

U. S. DEPARTMENT OF COMMERCE, ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 IN COOPERATION WITH THE OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
 AND THE OHIO DEPARTMENT OF NATURAL RESOURCES - DIVISION OF WATER
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20-33-26

LATITUDE 41°13' N
 LONGITUDE 83°46' W
 ELEV. (GROUND) 700 Ft.

CLIMATOLOGICAL SUMMARY

STATION: Hoytville, Ohio

MEANS AND EXTREMES FOR PERIOD 1953-1966

MONTH	TEMPERATURE (° F)											PRECIPITATION TOTALS (INCHES)											MONTH								
	MEANS				EXTREMES				MEAN DEGREE DAYS**	MEAN NUMBER OF DAYS				SNOW, SLEET							MEAN NUMBER OF DAYS										
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR		DAY	90° AND ABOVE	32° AND BELOW	32° AND BELOW	0° AND BELOW	MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	MEAN	MAXIMUM MONTHLY		YEAR	GREATEST DAILY	YEAR	DAY	.01 or MORE	.10 or MORE	.50 or MORE	1.00 or MORE
JAN	33.2	17.0	25.1	61	85	9	-16	65	24	123.7	6	1	1	1.99	4.52	65	1.92	59	21	5.3	10.0	63	5.0	57	31	9	4	1.2	.3	JAN	
FEB	27.4	20.3	23.6	79	55	14	-10	53	20	101.7	6	1	1	1.76	3.26	61	1.75	59	15	4.7	14.1	63	4.6	63	24	6	4	1.3	.3	FEB	
MAR	36.2	26.5	31.4	78	53	29	-7	55	2	85.5	3	2	2	2.41	4.50	55	1.45	54	28	3.0	12.0	54	7.0	54	1	11	6	1.9	.1	MAR	
APR	62.0	37.7	49.8	89	62	20	11	57	8	45.5	0	0	0	3.28	6.15	57	1.56	59	28	.8	10.0	57	8.0	57	0	12	7	2.1	.3	APR	
MAY	73.3	47.9	60.6	94	62	18	26	65	10	19.2	0	0	0	2.78	5.41	56	1.70	53	22	.0	0	0	0	0	0	0	6	1.7	.2	MAY	
JUNE	82.4	57.1	69.7	97	53	20	37	55	4	3.2	0	0	0	3.49	6.49	58	2.38	57	28	.0	0	0	0	0	0	0	0	2.2	.2	JUNE	
JULY	85.0	60.8	72.9	98	66	1	45	65	20	4.4	0	0	0	4.14	7.74	58	2.71	51	19	.0	0	0	0	0	0	0	9	7	3.2	.9	JULY
AUG	83.0	59.4	71.2	99	64	2	38	65	29	14.4	0	0	0	2.95	5.23	55	3.08	63	3	.0	0	0	0	0	0	0	6	2.1	.3	AUG	
SEPT	77.7	52.6	65.1	99	55	9	30	62	21	10.1	2	0	0	2.61	7.28	59	4.58	59	1	.0	0	0	0	0	0	0	7	5	1.5	.3	SEPT
OCT	66.3	41.9	54.1	90	53	4	17	64	11	34.6	0	0	0	2.74	6.20	54	2.25	59	6	.3	0	0	0	0	0	0	7	4	1.2	.4	OCT
NOV	51.0	32.2	41.6	78	53	17	-1	58	10	63.9	0	0	0	2.42	6.37	56	2.85	56	9	1.1	4.7	59	4.5	59	27	1	6	1.2	.2	NOV	
DEC	37.1	21.5	29.3	65	66	8	-10	62	12	110.2	0	10	26	1.79	4.34	56	1.63	57	7	4.1	16.0	62	6.0	62	7	9	4	1.2	.2	DEC	
YEAR	61.2	39.5	50.3	99	64	1	-18	53	62	608.6	16	35	134	31.96	7.74	58	4.85	59	1	19.5	15.0	62	6.0	57	6	109	64	20	5	YEAR	

** BASE 65° F *Also on earlier dates, months, or years

NARRATIVE CLIMATOLOGICAL SUMMARY

Hoytville is located in the southwest quadrant of Wood County in northwest Ohio. Terrain in this area is quite flat. Within a 5 mile radius of Hoytville the elevation of the earth's surface above sea level varies from about 690 to 750 feet. A map of the physiographic regions of Ohio shows all of Wood County to be a part of Ohio's Lake Plains. During the glacial age, all of Wood County was submerged by the waters of old Lake Maumee. The heavy soils and flat surface make it necessary for lands within the old lake bed to be artificially drained. Historically the Lake Plains area was referred to as the "Black Swamps of Ohio". Much of the best agricultural land in Ohio is found in the Lake Plains area.

The climate of Hoytville is marked by large annual, daily, and day to day ranges of temperature. The annual extremes of temperature normally occur soon after June 21 and December 22. In Wood County, summers are moderately warm and humid with occasional days when temperatures rise into the upper 90s; winters are reasonably cold and cloudy with an average of 6 days of sub-zero temperatures. Weather changes occur every few days from the passing of cold or warm fronts and their associated centers of high and low pressure.

Normal mean temperature for the year is near the average for northwestern Ohio. There is a large range between the lowest and highest temperature for the year. The extreme temperature range (record high minus record low) during the period 1953-1966 is 117 degrees. The normal daily range in temperature is greatest in late summer and least in winter. Coldest month of record is January 1963. In that month, the daily maximum temperature was below freezing on 20 days while sub-zero temperatures were recorded on 11 days. Maximum temperatures below freezing occur most frequently from mid-December through February. Warmest month of record is July 1955. In that month, the daily maximum temperature exceeded 89°F on 16 days while the daily minimum was 70°F or more on 8 days. Temperature in excess of 89°F has been recorded as early as mid-May; however, such days are more common in the period June through August.

Heating degree days as shown in the above table, are a measure of the departure of the mean daily temperature from 65°F. The daily totals are accumulated from July 1 through June 30. At any point during the year, the accumulated degree days can be used as an index of past temperature effect upon power consumption and fuel consumption for heating of homes and businesses.

Taking the number of days between the last freezing temperature (32°F) of spring and the first freezing temperature in fall as the crop-growing season, this season averages 148 days in length. The growing season is 166 days or more in 10% of the years, 155 days or more in 30% of the years, less than 140 days in 30% of the years and less than 129 days in 10% of the years. Freezing temperatures have been recorded as late as May 31 in Spring and as early as September 17 in Fall.

PROBABILITY OF FREEZES OCCURRING AS LATE IN THE SPRING OR AS EARLY IN THE FALL AS DATES SHOWN IN THE FOLLOWING TABLE

PERCENT CHANCE OF LATER DATE IN SPRING	TEMPERATURE LEVELS															
	16°	20°	24°	28°	32°	36°										
90	MAR 2	MAR 8	MAR 20	APR 9	APR 21	MAY 4										
70	MAR 12	MAR 18	APR 5	APR 17	APR 30	MAY 12										
50	MAR 19	MAR 26	APR 9	APR 22	MAY 7	MAY 16										
30	MAR 26	APR 2	APR 13	APR 28	MAY 14	MAY 24										
10	APR 5	APR 12	APR 19	MAY 6	MAY 23	JUNE 1										
PERCENT CHANCE OF EARLIER DATE IN FALL																
10	NOV 19	OCT 24	OCT 20	OCT 9	SEPT 20	SEPT 11										
30	NOV 27	NOV 5	OCT 27	OCT 17	SEPT 27	SEPT 18										
50	DEC 2	NOV 13	NOV 1	OCT 22	OCT 2	SEPT 23										
70	DEC 7	NOV 21	NOV 5	OCT 27	OCT 7	SEPT 27										
90	DEC 14	DEC 3	NOV 12	NOV 4	OCT 14	OCT 4										

Precipitation is normally abundant and well distributed throughout the year with fall being the driest season. The average annual precipitation of 31.96 is nearly 2 inches below the average for northwest Ohio. Showers and thundershowers account for most of the rainfall during the growing season. Thunderstorms occur on about 40 days each year. Most of these occur May through August. As is

typical of much of Ohio, most precipitation during the winter months comes in the form of rain. Snowfall averages about 20 inches a year although as little as 5 inches fell during the winter of 1965-1966 and as much as 43 inches fell during the winter of 1962-63. The yearly snowfall average of 20 inches is about 5 inches below the average for this area. This deficiency is in part caused by the 5 PM observation time because snow that fell during the night has often melted, settled, or blown away before the late afternoon snow observation time.

Evaporation is greatest during the warm months and is then most critical for agriculture. During the period May through September, potential pan evaporation exceeds the normal rainfall by about 8 inches. During the driest growing season of record, 1964, pan evaporation exceeded the rainfall by nearly 24 inches. When evaporation exceeds rainfall for prolonged periods, a drought may occur; however, severe droughts seldom occur in Wood County.

Humidity, cloudiness, sunshine, and wind observations are not recorded in Hoytville; however, estimates of these variables can be made from observations taken at other locations. Relative humidity, the ratio between the amount of moisture in the air and the amount which could be present, without condensation, at the same temperature and pressure, is an important factor in human and animal comfort and in the growth and development of vegetation. Generally, humidity rises and falls inversely with the daily temperature and is lowest in summer and highest in winter. For the year, relative humidity averages 79% at 1 AM, 83% at 7 AM, 61% at 1 PM, and 65% at 7 PM. Cloudiness is greatest in winter and least in summer. This variation is most clearly illustrated by the percentage of possible sunshine which is 71% in July and 41% in December. Heavy fog occurs about 10 times each year and is most frequent during the cold half of the year. Death from smog is unknown. During the summer, the wind near the ground blows most frequently from the southwest, averaging 8 mph. In winter, the prevailing direction is west-southwest, averaging 11 mph. Damaging winds occur most often during spring and summer. Such storms are usually associated with migrating thunderstorms.

The tornado, one of the most destructive of all atmospheric storms, is characterized by a violently rotating column of air which is nearly always observable as a "funnel cloud". It frequently leaves great destruction along a narrow path, and is usually accompanied by heavy rain and hail, and often by lightning and thunder. Since 1900, 6 such storms have been reported in Wood County. During the last decade, Ohio has averaged slightly more than 11 tornadoes a year.

Marvin E. Miller
 ESSA Weather Bureau State Climatologist
 Box 357, New Post Office Building
 Columbus, Ohio 43216

October 1967

STATION HISTORY

DATE	LOCATION	ELEVATION	OBSERVER
6/52 - 12/53	2 miles NE	700	O. S. Nichols
1/54 - 5/54	2 miles NE	700	H. B. Haskins
6/54 - 8/60	2 miles NE	700	D. E. Herr
9/60 - 11/62	2 miles NE	700	Dean Katterheinrich
12/62 - 2/64	2 miles NE	700	Gerald Myers
3/64 - 5/64	2 miles NE	700	C. S. Zimmerman
6/64 - Present	2 miles NE	700	James Trotter

(From Post Office) (Ft. MSL)

AVERAGE TEMPERATURE (°F)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNU
53	31.8	33.1	40.6	45.6	52.2	72.4	74.3	72.3	64.1	55.3	43.6	33.5	52.4
54	29.3	36.1	35.7	54.5	55.9	72.6	72.8	69.2	67.4	54.9	40.9	30.2	51.6
55	25.7	30.0	39.0	56.0	63.1	68.6	77.9	75.1	67.4	54.6	37.9	27.3	51.9
56	23.9	29.6	35.3	47.1	59.3	70.9	72.3	71.0	61.9	57.9	41.1	35.0	50.5
57	21.4	39.1	37.6	50.4	60.1	70.3	73.2	72.0	64.3	49.8	41.0	35.0	50.7
58	26.8	22.2	36.0	50.5	59.1	65.4	72.6	69.9	64.4	53.9	43.1	21.6	48.6
59	22.4	28.1	36.1	50.5	63.0	70.4	73.0	73.7	67.4	53.9	37.3	24.5	51.3
60	29.8	28.3	24.9	52.3	58.4	61.7	70.2	72.2	68.4	53.6	28.6	49.6	51.6
61	24.6	32.1	31.9	44.8	52.0	68.1	72.4	71.0	62.4	58.1	41.4	28.0	50.4
62	23.0	28.0	34.8	49.5	62.9	70.8	70.8	71.3	62.4	59.0	59.5	29.3	49.4
63	17.2	20.6	38.5	50.1	57.3	69.9	73.3	67.6	62.3	60.5	44.3	20.5	48.5
64	28.7	28.9	37.7	51.4	64.0	70.5	74.2	69.8	65.5	49.6	44.8	28.9	51.1
65	27.3	28.5	30.7	47.4	65.1	69.9	69.6	69.1	67.0	52.3	42.8	36.4	50.3
66	21.6	28.3	40.2	47.4	54.9	70.8	74.2	69.5	61.3	50.5	41.6	29.7	49.2

TOTAL PRECIPITATION (INCHES)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNU
53	2.29	1.06	1.74	2.63	3.84	2.81	2.69	2.77	1.85	.63	.47	1.80	24.38
54	2.47	2.21	2.57	2.53	1.06	2.89	4.13	4.09	1.59	6.20	1.62	1.88	33.04
55	1.99	1.68	4.20	2.72	1.73	1.79	3.46	2.81	1.28	4.16	4.11	2.48	30.69
56	.94	2.40	3.29	2.66	5.41	3.26	4.23	3.98	1.15	.91	1.93	2.38	32.54
57	1.14	1.28	.75	6.15	3.98	4.94	2.82	.93	4.54	4.51	2.23	3.52	36.79
58	1.12	.36	.62	2.45	1.63	6.49	7.74	3.72	2.77	.63	3.73	.26	31.58
59	3.42	3.25	3.11	4.74	3.01	3.50	2.63	2.57	7.28	4.31	2.77	2.35	42.84
60	3.23	2.26	3.82	1.28	1.92	2.83	6.47	1.09	4.53	1.07	1.90	1.70	26.89
61	.82	1.26	1.82	.85	2.29	4.02	2.87	1.92	4.28	1.28	4.46	1.71	29.42
62	3.02	1.49	1.84	.85	2.29	2.96	4.97	1.23	2.70	1.98	1.83	1.50	26.31
63	.68	.62	2.80	3.25	2.64	2.11	4.81	4.13	.81	.04	2.03	.73	24.55
64	1.73	.48	4.00	5.90	2.11	2.27	1.58	2.99	1.76	.54	.95	2.34	26.65
65	4.52	3.26	2.16	3.23	2.59	4.60	1.97	3.23	3.30	3.69	1.59	2.27	36.41
66	.83	1.13	1.73	3.49	3.42	3.48	4.85	4.13	2.82	1.48	6.37	4.34	38.07

MONTHLY AND SEASONAL SNOWFALL

SEASON	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
53-54	.0	.0	2.0	1.0	4.0	6.0	12.0	.0	.0	25.0
54-55	.0	.0	.0	.0	2.0	4.5	4.5	.0	.0	11.0
55-56	.0	.0	3.0	1.5	4.5	2.5	.0	.0	.0	21.0
56-57	.0	.0	.0	.0	.0	.0	.0	10.0	.0	10.0
57-58	.0	.0	.0	.0	.0	.0	.0	.0	.0	0.0
58-59	.0	.0	4.0	4.7	6.0	.0	.0	.0	.0	14.7
59-60	.0	.0	4.7	6.2	4.0	.0	.0	.0	.0	20.0
60-61	.0	.0	2.0	5.3	1.4	.0	.0	2.3	.0	13.5
61-62	.0	.0	.0	6.4	11.8	6.6	.0	.0	.0	29.8
62-63	.0	.0	.0	16.0	10.0	14.1	2.9	.0	.0	43.0
63-64	.0	.0	.0	.0	7.1	9.1	7.5	.0	.0	23.7
64-65	.0	.0	.0	.0	7.5	5.0	8.0	.0	.0	20.5
65-66	.0	.0	.0	.2	1.5	1.0	2.2	.0	.0	4.9