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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH ARKANSAS AGRICULTURAL EXTENSION SERVICE
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 — 3

CLIMATOLOGICAL SUMMARY

LATITUDE 36° 06' N
LONGITUDE 94° 10' W
ELEV. (GROUND) 1,270 Feet

STATION FAYETTEVILLE EXPERIMENT STATION, ARKANSAS

MEANS AND EXTREMES FOR PERIOD - 1927 - 1954

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Mean degree days (Base 65°)	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet, Hail: Mean	Maximum monthly	Year	Greatest daily	Year	Mean number of days: Precip. .10 inch or more	Temperatures Max.: 90° and above	32° and below	Min.: 32° and below	0° and below	Month
(a)	28	28	28	28		28		28	28	28		28	28		28		28	28	28	28	28	
Jan.	48.6	27.8	38.2	76	1943+	-23	1930	831	2.96	2.77	1932	2.7	12.2	1930	4.9	1937	5	0	4	20	1	Jan.
Feb.	52.9	31.2	42.1	78	1954	-13	1929	641	3.02	2.69	1945	2.7	12.8	1929	6.2	1944	5	0	2	16	*	Feb.
Mar.	60.5	37.6	49.1	91	1929	-11	1948	509	3.39	3.33	1945	1.0	7.8	1948	6.0	1948	6	*	*	10	*	Mar.
Apr.	70.4	46.0	58.2	89	1952+	19	1936	228	5.33	3.84	1928	0.6	8.6	1933	8.6	1933	7	0	0	2	0	Apr.
May	77.2	54.7	66.0	95	1934	28	1954	68	5.84	7.38	1950	T	T	1953+	T	1953+	7	1	0	*	0	May
June	86.0	64.1	75.1	103	1936	42	1946	0	5.38	3.56	1948	T	T	1951	T	1951	7	9	0	0	0	June
July	91.5	67.4	79.5	111	1954	48	1947+	0	2.98	4.09	1927	0	0		0		4	20	0	0	0	July
Aug.	90.9	66.6	78.8	109	1936	46	1949	0	3.64	4.73	1952	0	0		0		5	19	0	0	0	Aug.
Sept.	84.3	58.6	71.5	105	1939	30	1942	33	4.15	4.64	1949	0	0		0		5	9	0	*	0	Sept.
Oct.	74.2	48.3	61.3	95	1953	18	1952	181	3.88	3.78	1942	T	T	1954	T	1954	5	1	*	2	0	Oct.
Nov.	59.1	36.9	48.0	82	1937	7	1950	510	3.10	2.96	1934	0.9	9.3	1934	8.1	1934	5	0	*	12	0	Nov.
Dec.	50.5	30.5	40.5	78	1951	-2	1945	760	2.76	2.96	1932	1.0	3.9	1950	3.4	1932	5	0	2	19	*	Dec.
Year	70.5	47.5	59.0	111	July 1954	-23	Jan. 1930	3761	46.43	7.38	May 1950	8.9	12.8	Feb. 1929	8.6	Apr. 1933	66	59	8	81	1	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

+ Also on earlier dates, months or years.

* Less than one half.

CLIMATE OF FAYETTEVILLE, ARKANSAS

Fayetteville is located in the Ozark highlands of Northwestern Arkansas. The terrain is rough and hilly with higher elevations in the mountains a few miles south of Fayetteville and in the higher areas to the east and northeast. While there are mountains to the northwest and west of Fayetteville, elevations are not as high in these directions, and there are a number of wider valleys and more level prairies where there is considerable agricultural activity. The mountainous areas are largely timbered.

The weather station, since 1926, located at the University of Arkansas Experimental Farm, 3 miles north-northwest of the Fayetteville Post Office, is on a rather level bench 4-5 miles wide, extending from northeast to southwest for about 20 miles. Drainage, by a number of small creeks, is mostly to the north and west, forming part of the headwaters system of the Illinois River.

The mountains to the south, and the higher mountains east of Fayetteville, sometimes act as a barrier in retarding the southeastward movement of cold air. As a result, Fayetteville at times experiences colder weather than does many other sections of the State.

Precipitation is ample for agriculture, averaging 46.43 inches annually. It is heaviest in April, May, and June, with a secondary period of heavier rainfall in September. Precipitation is lightest in the winter months. The distribution of precipitation through the year is more similar to that of neighboring areas in Oklahoma, Kansas, and Missouri than to many sections of Arkansas, which experience heavier precipitation in winter and lighter amounts in the early fall. Monthly precipitation has been as much as 15.07 inches in the City of Fayetteville in March, 1898, and 15.01 inches at the present location in May, 1943. Droughts are of infrequent occurrence although as little as 0.10 inch was recorded in June, 1953, and 0.12 inch in January, 1943.

Daily precipitation amounts since 1926 exceeded five inches only on May 10, 1943 when 5.54 inches fell, and on May 10, 1950 when 7.38 inches occurred. The storm of May 8-11, 1950 was the heaviest of record in Northwestern Arkansas. Unofficial amounts of 12 to 14.6 inches were reported in neighboring Benton County; while the three-day total for May 8-11, 1950 at the Fayetteville Experiment Station was 9.84 inches.

Measurable snowfall occurs every winter, averaging 8.9 inches per season. Seasonal amounts since 1926 ranged from 1.8 inches in 1931-32 to 17.2 inches in 1941-42. Greatest seasonal snowfall of record in the area was 31.7 inches in 1923-24. Earliest measurable snowfall in the fall was 2.0 inches on November 2, 1951; latest in the spring was on April 15, 1933 when a record daily snowfall of 8.6 inches was measured.

Extremely cold weather usually does not persist. Below zero temperatures have been recorded a total of 39 times since November, 1926, usually with one or two below zero temperatures most winters. In January, 1930, temperatures fell to below zero eight times. In January, 1940, temperatures went below zero five times. The lowest temperature of record since 1926 was -23° on January 22, 1930. The lowest ever recorded in the area was -24° on February 12, 1899.

The following table shows freeze data for the Fayetteville area:

FREEZE DATA - FAYETTEVILLE, ARKANSAS

TEMPERATURE	AVERAGE DATE OF LAST IN SPRING	AVERAGE DATE OF FIRST IN FALL	AVERAGE NUMBER OF DAYS BETWEEN TEMPERATURE VALUES
32° or below	April 8	October 23	199
28° or below	March 29	November 2	219
24° or below	March 19	November 17	243
20° or below	March 3	December 6	279
16° or below	February 17	December 15	302

The latest date in the spring with freezing temperature was on May 4, 1954 when the temperature fell to 28°, and the earliest freeze in the fall occurred on September 27, 1942 when the low temperature was 30°.

Summers in the Fayetteville area are warm and relatively long. Maximum temperatures of 90° or higher occur on an average of 60 days each summer, ranging from 99 in 1954 to 5 days in 1950. Temperatures exceeded 100° during 19 of the last 28 summers. Highest ever recorded at Fayetteville was 111° on July 14, 1954. The warm summer temperatures are tempered by cooler nights as minimum temperatures average 64° in June, and 67° in July and August.

Severe local storms are of infrequent occurrence. Three tornadoes have been recorded in Fayetteville and vicinity since beginning of weather records. On April 18, 1880 a tornado from Fayetteville to Goshen, 12 miles to the northeast, left in its path, two dead, twenty-five injured, and $100,000 property damage. On April 19, 1893 a tornado over a 60-mile long path ending near Fayetteville caused $8,000 damage. On November 9, 1935 a tornado struck 1-1/2 miles northwest of Fayetteville with $1,500 damage.

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Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1926	--	--	--	--	--	--	--	--	--	--	44.8	40.0	--
1927	39.2	48.1	49.6	62.9	69.0	73.0	76.8	73.6	71.9	63.7	52.6	35.9	59.7
1928	40.8	41.4	50.6	54.5	66.9	69.9	78.0	79.5	68.8	64.9	47.8	41.3	58.7
1929	36.2	30.4	52.8	61.2	64.2	73.6	79.1	80.7	71.6	60.0	42.4	42.3	57.9
1930	27.0	50.0	47.6	63.5	65.0	73.1	82.0	79.8	74.2	57.8	48.3	38.7	58.9
1931	40.1	45.8	43.8	55.2	62.4	76.2	79.8	74.4	76.6	65.6	56.4	46.4	60.2
1932	43.1	49.4	45.2	61.9	67.0	76.1	80.4	79.4	71.4	58.2	44.8	38.0	59.6
1933	46.6	38.6	50.0	58.4	68.3	77.8	81.6	77.2	75.6	60.3	50.8	47.2	61.0
1934	41.7	39.8	46.9	59.1	67.0	80.3	85.5	84.2	68.0	63.9	53.2	39.4	60.8
1935	42.0	43.2	55.6	56.7	63.8	70.8	80.9	81.7	69.1	60.8	46.9	36.5	59.0
1936	33.8	33.2	54.8	57.2	68.9	79.0	84.3	85.9	76.5	58.2	46.3	44.3	60.2
1937	36.5	40.2	45.4	58.6	68.1	76.9	79.4	80.4	70.8	59.6	43.4	38.4	58.1
1938	39.4	47.7	57.8	59.2	66.8	73.4	80.2	82.2	73.3	65.8	47.8	41.0	61.2
1939	43.6	40.4	53.4	56.8	67.2	75.4	81.8	79.5	79.9	64.4	46.4	44.4	61.1
1940	23.4	39.4	50.0	57.4	64.7	73.1	77.3	74.8	68.7	63.8	46.6	44.0	56.9
1941	41.4	37.8	44.3	61.6	70.0	73.8	80.8	78.5	72.9	65.4	49.4	43.0	59.9
1942	34.8	39.1	49.8	62.3	65.4	74.4	78.6	76.2	69.2	60.5	52.8	40.6	58.6
1943	38.5	45.0	44.0	61.4	67.6	76.8	81.2	83.8	69.9	57.7	48.0	37.0	59.2
1944	39.6	44.0	47.0	56.8	67.5	75.3	78.4	77.6	70.4	62.0	50.4	35.6	58.7
1945	37.2	41.2	55.4	59.2	63.0	72.0	75.0	75.8	71.2	59.2	50.4	34.4	57.8
1946	37.0	44.8	55.2	62.2	62.0	72.6	78.6	77.9	70.2	62.6	48.8	45.4	59.8
1947	38.4	33.5	41.0	58.4	63.8	73.7	75.3	82.8	73.4	65.5	45.8	42.7	57.8
1948	31.4	39.9	45.9	64.4	65.5	75.0	77.6	75.4	70.0	58.0	49.7	42.7	58.0
1949	36.2	42.9	48.2	57.2	67.8	75.0	77.7	74.2	65.3	58.0	49.3	41.0	57.7
1950	40.3	43.7	45.5	56.3	66.1	73.8	73.2	71.9	67.0	64.6	44.7	35.1	56.9
1951	36.4	42.2	47.9	54.7	65.1	71.7	77.2	79.8	69.6	61.0	42.2	40.4	57.4
1952	44.4	45.7	47.4	55.2	66.3	80.1	80.4	78.5	68.9	55.3	47.2	39.5	59.1
1953	41.7	43.5	53.5	54.8	66.8	82.5	77.9	76.4	72.8	61.4	46.5	38.4	59.7
1954	36.5	46.9	46.0	64.3	60.9	76.4	85.3	83.0	74.6	60.5	48.4	40.8	60.3

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Ann'l
1926	--	--	--	--	--	--	--	--	--	--	2.25	2.87	--
1927	3.98	2.14	4.40	12.94	6.50	8.93	7.27	6.83	4.14	2.75	3.90	2.85	66.63
1928	1.54	2.61	2.88	11.87	4.22	8.90	3.00	7.83	0.47	2.83	4.08	2.67	52.90
1929	5.02	3.68	2.37	6.90	7.47	6.66	5.02	0.35	5.07	6.00	1.12	3.12	52.78
1930	4.52	2.92	2.69	2.81	7.26	3.85	0.25	2.76	4.31	3.65	2.32	2.81	40.15
1931	0.57	4.68	2.98	5.65	4.34	3.10	5.71	2.87	1.75	5.88	3.47	0.90	41.90
1932	7.89	2.23	2.82	2.27	1.34	8.64	3.89	1.42	1.79	4.06	2.00	6.77	45.12
1933	4.64	3.56	1.90	6.64	5.88	0.18	4.25	5.93	11.07	5.92	2.27	1.94	54.18
1934	2.04	1.49	2.94	4.07	2.56	3.53	1.35	3.02	9.16	1.03	7.63	1.15	39.97
1935	2.56	1.36	9.91	2.95	8.64	13.04	0.63	1.46	4.60	5.72	4.51	3.09	58.47
1936	0.13	1.54	0.94	1.86	2.32	0.74	1.76	0.95	10.92	3.73	1.57	2.82	29.28
1937	6.76	0.94	2.49	3.76	3.17	2.66	4.51	5.75	3.77	1.30	3.06	4.26	42.43
1938	3.33	6.51	5.64	4.46	8.44	6.37	1.80	2.44	0.87	1.32	4.58	1.23	46.99
1939	3.51	4.75	1.52	4.47	6.23	5.27	0.83	0.89	0.87	3.60	3.30	1.17	36.41
1940	0.79	1.57	1.80	6.57	1.55	6.01	0.90	5.71	7.76	1.83	3.24	2.75	40.48
1941	5.46	2.57	0.47	8.57	0.75	3.64	2.19	4.71	3.80	13.04	2.82	2.46	50.48
1942	2.15	2.43	1.38	7.11	5.99	6.80	2.10	6.97	4.40	6.52	5.56	5.47	56.88
1943	0.12	0.82	3.45	2.92	15.01	4.86	0.34	0.91	3.81	4.74	0.65	3.11	40.74
1944	1.30	4.23	5.95	5.25	5.49	7.25	2.21	6.37	1.99	3.63	1.58	2.72	47.97
1945	0.97	8.67	9.83	10.90	4.55	6.66	6.17	2.43	9.56	2.73	1.30	0.46	64.23
1946	2.91	3.70	2.31	3.68	10.22	5.31	3.28	0.70	1.51	1.96	12.19	4.85	52.62
1947	1.06	0.23	1.55	6.98	7.08	6.51	2.18	0.90	4.18	3.92	2.35	3.07	40.01
1948	1.33	3.47	5.49	1.62	5.13	8.27	4.54	10.36	0.32	1.45	2.47	3.83	48.28
1949	5.48	3.54	2.59	1.77	9.23	4.82	4.25	1.02	6.68	3.68	0.57	3.40	47.03
1950	5.66	3.06	1.55	4.49	14.17	4.24	7.51	4.93	3.02	1.17	0.46	0.45	50.71
1951	2.39	7.75	2.03	2.96	2.55	10.95	1.69	1.93	4.51	6.59	3.99	0.79	48.13
1952	2.35	2.16	3.39	4.62	4.74	0.56	2.85	7.48	0.29	0.54	4.57	1.28	34.83
1953	1.74	1.08	7.04	7.11	5.02	0.10	2.54	3.34	1.23	2.68	1.54	2.21	35.63
1954	2.69	0.85	2.47	4.10	3.75	2.73	0.50	1.76	4.23	6.33	0.50	5.42	35.33

STATION HISTORY

The weather station at Fayetteville Experiment Station has remained at the same location, 3 miles north-northwest of the Post Office at latitude 36° 06' N, and longitude 94° 10' W, elevation 1270 feet above mean sea level, from November 1, 1926 to date. Station has also been called, and published as, "Fayetteville (Near)" and "Fayetteville 3N". Tabular data used in this publication are for this location only. The site of the station is an open fenced lot.

The thermometer shelter faced to the south until changed to face north April 11, 1930. A recording rain gage was installed in May, 1937, and was in use until April, 1946. Other meteorological equipment, owned by the University, includes a hygro-thermograph, and soil thermometers. Mr. J. Frank Prince, an employee of the University, is the observer.

The first weather record for the Fayetteville station, published in Bulletin "W" (Climatic Summary of the United States), began in October, 1870; records on file at the Weather Bureau Office, Little Rock, began January, 1892. Station was located on the University Campus, latitude 36° 05' N, longitude 94°, 10' W, elevation 1370 feet above mean sea level, in hilly terrain, from January, 1892 to October 31, 1926. Observations were taken by the University of Arkansas.

On December 1, 1937, a station was established in the City of Fayetteville with Mr. Charles F. Ford as observer. At first, the station was at the observer's residence, 703 West Dickson Street, with the thermometer shelter on the ground and the rain gage on the garage roof. The station was located at the eastern edge of the University Campus, and was 600 feet west of the University Post Office in Fayetteville at latitude 36° 05' N, longitude 94° 10' W, elevation 1370 feet above mean sea level. The rain gage was moved to a ground exposure in 1941. At a later date Mr. Ford moved to 116 Watson Street, 600 feet east of the University Post Office. Exposure, while on the ground, was only fair because of nearby trees; and, the rain gage was moved to the roof of the garage on June 30, 1947 to improve exposure. The observer also owns additional meteorological equipment. This record continues.

STATION HISTORY - Cont'd.

It is published in Climatological Data as "Fayetteville".

There is, also, a Second-Order Station at the Airport about 5 miles south of the Post Office at Fayetteville. Latitude, 36°, 00' N; longitude, 94°, 10' W; elevation 1253 feet above mean sea level. Observations taken by the Civil Aeronautics Administration since July 1, 1949. Record is published in Climatological Data as "Fayetteville CAA A.P.".

Tabular data in this summary cover the period 1926 through 1954; for additional information, and for data from other locations in Fayetteville from October, 1870 to date, reference is made to the following publications:

"CLIMATOLOGICAL DATA - ARKANSAS", monthly and annual, 1897 to date.

"CLIMATIC SUMMARY OF THE UNITED STATES (BULLETIN W), SECTION 59, ARKANSAS NORTH OF THE ARKANSAS RIVER" - data from establishment of station, through 1930.

Original records, 1892 to date, are on file at the Weather Bureau Office - Little Rock, Arkansas.

Weather Bureau Airport Station
Little Rock, Arkansas
November 29, 1955