20	0.15	0.25	0.07	0.05	0.00	0.00	0.00	5.90	6.62
1970 through 1989:														
Avg.	0.31	0.36	1.30	1.93	4.08	3.03	3.17	1.92	1.48	1.01	0.72	0.35	15.43	19.65
Max.	1.01	1.21	3.49	3.73	8.92	8.95	7.66	4.98	5.69	4.24	2.07	1.37	21.38	26.22
Min.	0.00	0.01	0.11	0.54	1.38	0.15	0.63	0.21	0.05	0.00	0.00	0.00	9.75	11.86

<sup>1</sup> Season is defined as middle six months of the year.

Table 15. Number of days in the year with precipitation amounts equal to or greater than threshold amounts at the Colby weather stations, 1900-89.

Year	Threshold values, inches						Year	Threshold values, inches					
	.01	.10	.25	.50	1.0	2.0		.01	.10	.25	.50	1.0	2.0
	----- number of days -----							----- number of days -----					
1900	53	38	20	12	4	0	1950	67	39	24	9	2	0
1901	57	37	22	8	2	0	1951	97	47	28	17	5	1
1902	63	42	27	16	4	1	1952	75	35	18	5	2	0
1903	57	41	25	15	3	1	1953	71	44	30	10	2	2
1904	62	44	26	15	7	0	1954	58	30	15	7	2	0
1905	72	39	20	8	3	0	1955	51	33	19	7	0	0
1906	89	43	25	13	4	0	1956	69	28	12	3	0	0
1907	63	33	19	8	2	0	1957	95	49	28	20	5	3
1908	68	35	18	9	3	0	1958	91	48	29	12	3	1
1909	67	45	23	10	3	0	1959	74	37	23	12	2	0
1910	43	24	10	1	0	0	1960	85	48	26	10	4	1
1911	63	29	19	6	1	0	1961	79	46	25	10	3	0
1912	101	41	22	11	5	0	1962	70	43	30	17	8	1
1913	83	47	25	15	4	1	1963	60	36	20	10	4	1
1914	80	38	16	8	2	1	1964	56	26	17	7	2	0
1915	89	54	37	21	10	0	1965	89	44	29	19	8	1
1916	57	36	18	7	2	0	1966	64	33	17	9	3	0
1917	83	39	22	14	6	0	1967	78	30	15	4	1	0
1918	71	42	29	12	5	0	1968	71	38	17	9	4	2
1919	69	42	21	14	4	1	1969	89	45	23	12	1	0
1920	74	49	31	18	6	1	1970	63	37	20	9	4	1
1921	52	35	24	13	6	0	1971	66	41	24	13	2	0
1922	58	38	21	12	5	1	1972	74	39	21	13	3	0
1923	88	62	40	20	5	0	1973	87	51	35	20	5	0
1924	73	41	21	10	2	0	1974	58	34	18	10	3	1
1925	63	37	21	10	2	0	1975	64	26	18	12	6	2
1926	71	35	15	5	1	0	1976	56	28	15	6	2	1
1927	83	50	29	10	3	0	1977	73	47	27	14	4	1
1928	76	55	26	14	3	0	1978	75	30	18	10	4	0
1929	71	53	29	11	1	0	1979	79	44	27	17	8	1
1930	58	42	29	17	7	2	1980	71	34	22	9	2	0
1931	60	42	21	9	1	1	1981	73	41	23	17	8	1
1932	62	41	17	7	2	0	1982	77	46	29	15	7	1
1933	56	39	24	14	3	0	1983	82	38	19	11	1	0
1934	57	29	9	3	0	0	1984	80	41	24	12	6	0
1935	58	27	16	7	4	0	1985	82	40	19	13	7	0
1936	59	26	11	7	2	0	1986	69	41	21	9	3	1
1937	68	33	19	10	2	0	1987	75	43	27	15	2	0
1938	64	32	21	14	4	0	1988	65	37	20	12	2	0
1939	63	32	22	9	3	1	1989	70	39	23	13	1	1
1940	85	38	20	9	1	0							
1941	104	54	30	18	6	3	1900 through 1989:						
1942	83	40	22	13	4	1	Avg.	72	40	23	12	4	1
1943	57	31	17	7	3	1	Max.	104	62	40	21	10	3
1944	81	48	32	17	7	2	Min.	43	24	9	1	0	0
1945	74	40	25	13	5	0							
1946	70	44	32	17	7	2	1970 through 1989:						
1947	73	41	17	8	4	0	Avg.	72	39	23	13	4	1
1948	82	43	24	13	4	0	Max.	87	51	35	20	8	2
1949	97	54	34	18	6	2	Min.	56	26	15	6	1	0

Table 16. Probabilities that monthly precipitation will be equal to or less than the indicated amount at the KSU Northwest Research-Extension Center.

Prob. level	Monthly precipitation, inches											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.05	0.00	0.00	0.05	0.23	0.89	0.59	0.70	0.26	0.05	0.05	0.01	0.02
0.10	0.01	0.01	0.14	0.35	1.17	0.89	0.99	0.42	0.11	0.11	0.04	0.05
0.20	0.06	0.05	0.30	0.57	1.59	1.40	1.44	0.71	0.28	0.23	0.11	0.11
0.30	0.11	0.10	0.47	0.77	1.95	1.87	1.85	0.99	0.48	0.37	0.19	0.16
0.40	0.17	0.16	0.65	0.97	2.30	2.36	2.26	1.28	0.72	0.52	0.28	0.22
0.50	0.24	0.24	0.85	1.20	2.66	2.90	2.69	1.61	1.02	0.70	0.39	0.29
0.60	0.33	0.35	1.09	1.46	3.07	3.51	3.17	2.00	1.40	0.92	0.51	0.38
0.70	0.44	0.49	1.38	1.77	3.54	4.25	3.75	2.47	1.89	1.21	0.68	0.48
0.80	0.61	0.69	1.79	2.20	4.15	5.23	4.51	3.10	2.61	1.61	0.92	0.62
0.90	0.89	1.06	2.47	2.88	5.10	6.83	5.72	4.15	3.86	2.29	1.31	0.85
0.95	1.17	1.43	3.14	3.54	5.99	8.36	6.86	5.16	5.13	2.97	1.71	1.08

Source: NOAA Climatology of the United States 20.

Table 17. Measurable monthly, winter, and annual snowfall amounts (inches) recorded at the Colby weather stations, 1900-89.

Year	Jan	Feb	Mar	Apr	May	Winter	Sep	Oct	Nov	Dec	Total
1900	0.0	10.3	3.2	3.0	0.0		0.0	0.0	0.0	3.5	20.0
1901	2.0	19.0	18.9	0.5	0.0	43.9	0.0	0.0	0.0	3.0	43.4
1902	3.3	4.2	0.0	3.0	0.0	13.5	0.0	0.0	0.0	9.1	19.6
1903	1.0	19.4	3.3	1.7	0.0	34.5	0.0	0.0	0.5	0.0	25.9
1904	0.0	0.0	0.0	5.0	0.0	5.5	0.0	0.0	0.0	6.0	11.0
1905	4.5	5.5	0.0	0.0	0.0	16.0	0.0	9.6	0.0	0.0	19.6
1906	5.0	0.5	13.1	2.5	0.0	30.7	0.0	2.8	0.5	0.5	24.9
1907	0.7	0.9	6.2	2.2	1.0	14.8	0.0	0.0	0.3	9.0	20.3
1908	1.1	2.2	0.0	0.0	0.0	12.6	0.0	0.0	7.5	1.0	11.8
1909	0.9	5.0	9.0	3.2	0.0	26.6	0.0	0.0	8.5	6.7	33.3
1910	2.7	4.0	0.0	0.0	0.0	21.9	0.0	0.0	0.0	0.8	7.5
1911	3.0	2.0	0.0	0.0	0.0	5.8	0.0	0.0	2.5	8.5	16.0
1912	1.2	6.0	13.5	0.0	0.0	31.7	0.0	5.0	2.0	1.5	29.2
1913	3.0	6.0	5.5	0.5	0.0	23.5	0.0	0.0	0.0	13.0	28.0
1914	0.0	1.6	0.0	0.0	0.0	14.6	0.0	0.0	0.0	6.0	7.6
1915	4.0	1.3	13.8	0.0	1.5	26.6	0.0	0.0	0.0	5.0	25.6
1916	2.5	0.5	3.0	9.0	0.0	20.0	0.0	3.0	2.5	4.5	25.0
1917	1.5	2.5	5.0	4.0	0.0	23.0	0.0	0.0	0.5	2.0	15.5
1918	9.0	15.5	0.0	0.0	0.0	27.0	0.0	0.0	2.0	26.0	52.5
1919	0.0	13.5	1.5	5.0	0.0	48.0	0.0	0.5	9.0	2.0	31.5
1920	2.0	3.0	2.0	15.5	0.0	34.0	0.0	0.0	2.5	11.0	36.0
1921	0.0	0.5	0.5	5.0	0.0	19.5	0.0	0.0	2.0	4.0	12.0
1922	1.2	3.0	10.5	10.0	0.0	30.7	0.0	0.0	4.0	0.0	28.7
1923	0.0	1.0	8.5	0.0	0.0	13.5	0.0	0.0	0.0	7.5	17.0
1924	2.0	19.0	12.2	0.0	0.0	40.7	0.0	0.0	1.5	18.0	52.7
1925	3.0	0.0	3.0	0.0	0.0	25.5	0.0	2.5	4.0	2.0	14.5
1926	0.5	0.5	0.0	6.5	0.0	16.0	0.0	0.0	4.5	3.0	15.0
1927	1.0	13.7	16.0	0.0	0.0	38.2	0.0	0.0	2.0	3.0	35.7
1928	0.0	5.0	8.0	0.0	0.0	18.0	0.0	1.5	8.0	0.0	22.5
1929	0.0	2.5	1.0	0.0	0.0	13.0	0.0	1.0	20.0	1.0	25.5
1930	4.0	2.0	1.0	0.0	0.0	29.0	0.0	0.0	4.5	0.0	11.5
1931	0.0	4.0	14.0	5.0	0.0	27.5	0.0	0.0	9.0	3.5	35.5
1932	4.5	2.5	3.0	1.0	0.0	23.5	0.0	0.0	0.0	2.2	13.2
1933	0.0	1.5	7.0	0.0	0.0	10.7	0.0	0.0	0.5	0.0	9.0
1934	0.5	9.2	7.0	1.0	0.0	18.2	0.0	0.0	2.0	1.5	21.2
1935	0.0	3.0	3.5	1.0	0.0	11.0	0.0	0.0	5.0	1.0	13.5
1936	2.4	3.6	1.2	6.7	0.0	19.9	0.0	1.3	0.2	4.4	19.8
1937	3.5	3.5	4.1	2.0	0.0	19.0	0.0	0.0	0.2	2.6	15.9
1938	2.1	1.0	0.5	1.5	2.0	9.9	0.0	0.0	2.0	0.3	9.4
1939	0.7	12.1	15.7	3.2	0.0	34.0	0.0	0.0	0.0	14.0	45.7
1940	9.3	2.6	12.2	2.5	0.0	40.6	0.0	0.0	5.6	4.1	36.3
1941	5.6	2.6	3.8	6.6	0.0	28.3	0.0	0.0	1.7	14.3	34.6
1942	8.0	10.2	9.5	2.0	0.0	45.7	0.0	0.0	6.0	6.0	41.7
1943	2.0	3.5	6.4	0.0	0.0	23.9	0.0	0.0	0.0	4.7	16.6
1944	5.8	8.0	15.6	20.0	0.0	54.1	0.0	0.0	3.3	4.6	57.3
1945	8.7	2.7	2.2	13.5	0.0	35.0	0.1	0.5	0.7	1.5	29.9
1946	1.6	0.5	7.5	0.0	0.0	12.4	0.0	0.0	9.4	0.5	19.5
1947	4.2	4.8	9.3	1.5	0.0	29.7	0.0	0.0	2.1	6.0	27.9
1948	5.3	6.4	15.8	0.0	0.0	35.6	0.0	0.0	11.9	4.3	43.7
1949	8.8	2.2	15.4	2.5	0.0	45.1	0.0	0.0	0.0	0.8	29.7
1950	4.1	2.5	6.7	3.1	2.0	19.2	0.0	0.0	0.2	1.0	19.6

Continued

Table 17 concluded.

Year	Jan	Feb	Mar	Apr	May	Winter	Sep	Oct	Nov	Dec	Total
1951	6.1	3.9	2.7	2.8	0.0	16.7	0.0	0.0	3.2	1.8	20.5
1952	3.0	5.9	17.2	4.5	0.0	35.6	0.0	0.0	7.6	1.8	40.0
1953	0.5	3.5	10.5	7.3	0.0	31.2	0.0	0.0	11.8	13.0	46.6
1954	1.7	1.0	7.1	0.0	5.0	39.6	0.0	0.0	0.5	3.0	18.3
1955	7.5	8.2	4.7	0.0	0.0	23.9	0.0	0.0	0.8	3.1	24.3
1956	5.3	5.1	4.3	4.0	0.0	22.6	0.0	0.0	1.2	3.5	23.4
1957	6.4	7.0	19.3	4.6	0.0	42.0	0.0	0.5	2.5	1.5	41.8
1958	7.3	7.9	30.4	0.0	0.0	50.1	0.0	0.0	11.5	7.5	64.6
1959	10.6	5.6	9.5	2.2	0.0	46.9	0.0	1.0	0.7	2.0	31.6
1960	11.5	16.5	7.9	0.0	0.0	39.6	0.0	0.0	3.0	9.7	48.6
1961	0.5	2.5	4.7	6.5	0.0	26.9	0.0	0.0	6.4	7.5	28.1
1962	3.5	2.9	0.0	0.0	0.0	20.3	0.0	0.0	4.5	1.5	12.4
1963	9.5	0.0	15.2	0.0	0.0	30.7	0.0	0.0	2.0	5.6	32.3
1964	0.1	11.1	5.8	5.0	0.0	29.6	0.0	0.0	1.1	1.0	24.1
1965	3.6	4.9	4.4	0.0	0.0	15.0	0.0	0.0	0.0	5.7	18.6
1966	7.0	0.8	4.0	1.5	0.5	19.5	0.0	3.0	0.1	6.5	23.4
1967	3.3	0.0	2.2	0.0	1.0	16.1	0.0	0.0	2.5	3.7	12.7
1968	0.0	1.8	0.0	0.0	0.0	8.0	0.0	0.0	0.2	8.8	10.8
1969	0.6	7.0	12.7	0.0	0.0	29.3	0.0	8.9	0.7	4.4	34.3
1970	1.1	0.4	9.9	3.8	3.5	32.7	0.0	2.2	1.5	0.0	22.4
1971	4.2	8.0	3.0	0.0	0.0	18.9	0.0	0.5	3.0	1.2	19.9
1972	3.2	1.0	0.0	0.0	0.0	8.9	0.0	0.0	8.8	10.3	23.3
1973	4.0	0.0	8.2	4.2	0.0	35.5	0.0	0.0	5.5	9.8	31.7
1974	4.0	2.2	6.7	2.5	0.0	30.7	0.0	0.0	0.0	4.1	19.5
1975	2.1	0.7	4.8	3.3	0.0	15.0	0.0	0.0	8.1	0.8	19.8
1976	3.5	3.0	9.5	0.0	0.0	24.9	0.0	4.5	3.5	0.2	24.2
1977	3.3	0.0	7.0	6.5	0.0	25.0	0.0	0.0	0.3	0.1	17.2
1978	2.9	15.2	1.1	0.0	0.0	19.6	0.0	0.0	3.3	6.2	28.7
1979	10.9	0.5	11.6	3.1	0.1	35.7	0.0	5.0	3.2	8.5	42.9
1980	9.6	9.8	18.3	6.3	0.0	60.7	0.0	0.3	0.7	0.2	45.2
1981	9.8	4.5	8.0	0.0	0.0	23.5	0.0	0.0	0.1	0.4	22.8
1982	4.0	9.4	2.3	1.4	0.0	17.6	0.0	0.0	1.9	17.5	36.5
1983	2.9	6.2	8.0	6.0	0.0	42.5	0.0	0.0	12.9	7.2	43.2
1984	10.0	7.5	19.1	14.0	0.0	70.7	1.0	0.0	1.0	7.6	60.2
1985	7.2	5.5	6.8	0.0	0.0	29.1	2.5	0.0	6.0	5.1	33.1
1986	0.0	4.2	0.0	2.5	0.0	20.3	0.0	1.0	3.0	2.5	13.2
1987	2.6	5.5	16.6	3.5	0.0	34.7	0.0	0.0	5.2	5.1	38.5
1988	14.0	3.3	7.6	7.5	0.0	42.7	0.0	0.0	2.5	0.7	35.6
1989	1.2	2.5	2.7	8.5	0.0	18.1	0.0	0.0	0.0	4.2	19.1
1900 through 1989:											
Avg.	3.6	4.9	7.0	2.9	0.2	27.1	0.0	0.6	3.1	4.6	27.0
Max.	14.0	19.4	30.4	20.0	5.0	70.7	2.5	9.6	20.0	26.0	64.6
Min.	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	7.5
1970 through 1989:											
Avg.	5.0	4.5	7.6	3.7	0.2	30.3	0.2	0.7	3.5	4.6	29.9
Max.	14.0	15.2	19.1	14.0	3.5	70.7	2.5	5.0	12.9	17.5	60.2
Min.	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	13.2

Table 18. Monthly and seasonal pan evaporation (inches) measured at the Colby weather stations, 1914 to 1989.

Year	Apr	May	Jun	Jul	Aug	Sep	Season
Obtained from BPI sunken pan:							
1914	4.59	5.74	8.98	7.97	8.88	7.59	43.75
1915	4.02	5.43	5.84	5.98	5.44	4.94	31.65
1916	4.42	7.06	7.15	11.23	8.83	6.84	45.53
1917	4.36	5.38	7.95	9.58	6.74	4.71	38.72
1918	3.75	7.05	8.09	8.46	9.21	4.81	41.37
1919	3.54	5.02	6.61	9.19	8.86	6.42	39.64
1920	3.06	4.06	6.81	7.50	5.26	6.02	32.71
1921	5.28	7.03	6.03	8.72	6.41	5.89	39.36
1922	3.54	6.50	8.36	9.06	8.30	6.84	42.60
1923	5.43	5.26	6.61	7.34	6.89	5.84	37.37
1924	5.61	6.71	7.87	10.19	8.64	6.28	45.30
1925	6.14	6.70	10.40	10.89	8.47	6.37	48.97
1926	5.34	7.31	8.52	11.48	10.35	6.28	49.28
1927	5.02	8.94	7.06	9.04	6.01	7.15	43.22
1928	6.12	5.95	5.23	7.36	8.77	7.15	40.58
1929	5.80	5.10	7.05	9.98	8.22	5.78	41.93
1930	4.82	5.55	7.63	9.50	7.54	5.04	40.08
1931	3.99	6.07	8.90	9.80	8.01	8.16	44.93
1932	5.73	7.59	6.87	10.34	9.15	6.29	45.97
1933	6.34	5.85	10.15	9.74	7.09	6.54	45.71
1934	6.29	9.42	11.22	13.54	10.65	6.34	57.46
1935	6.92	5.32	7.66	11.82	9.35	6.20	47.27
1936	5.25	6.56	9.68	12.18	9.64	6.80	50.11
1937	5.44	6.88	7.32	10.30	9.79	5.97	45.70
1938	4.77	5.30	7.67	9.22	10.62	6.22	43.80
1939	4.47	7.75	9.81	11.68	8.50	8.92	51.13
1940	5.20	7.11	10.18	10.50	7.65	5.33	45.97
1941	3.79	6.34	7.26	7.66	7.54	6.76	39.35
1942	4.21	6.16	6.04	9.60	8.06	5.24	39.31
1943	5.66	4.94	8.26	10.14	9.62	6.80	45.42
1944	2.89	6.73	7.15	7.33	7.78	5.98	37.86
1945	3.96	5.92	5.80	8.39	7.55	6.13	37.75
1946	6.19	6.63	9.04	9.02	9.55	6.52	46.95
1947	4.13	5.01	6.03	7.77	9.79	8.34	41.07
1948	7.14	6.55	6.79	8.52	8.40	7.30	44.70
1949	4.96	5.69	6.19	8.38	7.44	5.34	38.00
1950	5.42	5.88	9.34	7.29	6.45	4.86	39.24
1951	5.13	6.22	5.95	6.39	6.90	5.26	35.85
1952	3.51	4.93	10.21	9.17	7.07	6.73	41.62
1953	4.41	6.24	9.14	9.46	7.33	6.82	43.40
1954	5.20	4.27	10.42	10.44	8.19	7.85	46.37
1955	5.36	6.26	6.02	11.80	9.78	7.41	46.63
1956	5.14	7.18	11.03	8.75	9.17	8.43	49.70
1957	3.27	4.55	6.44	8.16	8.17	4.98	35.57
1958	3.00	5.20	7.44	7.23	7.10	7.03	37.00
1959	4.46	5.93	9.55	9.18	7.92	6.12	43.16
1960	5.03	5.39	5.82	7.97	8.19	7.34	39.74

Continued



Table 18 concluded.

Year	Apr	May	Jun	Jul	Aug	Sep	Season
1961	4.41	4.56	6.84	8.25	7.50	5.70	37.26
1962	5.36	7.63	6.65	8.26	8.80	4.32	41.02
1963	5.91	6.45	10.43	9.76	7.76	5.37	45.68
1964	4.80	7.17	8.59	10.22	9.56	6.59	46.93
1965	5.60	8.82	6.71	9.39	7.14	3.31	40.97
1914 through		1965:					
Avg.	7.06	6.22	7.86	9.25	8.19	6.29	44.87
Max.	9.39	9.42	11.22	13.54	10.65	8.92	57.46
Min.	3.62	4.06	5.23	5.98	5.26	3.31	31.65
Obtained from a raised pan:							
1966	6.04	12.26	12.61	14.49	10.31	8.63	64.34
1967	9.39	9.47	9.04	10.41	12.21	8.80	59.32
1968	8.50	8.85	14.26	13.64	11.53	10.24	67.02
1969	8.21	8.84	10.79	14.08	12.09	9.77	63.78
1970	7.56	11.73	12.79	13.96	14.15	10.10	70.29
1971	8.44	8.28	13.59	12.92	12.60	9.99	65.82
1972	7.48	9.14	11.63	11.76	11.19	8.31	59.51
1973	5.83	9.52	14.00	12.22	14.22	6.33	62.12
1974	7.46	11.32	12.72	16.82	9.83	8.98	67.13
1975	6.71	10.65	10.75	14.19	12.05	9.33	63.68
1976	6.81	8.85	13.64	14.85	14.39	8.07	66.61
1977	6.59	8.77	12.03	14.77	9.14	9.73	61.03
1978	8.73	8.10	11.34	15.03	11.86	11.06	66.12
1979	7.10	8.63	10.79	11.66	10.49	9.89	58.56
1980	6.56	7.73	11.69	15.01	13.28	9.95	64.22
1981	7.79	6.58	12.68	11.34	9.51	9.04	56.94
1982	6.96	7.07	6.96	12.86	10.42	7.24	51.51
1983	3.62	7.78	7.73	15.56	13.63	10.54	58.86
1984	4.52	9.15	11.61	14.29	12.10	9.48	61.15
1985	8.04	8.60	11.71	12.45	9.48	7.06	57.34
1986	7.03	9.65	10.96	14.04	10.89	8.13	60.70
1987	6.50	7.88	12.66	14.92	10.66	8.43	61.05
1988	6.52	11.14	13.19	12.64	12.95	9.06	65.50
1989	9.07	9.58	9.47	12.94	9.10	8.01	58.17
1966 through		1989:					
Avg.	7.14	9.15	11.61	13.62	11.59	9.01	62.12
Max.	9.39	12.26	14.26	16.82	14.39	11.06	70.29
Min.	3.62	6.58	6.96	10.41	9.10	6.33	51.51

Table 19. Reference evapotranspiration (ET) values calculated<sup>1</sup> for the 120-day period from May 1 through September 11 from data collected at the Colby weather stations.

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Average
May																			
Avg.	0.22	0.22	0.27	0.22	0.21	0.22	0.21	0.21	0.20	0.15	0.15	0.19	0.26	0.23	0.25	0.22	0.29	0.25	0.22
Max.	0.45	0.37	0.46	0.47	0.39	0.35	0.41	0.56	0.41	0.36	0.40	0.41	0.42	0.50	0.56	0.39	0.52	0.53	0.26
Min.	0.04	0.10	0.14	0.07	0.04	0.11	0.04	0.09	0.06	0.05	0.04	0.08	0.09	0.05	0.07	0.05	0.05	0.07	0.18
Total	6.79	6.94	8.27	6.76	6.60	6.79	6.63	6.38	6.35	4.68	4.73	5.98	7.93	7.13	7.74	6.82	9.01	7.74	6.85
June																			
Avg.	0.27	0.32	0.29	0.24	0.33	0.27	0.29	0.30	0.29	0.30	0.15	0.25	0.31	0.33	0.27	0.32	0.35	0.27	0.29
Max.	0.44	0.59	0.45	0.47	0.59	0.48	0.61	1.17	0.43	0.56	0.26	0.50	0.54	0.51	0.45	0.50	0.54	0.68	0.35
Min.	0.17	0.17	0.09	0.09	0.19	0.15	0.07	0.03	0.17	0.15	0.05	0.11	0.19	0.04	0.10	0.15	0.18	0.09	0.21
Total	8.14	9.71	8.85	7.34	9.89	8.22	8.68	8.87	8.73	8.98	4.64	7.45	9.32	9.79	8.07	9.69	10.35	8.19	8.61
July																			
Avg.	0.26	0.27	0.37	0.28	0.30	0.31	0.34	0.25	0.34	0.27	0.24	0.38	0.35	0.30	0.31	0.38	0.33	0.33	0.31
Max.	0.38	0.55	0.53	0.49	0.52	0.59	0.61	0.45	0.49	0.56	0.32	0.53	0.59	0.53	0.62	0.52	0.52	0.56	0.36
Min.	0.11	0.09	0.19	0.15	0.16	0.06	0.19	0.10	0.22	0.08	0.09	0.21	0.17	0.11	0.11	0.14	0.13	0.12	0.25
Total	7.97	8.26	11.42	8.80	9.21	9.68	10.55	7.87	10.55	8.31	7.32	11.75	10.80	9.17	9.59	11.83	10.10	10.18	9.63
August																			
Avg.	0.17	0.31	0.23	0.28	0.29	0.22	0.28	0.25	0.31	0.22	0.24	0.33	0.29	0.27	0.27	0.26	0.32	0.25	0.27
Max.	0.32	0.48	0.50	0.49	0.47	0.49	0.51	0.41	0.57	0.35	0.32	0.49	0.50	0.56	0.43	0.49	0.54	0.42	0.30
Min.	0.03	0.19	0.10	0.09	0.15	0.10	0.09	0.04	0.11	0.11	0.04	0.16	0.16	0.10	0.12	0.05	0.07	0.09	0.22
Total	5.42	9.68	7.10	8.61	9.12	6.81	8.57	7.80	9.69	6.89	7.39	10.09	8.98	8.49	8.22	7.91	9.82	7.70	8.24
September																			
Avg.	0.12	0.18	0.25	0.22	0.26	0.25	0.33	0.27	0.26	0.20	0.22	0.33	0.30	0.24	0.19	0.22	0.31	0.20	0.24
Max.	0.25	0.32	0.39	0.35	0.38	0.54	0.46	0.40	0.39	0.35	0.30	0.46	0.53	0.44	0.29	0.41	0.59	0.35	0.26
Min.	0.03	0.09	0.09	0.10	0.16	0.17	0.24	0.13	0.09	0.07	0.11	0.24	0.17	0.04	0.05	0.11	0.21	0.04	0.19
Total	1.33	2.03	2.73	2.46	2.84	2.73	3.63	2.99	2.87	2.22	2.45	3.68	3.28	2.66	2.09	2.37	3.37	2.21	2.66

<sup>1</sup> Source: F. R. Lamm using a modified Penman equation with an alfalfa base.

Fig. 1. Average daily air temperatures at Colby, KS, 1900-1989.

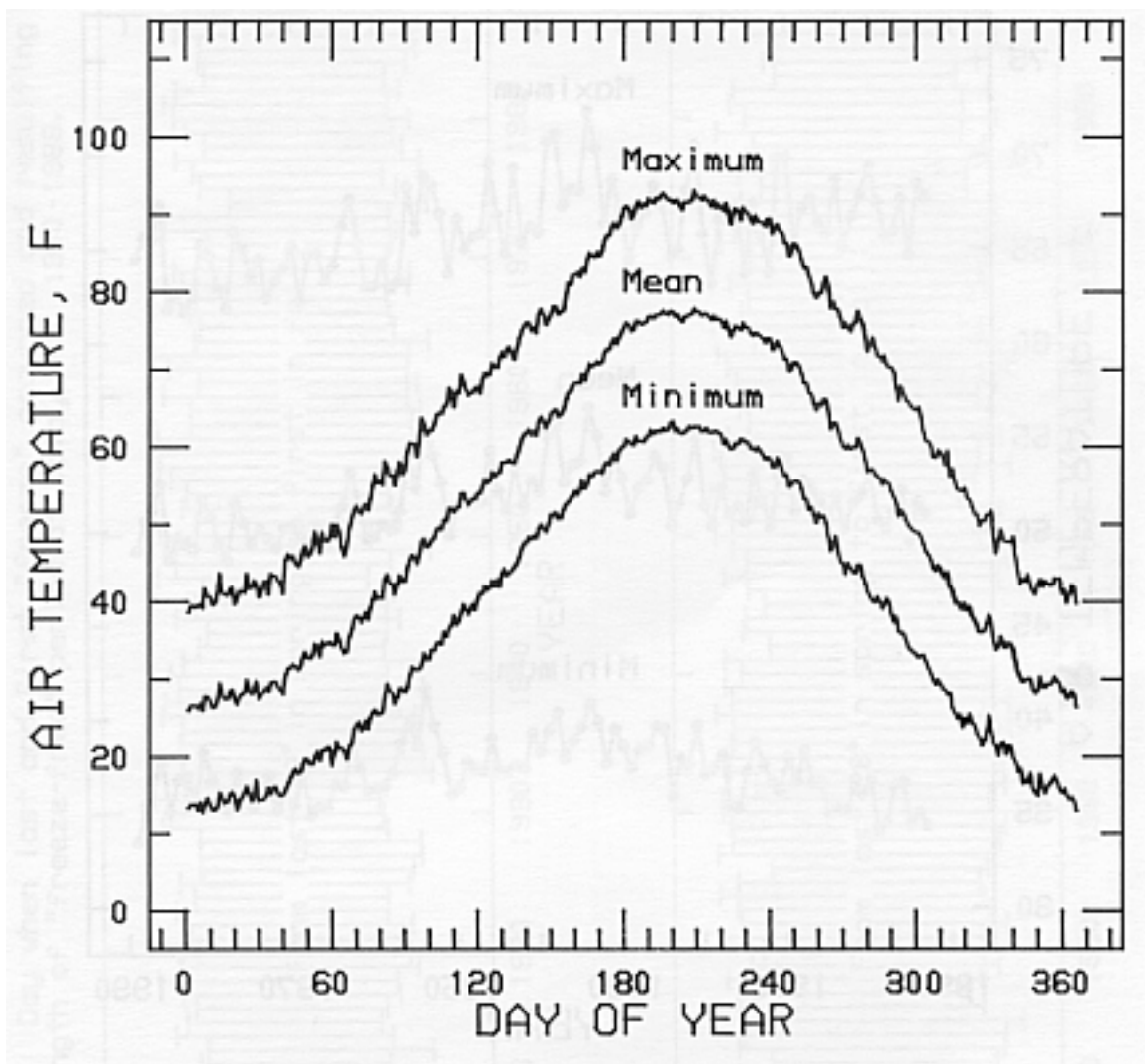


Fig. 2. Average annual maximum, minimum, and mean air temperatures at Colby, KS, 1893-1989.

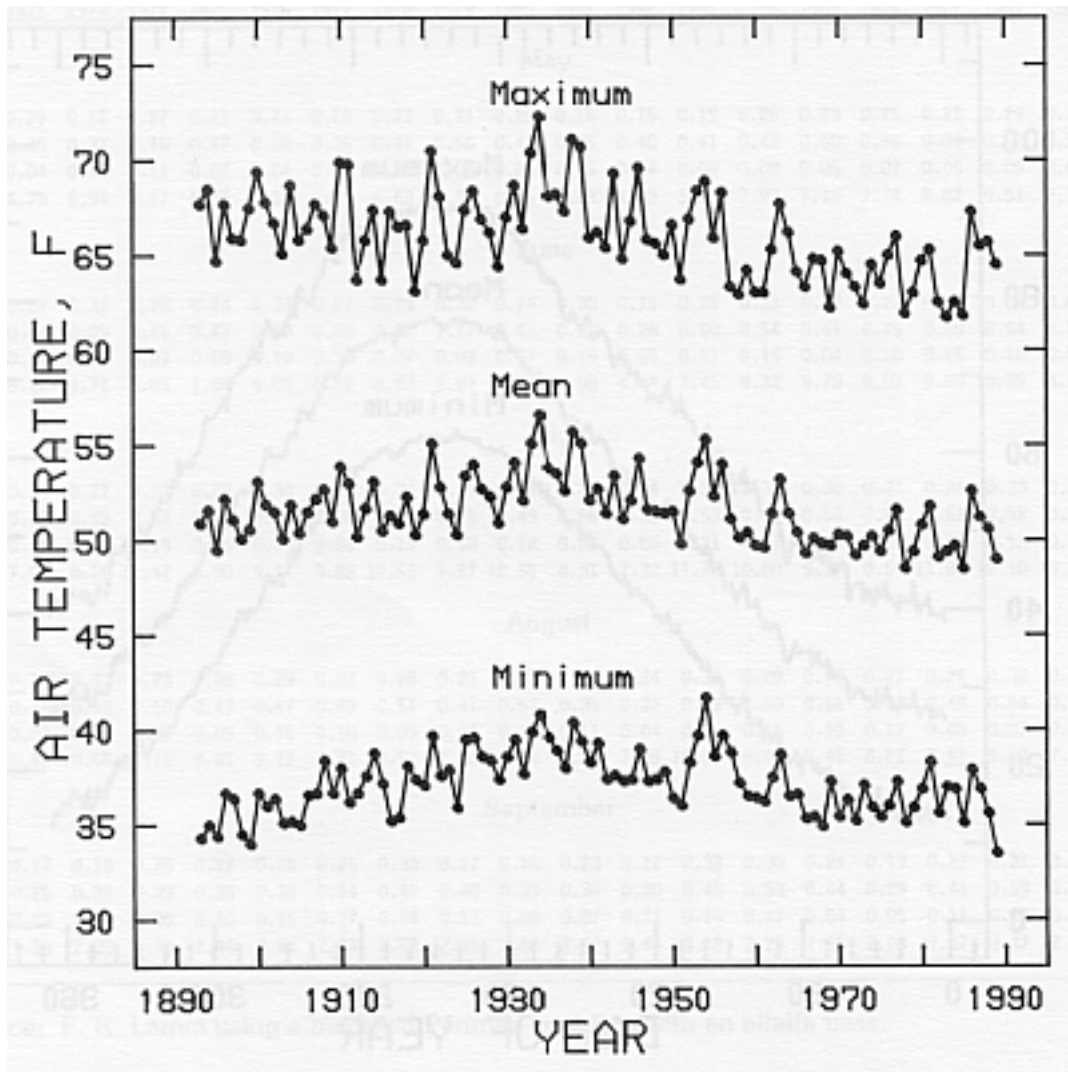


Fig. 3. Day when last and first "freeze" occurred and resulting length of "freeze-free" period at Colby, KS, 1900-1989.

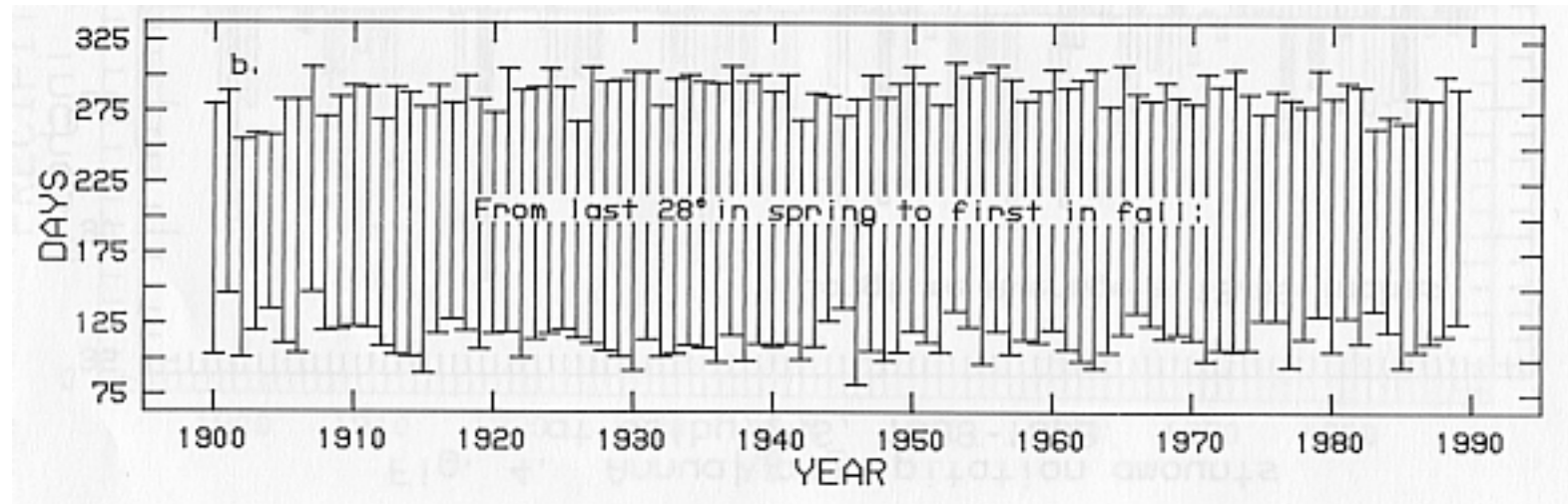
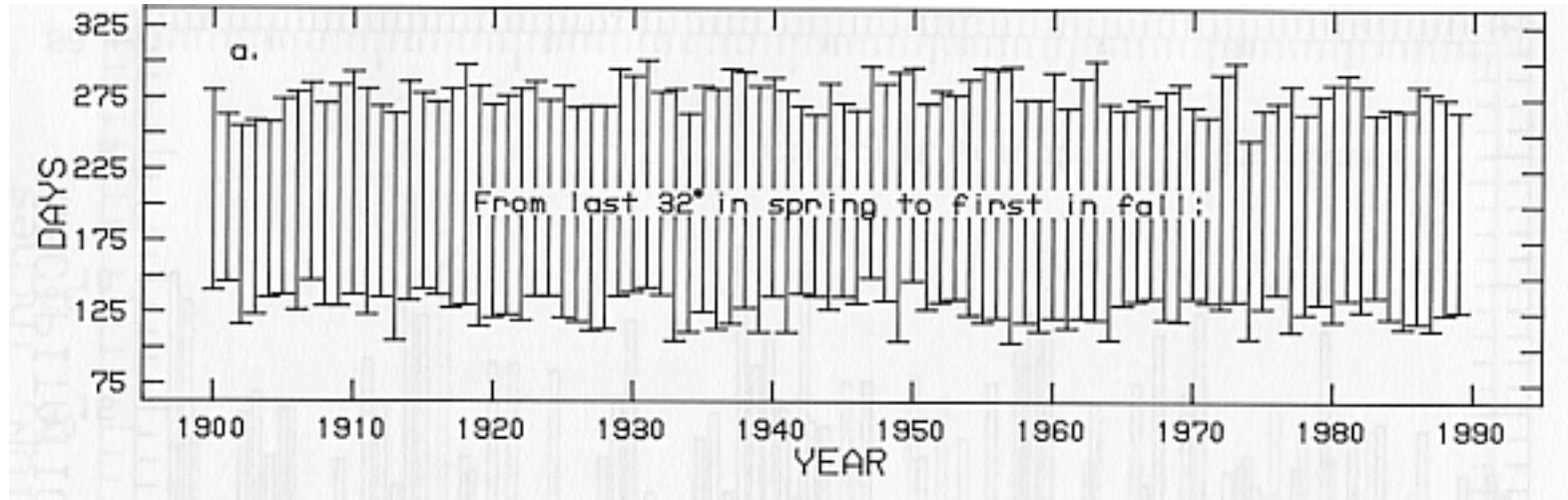


Fig. 4. Annual precipitation amounts at Colby, KS, 1893-1989.

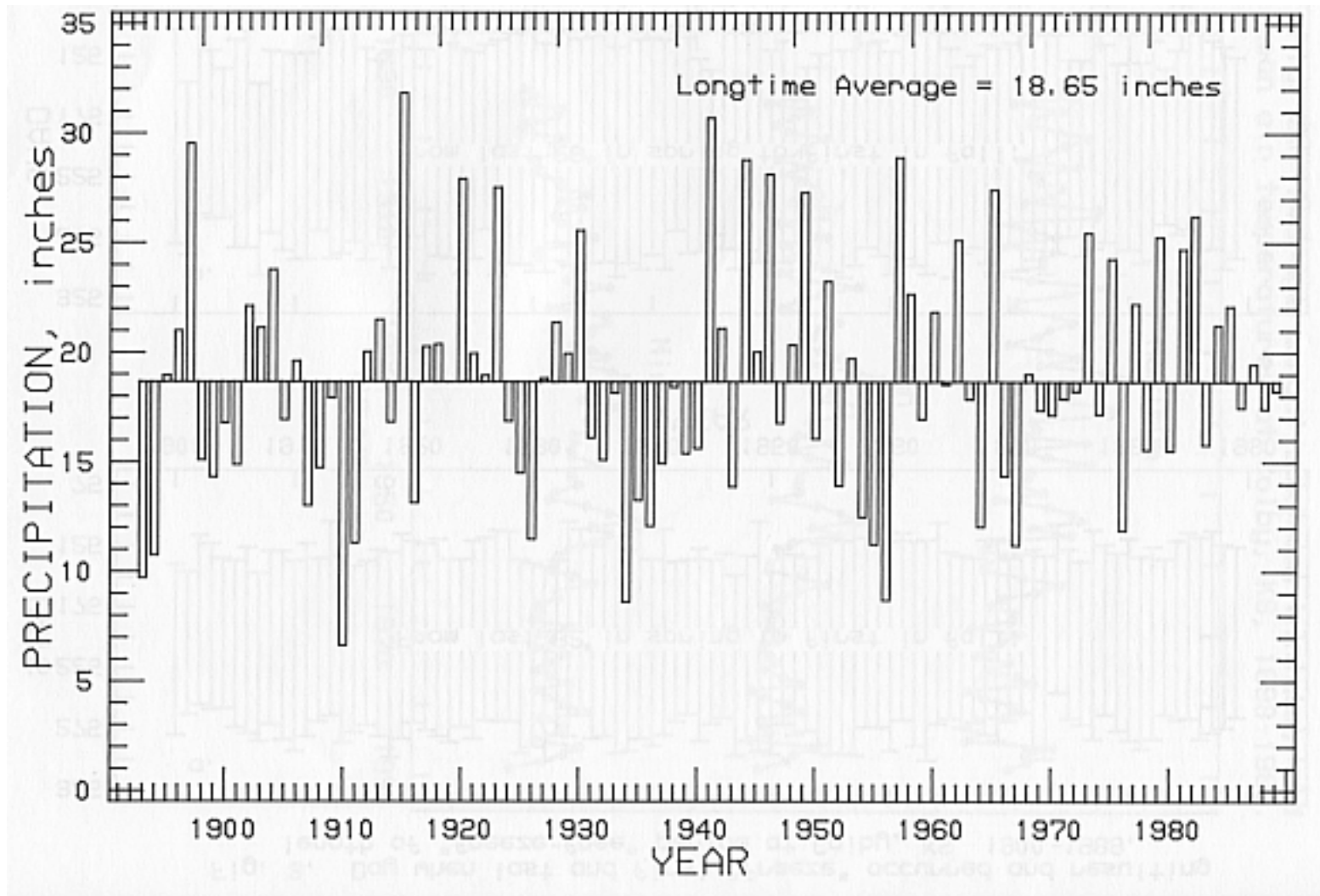


Fig. 5. April-through-September precipitation amounts at Colby, KS, 1893-1989.

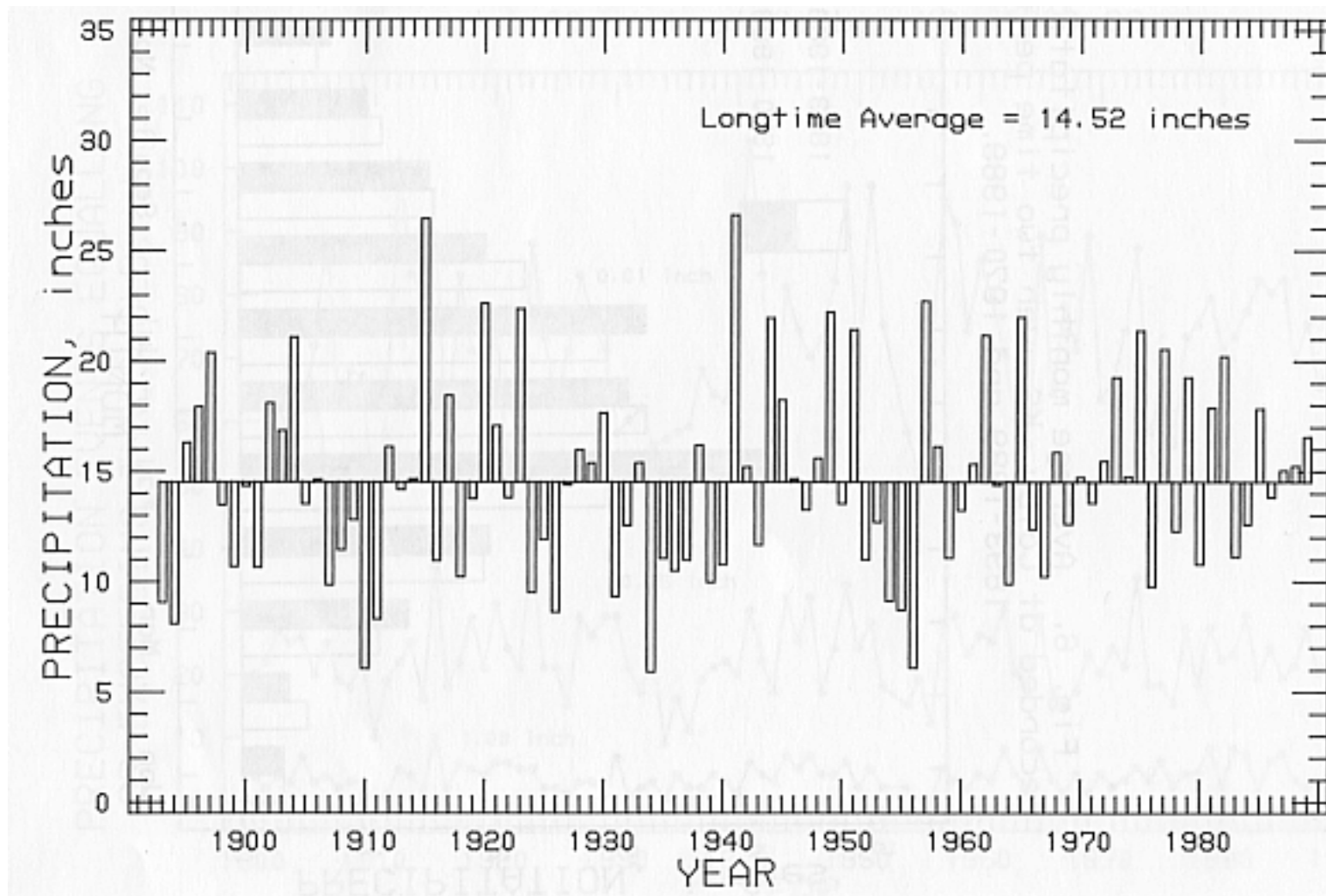


Fig. 6. Average monthly precipitation recorded at Colby, KS over two time periods, 1893-1989 and 1970-1989.

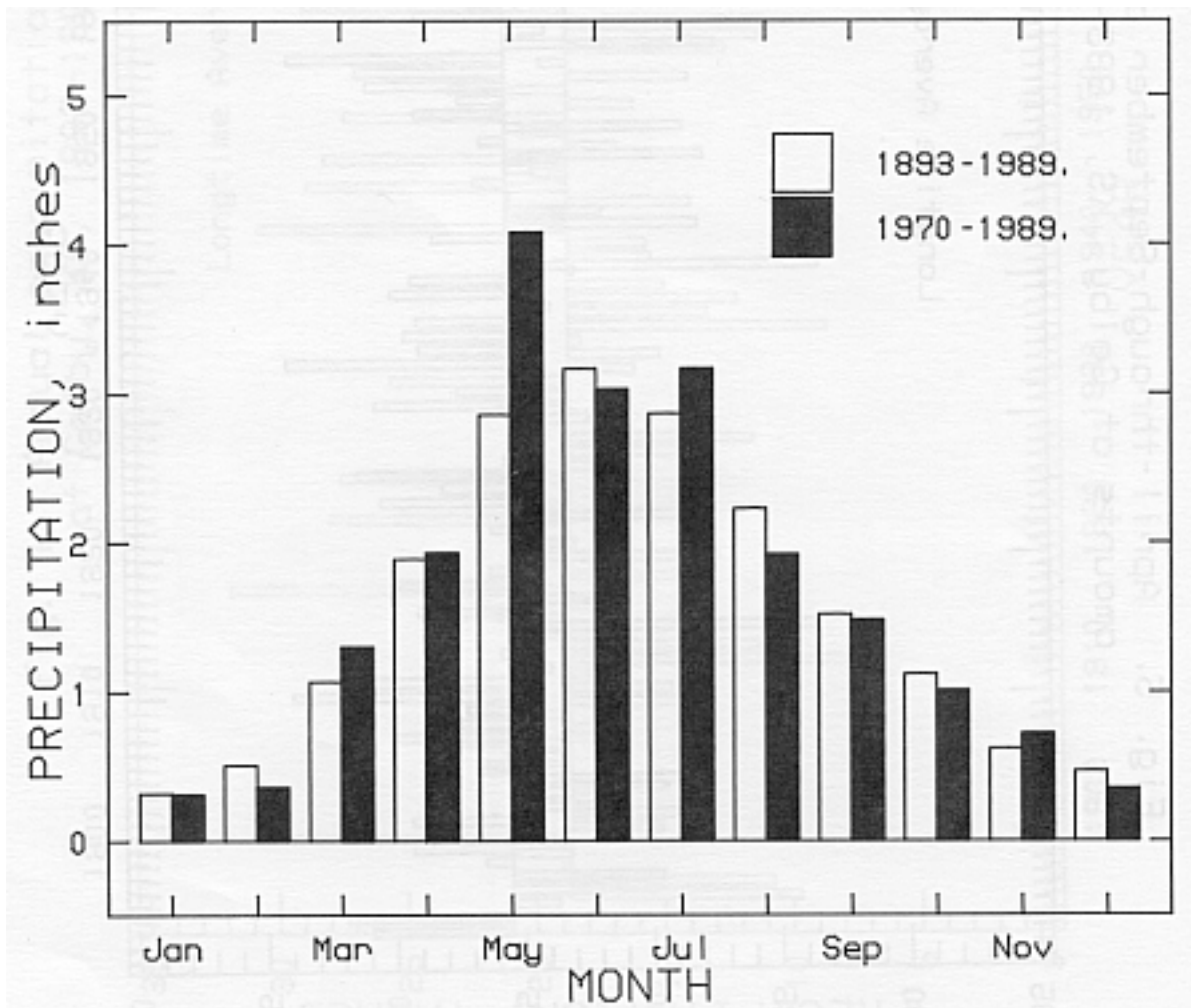




Fig. 7. Number of days during the year when precipitation equalled or exceeded 0.01, 0.25, and 1.00 inch at Colby, KS, 1900-89.

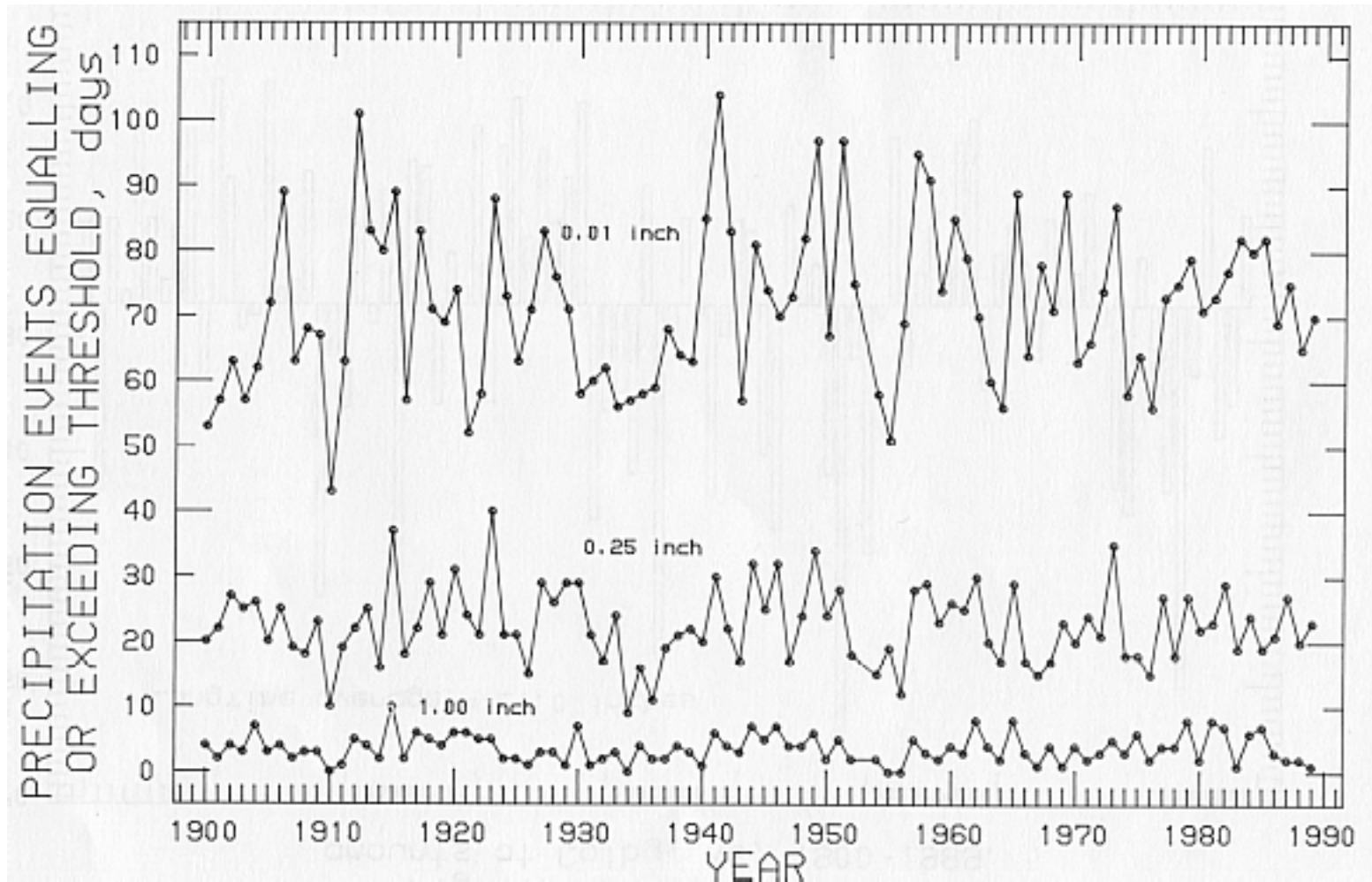
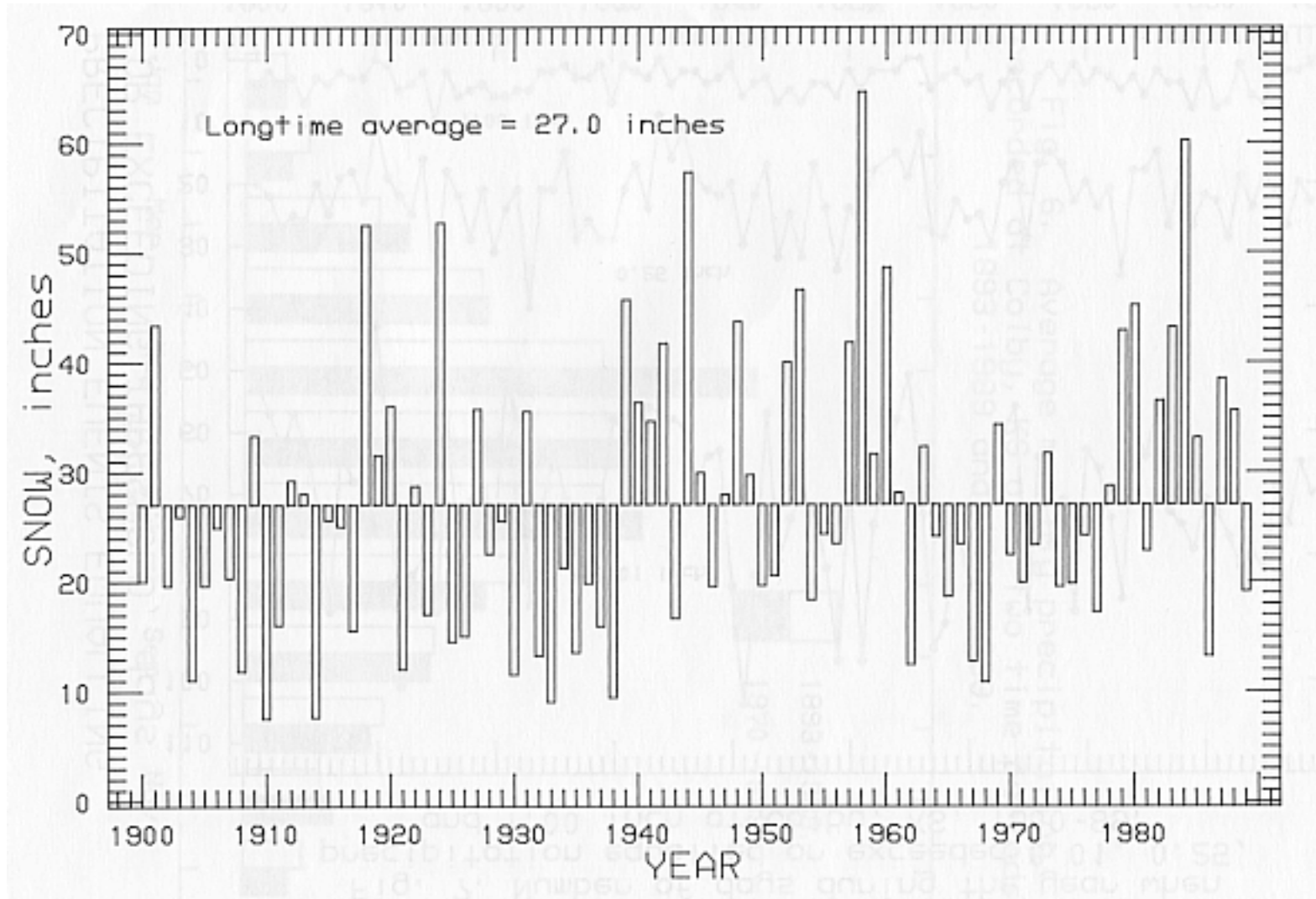


Fig. 8. Annual snowfall amounts at Colby, KS, 1900-89.





Agricultural Experiment Station, Kansas State University, Manhattan 66506-4008

Report of Progress 594

May 1990

Publications and public meetings by the Kansas Agricultural Experiment Station are available and open to the public regardless of race, color, national origin, sex, or handicap.

1M