U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH Albia Chamber of Commerce
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 — 13

CLIMATOLOGICAL SUMMARY

LATITUDE 41° 02'
LONGITUDE 92° 48'
ELEV. (GROUND) 969 feet

STATION Albia, Iowa

MEANS AND EXTREMES FOR PERIOD of record 1931-1960

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: 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)	(30)	(30)	(30)	(30)		(30)		(30)	(30)	(30)		(30)	(30)		(30)		(30)	(30)	(30)	(30)	(30)	
Jan.	33.2	15.9	24.6	65	1952	-20	1936	1252	1.39	1.84	1937	7.9	33.6	1936	10.0	1948	4	0	14	29	5	Jan.
Feb.	37.0	19.0	28.0	73	1932	-20	1958	1045	1.11	1.31	1960	5.5	28.0	1960	9.0	1939	3	0	10	26	3	Feb.
Mar.	47.2	27.8	37.5	88	1938	-15	1960	853	2.33	2.29	1939	7.9	29.5	1931	10.0	1959+	5	0	5	21	*	Mar.
Apr.	62.3	40.6	51.5	90	1952	11	1936	405	3.09	2.18	1957	0.5	4.2	1936	3.4	1936	6	*	*	7	0	Apr.
May	73.5	51.5	62.5	104	1934	26	1931	171	4.83	2.80	1960	T	0.3	1944	0.3	1944	7	1	0	*	0	May
June	82.8	61.5	72.2	105	1934	37	1945	39	4.96	4.28	1946	0	0		0		7	7	0	0	0	June
July	88.9	65.6	77.3	110	1936+	44	1947	3	3.64	7.13	1946	0	0		0		5	14	0	0	0	July
Aug.	86.5	64.0	75.3	113	1934	40	1950	9	3.99	3.15	1954	0	0		0		6	11	0	0	0	Aug.
Sept.	78.9	55.2	67.1	102	1947	23	1942	87	3.26	4.35	1931	T	0.3	1942	0.3	1942	6	4	0	*	0	Sept.
Oct.	68.3	44.8	56.6	96	1953	18	1942	306	2.08	2.10	1931	T	0.1	1937	0.1	1937	4	*	0	4	0	Oct.
Nov.	49.6	30.3	40.0	82	1938	-3	1937	750	1.89	3.21	1952	2.0	15.0	1934	12.0	1934	4	0	3	18	*	Nov.
Dec.	37.4	21.1	29.3	68	1946	-16	1932	1106	1.39	1.25	1932	5.3	20.0	1951	7.5	1953	3	0	11	27	3	Dec.
Year	62.1	41.4	51.8	113	1934	-20	1958+	6026	33.96	7.13	1946	29.1	33.6	1936	12.0	1934	60	37	43	132	11	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

CLIMATE OF ALBIA, IOWA

Albia, centrally located in Monroe County, is quite representative of much of the surrounding rolling terrain which drains generally eastward into the Des Moines River. Summers are quite warm and winters rather cold although prolonged periods of intense cold or extreme cold are quite rare. The frequent and pronounced weather changes producing the stimulating climate can be attributed to the proximity of the two major midwest storm tracks, one from the southwest and the other from the northwest.

Of the elements measured, minimum temperatures and shower activity are most variable. On calm clear nights valley temperatures are usually a few degrees lower than those in the urban uplands. Showers, falling primarily in the warmer half year, vary considerably over short distances but seasonal amounts are usually about the same.

During the growing season, from April through September, about 70 per cent of the annual precipitation is measured, much of it as showers reaching the peak activity in May and June. More than 40 of the seasonal average of approximately 50 thunderstorms per season occurs within the crop growing season, occasionally with hail, high wind, excessive precipitation and on occasion, tornado. In seventy years only five small tornadoes were reported to have originated in Monroe County and few others originating in other counties have reached Monroe County. In addition to being in a low tornado frequency area, Monroe County is also in the part of Iowa reporting comparitively low hail losses. On occasion, excessive rainfalls with localized flooding occur, mostly during the crop season months.

The heaviest observational day of rainfall occured the night of July 16, 1946 when 7.13 inches of rain fell. The probability of such a rainfall is estimated to occur once in more than a hundred years. The probability of about 3 inches in an hour and/or 5 inches in 24 hours is about once in fifty years and 1.45 inches in an hour and/or 2.90 inches in 24 hours can be expected about once every other year (based upon Keokuk and Des Moines, Iowa rainfall frequency data). Measurable rainfall can be expected on about a hundred days a year of which 60 will be with at least a tenth of an inch of rainfall. Occasional degrees of drought occur during the crop season although rainfall is usually ample. The probability of receiving an inch or more of rainfall per week, about the requirement of well developed corn, is about one in three from early May into September excepting late July and the first and last weeks of August.

Snowfall, averaging about 34 inches per season has ranged from 7.9 inches in 1921-22 to 70.4 inches during the 1959-60 winter. The heaviest day of snowfall was 12 inches measured November 30, 1934. About every other winter one or more daily snowfalls of 5 inches or more can be expected and about one winter in three, snowfalls of eight inches or more in 24 hours can be expected. The first one inch snowfall, of consequence for highway travel, can be expected December 10.

At the thirty foot level, of consequence to trees and most industrial structures, high wind velocities (neglecting gusts) to 55 miles per hour can be expected about once every two years, to 85 miles per hour about once in fifty years and to 90 miles per hour or greater once in a century.

The highest temperature of record, 113 degrees F., was recorded at Albia on August 8, 1934, the lowest minimum, 20 degrees below zero, was reported on January 23, 1936 and on February 17, 1958. During about half of the winters the minima reaches -10° F. or lower. The continentality of the climate is emphasized by the fact that about 11 days are with minima zero or lower and about 37 summer dates with maxima of 90 degrees F. or higher, which is above the optimum growth temperature for most plants. The average freeze free season is 170 days extending from the average spring and fall threshold dates of 32° F. of April 28 and October 15.

Relative humidity averages about 83 percent around sunrise to about 60 percent at mid-afternoon. Sunshine varies from about 48 percent of the possible in December to 75 percent of the possible in July but the total incoming solar radiation is increased by about four fold in mid-summer over December.

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WEATHER BUREAU

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	32.4	36.4	35.5	51.6	58.4	74.8	78.0	73.2	72.8	59.0	47.8	36.9	54.7
1932	28.4	33.9	31.4	51.6	62.5	72.4	76.4	72.4	63.9	51.3	35.5	26.0	50.5
1933	36.2	26.2	38.7	50.6	62.2	78.4	77.8	72.5	71.4	51.1	39.8	31.4	53.0
1934	31.4	27.6	36.6	53.4	69.8	80.2	84.2	77.9	62.8	57.4	43.4	24.6	54.1
1935	24.7	31.6	43.6	48.4	56.4	67.1	80.2	75.0	65.9	53.2	36.7	25.0	50.7
1936	13.3	11.4	42.8	48.5	68.2	72.6	85.8	82.3	70.1	53.2	38.2	32.5	51.6
1937	18.8	23.5	35.3	50.4	64.1	71.0	77.5	79.9	68.7	53.0	35.8	26.0	50.3
1938	25.4	34.4	48.1	52.6	62.5	71.2	79.4	78.0	69.0	62.6	40.8	29.1	54.4
1939	32.8	24.8	39.4	49.6	66.8	72.6	77.8	71.8	71.4	57.4	42.5	35.6	53.5
1940	10.2	27.3	34.4	49.3	58.8	72.8	78.2	72.0	67.3	60.5	37.0	32.4	50.0
1941	26.8	25.3	36.0	56.0	67.4	71.8	76.4	76.9	68.4	57.2	42.9	35.6	53.4
1942	25.5	25.9	40.4	56.4	61.6	71.4	75.7	73.6	63.8	55.6	41.9	23.6	51.3
1943	21.7	31.4	34.4	50.5	58.6	72.9	76.7	75.4	61.8	53.6	36.2	27.4	50.0
1944	32.4	29.6	32.9	46.4	66.0	72.8	74.0	72.9	66.0	55.4	42.2	22.1	51.0
1945	20.8	28.3	37.3	40.6	56.2	65.3	73.0	73.8	64.8	53.0	39.2	20.4	49.3
1946	25.7	32.0	49.2	54.4	57.1	70.6	74.3	68.8	64.6	58.1	40.6	32.8	52.4
1947	28.6	20.4	32.4	49.0	55.8	67.6	73.8	82.6	69.0	63.0	34.8	31.1	50.7
1948	19.3	25.6	35.4	56.0	60.7	70.0	76.2	75.7	69.3	53.5	41.4	29.5	51.1
1949	21.3	23.8	37.4	50.5	65.1	73.3	76.5	73.4	60.8	57.9	44.6	31.1	51.3
1950	24.6	26.7	34.2	45.0	62.5	69.4	70.8	68.5	64.5	60.8	35.0	21.0	48.6
1951	22.2	27.3	30.4	46.8	63.3	66.5	74.6	73.5	62.3	55.0	34.7	23.6	48.4
1952	26.3	34.4	35.3	52.2	61.9	76.7	76.7	72.2	67.7	51.4	41.6	30.5	52.2
1953	26.5	32.8	39.8	46.8	62.1	76.0	77.6	77.0	68.5	61.3	44.7	31.9	53.7
1954	23.5	39.8	35.9	55.7	58.0	75.5	81.2	75.0	69.9	54.8	44.2	31.8	53.8
1955	23.8	26.0	38.4	58.5	64.5	68.9	81.6	78.3	69.3	55.8	33.9	25.4	52.0
1956	23.1	28.2	38.3	50.4	66.4	76.9	75.6	75.3	67.0	62.8	40.2	30.8	52.9
1957	18.5	33.0	38.1	51.3	61.6	71.3	80.3	75.4	63.8	52.6	38.2	34.5	51.5
1958	26.1	18.6	36.6	52.2	64.9	68.7	72.4	74.5	66.8	57.1	45.0	25.2	50.7
1959	18.0	26.9	38.6	50.8	65.0	72.8	73.9	78.2	66.5	51.6	33.1	35.2	50.9
1960	23.7	21.8	24.6	53.3	61.6	69.2	74.9	75.9	68.8	56.0	42.9	27.7	50.1

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	0.42	0.46	3.68	3.40	2.15	5.44	1.42	1.32	11.08	6.42	5.82	2.77	44.38
1932	1.39	0.74	0.95	2.65	2.86	8.07	4.32	8.99	2.08	2.25	1.36	2.15	37.81
1933	1.04	0.12	2.99	1.51	3.66	1.21	1.05	3.53	5.27	1.74	0.26	0.37	22.75
1934	0.69	0.99	1.15	2.67	1.75	1.90	0.88	1.70	5.97	0.73	6.18	0.47	25.08
1935	0.86	1.08	1.03	2.12	6.78	8.85	4.77	1.57	5.09	1.15	2.75	0.66	36.71
1936	2.46	0.61	0.53	0.80	2.21	2.36	0.83	1.61	5.52	1.12	0.56	0.95	19.56
1937	3.33	1.85	1.40	2.24	4.64	1.61	2.40	2.51	0.23	2.47	0.66	0.81	24.15
1938	1.51	0.71	2.35	3.54	3.84	5.61	2.65	6.20	0.68	1.12	3.78	1.35	33.34
1939	0.94	1.88	4.65	1.86	1.51	5.00	2.21	6.23	0.19	1.01	0.70	0.90	27.08
1940	1.00	1.19	1.87	3.50	2.35	1.59	4.86	8.27	0.41	1.13	2.27	1.87	30.31
1941	2.41	0.38	0.85	1.69	2.09	4.75	2.54	3.68	7.21	5.57	2.30	2.56	36.03
1942	0.68	1.92	1.06	0.62	2.33	5.40	5.27	2.00	2.58	1.78	2.04	2.42	28.10
1943	0.58	0.97	1.53	3.07	5.25	6.67	5.38	6.41	1.72	1.54	0.91	0.83	35.86
1944	0.78	1.22	3.20	7.44	5.47	4.37	3.07	6.81	3.51	1.57	2.71	2.32	42.47
1945	1.20	0.82	2.47	3.55	6.39	3.74	1.47	1.42	8.00	1.02	1.07	2.74	33.91
1946	2.34	0.26	4.66	2.22	4.86	7.38	10.21	3.84	3.13	3.23	1.75	1.00	44.88
1947	1.58	0.10	1.68	6.22	4.30	12.96	1.26	1.13	2.20	3.40	1.50	1.80	38.13
1948	1.67	1.26	2.16	2.38	2.73	2.27	5.25	2.73	3.27	1.16	2.73	2.34	29.95
1949	3.34	1.47	3.47	1.31	2.66	9.69	4.43	2.37	2.53	1.55	1.07	1.72	35.52
1950	2.06	2.20	0.55	2.84	4.39	5.08	1.54	4.11	1.95	0.24	0.75	0.92	26.63
1951	0.78	1.79	5.73	3.79	5.53	8.20	2.66	6.18	1.75	4.46	1.29	1.24	43.40
1952	0.73	1.11	3.68	2.15	5.02	7.67	3.23	5.46	1.25	0.06	5.34	1.81	37.51
1953	0.62	1.79	4.38	2.11	1.80	4.15	1.19	0.43	1.04	0.26	0.45	1.34	19.56
1954	0.20	0.82	2.19	5.97	2.73	3.94	0.72	7.42	1.45	5.54	0.31	0.62	31.91
1955	2.18	1.87	1.28	4.17	4.62	2.35	4.31	3.23	3.19	0.58	0.41	0.25	28.44
1956	0.28	1.09	0.76	1.18	1.81	2.44	6.16	8.18	0.88	0.38	1.12	0.62	24.90
1957	0.80	0.17	2.57	6.40	2.98	4.25	5.10	1.33	3.76	2.05	2.19	1.72	33.32
1958	1.13	0.73	0.44	1.53	2.10	3.65	12.62	4.63	4.05	1.17	1.97	0.19	34.21
1959	1.46	1.55	4.16	4.96	6.38	2.34	4.03	2.99	5.65	3.72	0.71	2.26	40.21
1960	3.17	2.22	2.50	4.67	9.54	5.89	2.42	3.35	2.01	3.95	1.70	0.57	41.99

STATION HISTORY

The earliest recorded observations available from the Albia area were signed Alph Koontz for the month of January 1888. A continuous record of precipitation began with January 1891, most of the first five years collected at Maxon, 2 miles northeast of Albia. The earliest temperature record published began March 15, 1894 with the appointment of Carl Koontz. Gus Johnson and George Price contributed to the early climatological records of the Albia area. Succeeding observers of maximum and minimum temperature and precipitation and dates of service were as follows: R. Moore, June 1, 1898 - November 30, 1901; E. R. Reeve, December 1, 1901 - July 31, 1906; J. I. Chenoweth, August 1, 1906 - December 31, 1913; F. H. Holmes, January 1, 1914 - September 30, 1921, O. E. McBride, October 1, 1921- June 30, 1930; J. M. Stevenson, July 1, 1930 - March 31, 1933; S. L. Gasoway, April 1, 1933 - March 31, 1934; O. E. McBride, April 1, 1934 - August 30, 1938; Arthur L. Freed, August 31, 1938 - June 27, 1951; George Seibert, June 28, 1951 to present.

On July 20, 1954 another station was established at the Albia Pasture Improvement Farm, 4.2 miles southwest of the post office and operated by the present observer Floyd S. Ransom. In addition to the maximum and minimum temperatures and precipitation as recorded at the station in Albia, the Pasture Farm site recorded daily evaporation and wind movement from 1954 through 1957 which was published in Climatological Data, Iowa.

The data for this publication was derived from the Albia weather records on file at the Weather Bureau State Climatological Office in Des Moines. Monthly precipitation data are contained in the U. S. Weather Bureau Bulletin W and Bulletin W Supplement from 1891 through 1952. Temperature and precipitation data from both Albia stations are contained in each month's Climatological Data, Iowa published by the U. S. Department of Commerce Weather Bureau in cooperation with the Iowa Weather Division.