

# **Thirty Years of Climatological Data: 1969 to 1998**

**NMSU's Agricultural Science Center  
at Farmington, New Mexico**



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# Thirty Years of Climatological Data: 1969 to 1998 NMSU's Agricultural Science Center at Farmington, New Mexico

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New Mexico State University's Agricultural Science Center at Farmington is located in northwestern New Mexico (36° 4' N, 108° 2' W) about seven miles southwest of Farmington, N.M. at an elevation of 5,640 feet above mean sea level. A weather station, established at the center in January 1969, was given an official designation by the National Weather Service in 1978. Weather observations are made at 8 a.m. daily.

## MATERIALS AND METHODS

Air temperature measurements were recorded from standard U.S. Weather Bureau maximum and minimum thermometers housed in a regulation, louvered instrument shelter. A standard 8-inch diameter rain gauge was installed in 1969 to measure total daily precipitation. A battery-operated, constant-reading rain gauge was installed in 1982 to measure precipitation rate. Wind movement in miles per day has been recorded at two heights since 1980, using three-cup anemometers. One is located 6 inches above a standard Class-A metal evaporation pan, while the other is set at a height of 6 feet above the soil surface.

Water evaporation (pan) was measured daily from a Class-A pan with a hook-gauge from April through October in all years except 1972-1974, 1983, and 1986-1991. In 1974, 1983, 1987, and 1988, pan measurements did not begin until May. Pan was recorded from May through September in 1973 and 1989, from June through October in 1972, and from April through September in 1986 and 1991.

Maximum and minimum bare-soil temperatures at a depth of 4 inches have been recorded since 1976, using buried temperature sensors. The soil type is a Doak fine sandy loam with about 70% sand, 20% silt, and 10% clay.

Using a pyranometer, daily solar radiation measurements have been recorded since 1977. Between January 1977 and September 1996, the instrument was set near the instrument shelter at a height of 6.5 feet. Subsequent readings were obtained from an instrument set at a height of 10 feet at a location 400 yards away from the shelter.

## RESULTS

### Air Temperature

Between 1969 and 1998, the daily minimum, mean and maximum air temperatures averaged over all months and years were 39, 52 and 66°F, respectively (tables 1, 2, and 3). Average annual minimums ranged from 36.1°F in 1975 to 40.2°F in 1990, while average maximums ranged from 63.7°F in 1982 to 68.2°F in 1989 (fig. 1). The overall cooler year of 1975 and warmer year of 1989 appeared to be a result of lower and higher than average spring temperatures, respectively (tables 1, 2 and 3).

January and December were the coolest months, having average daily minimum, mean, and maximum temperatures of about 19, 30 and 41°F, respectively (fig. 2). July and August had the highest average daily temperatures (60°F minimum, 75°F mean, and about 90°F maximum).

### Frost-Free Period

The frost-free period (consecutive days above 32°F) averaged 162 days over the 30 years (table 4). The shortest frost-free period occurred in 1983 (125 days), while the longest occurred in 1977 (193 days). The average dates of the last spring frost and first autumn frost were May 4 and October 14, respectively. The

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earliest and latest dates of the last spring frost were April 10, 1990, and May 26, 1980, respectively. The earliest and latest dates of the first fall frost were September 18, 1971, and November 12, 1988 (table 4). The number of consecutive days without a killing frost (28°F or less) averaged 183.

## Extremes

Although the average number of days between the first and last frost was 203, the temperature dropped below 32°F on an average of only 144 of those days (table 5). From November through March, the temperature dropped below freezing more than 20 days per month on average, while the temperature dropped to zero or below only 1.5 days per year on average (table 5). The coldest temperature recorded during the 30 years was -18°F on January 7, 1971 (table 6).

The temperature exceeded 95°F an average of 11.5 days per year, but it exceeded 100°F on only 18 days during the entire 30 years (table 7). The highest temperature recorded was 103°F on July 7, 1989, and July 1, 1990 (table 8).

## Precipitation

From 1969 through 1998, the average annual precipitation was 8.19 inches (fig. 3 and table 9). Annual precipitation extremes during the 30 years ranged from a low of 3.6 inches in 1976 to a high of 14.7 inches in 1986 (fig. 3). The average monthly precipitation ranged from a low of 0.3 inches in June to more than 1 inch in August and September (fig. 4). Greater than 50% of the total average annual precipitation fell during the five-month period between July 1 and November 30. The greatest amount of rainfall in a single month was 4.1 inches in July 1986. In 20 months over the thirty years, there was no measurable precipitation (table 9). The greatest amount of precipitation to fall within a 24-hour period (1.93 inches) was recorded on September 6, 1970. Precipitation amounts greater than 1 inch in 24 hours were recorded only eight other times during the thirty years (data not shown).

The probability of receiving more than 1-inch of precipitation during a 24-hour period is about 13% in August and September and 7% in October (fig. 5). In six months of the year (April, July, August, September, October, and November), the chances are greater than 25% that precipitation will exceed 0.5 inches on at least one day. Only in August and September does that chance exceed 50% (fig. 5).

## Wind

Since 1980, the average daily wind run at the 6-foot height has been about 122 miles/day (5.1 mph). But it varied considerably with the time of year (fig. 6 and table 10). March and April were the windiest months with an average daily wind run at the 6-foot height of more than 145 miles/day. The calmest months of August through December had an average daily wind run of about 110 miles (fig. 6). In 1991, March and April were particularly windy with an average daily wind run at the 6-foot height of 190 miles (table 10).

## Solar Radiation

From 1977 to 1998, average daily solar radiation, measured as gram calories/cm<sup>2</sup> (Langley's), ranged from a low of about 200/day in December and January to a high of about 630/day in June and July (fig. 7 and table 11). Total annual radiation averaged 154,400 Langley's (423 Langley's/day).

## Evaporation

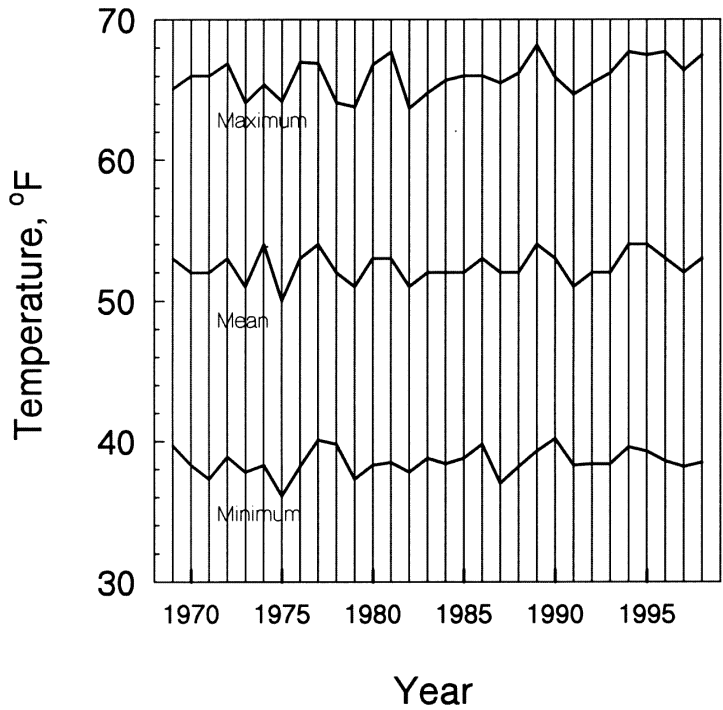
Evaporation (pan) is related to solar radiation, temperature, humidity, and wind. It is commonly used as an index of plant water-use. From 1973 to 1998, the total pan between May 1 and September 30 averaged 56.3 inches (table 12). Average total monthly pan was greatest in June and July (about 13 inches). This corresponded to an average daily rate of about 0.425 inches (fig. 8 and table 13).

## Soil Temperature

The average daily bare soil temperature 4 inches below the surface did not exceed 50°F (the minimum seed germination temperature for many crops) until April of each year (fig. 9). In July and August, the daily mean temperature at this depth equaled or exceeded 80°F (fig. 9 and table 14). Soil temperature extremes ranged from a low of 6°F in January 1977 to a high of 117°F in June and July of that same year (tables 15 and 16).

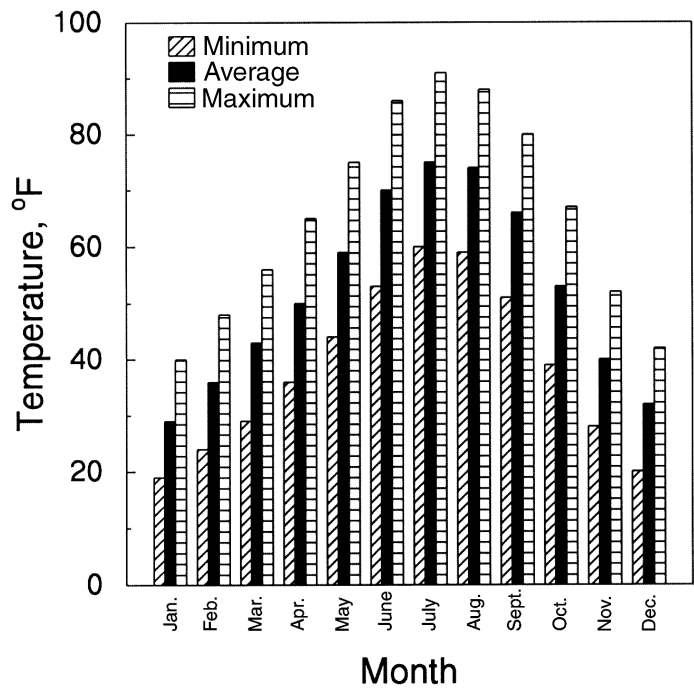
## Growing Degree Days

Plant development is related to temperature, and each crop has an optimum temperature range for growth. That is, there is a minimum temperature below which plants will not grow (minimum cutoff or base temperature) and a maximum temperature at which plant growth rate will stabilize or decrease (maximum cutoff tem-



**Fig. 1. Average\* daily minimum, mean, and maximum air temperature for each year at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

*\*Summation of daily minimums, means, and maximums divided by days in year.*



**Fig. 2. Average\* daily minimum, mean, and maximum air temperature for each month at NMSU's Agricultural Science at Farmington, 1969-1998.**

*\*Summation of daily minimums, means, and maximums divided by days in month.*

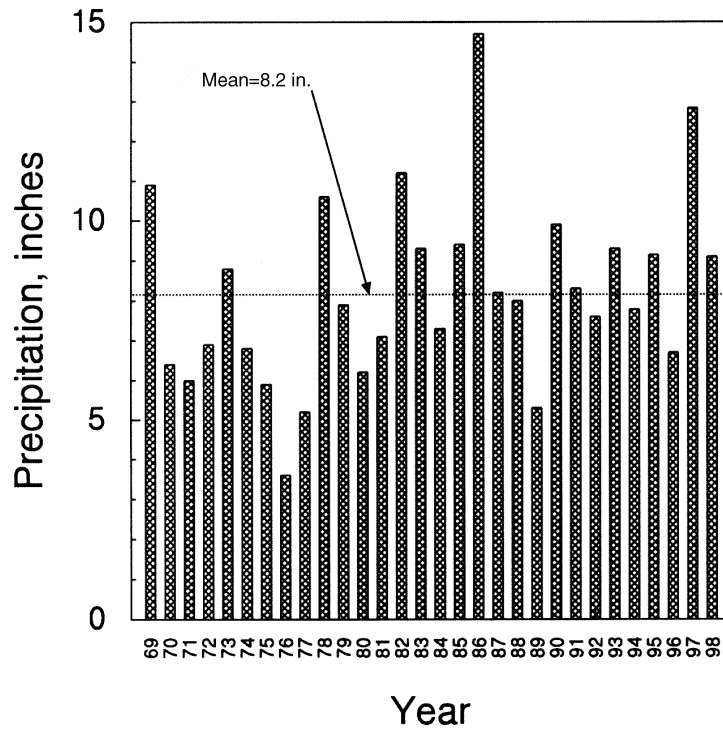


Fig. 3. Total annual precipitation measured at NMSU’s Agricultural Science Center at Farmington, 1969-1998.

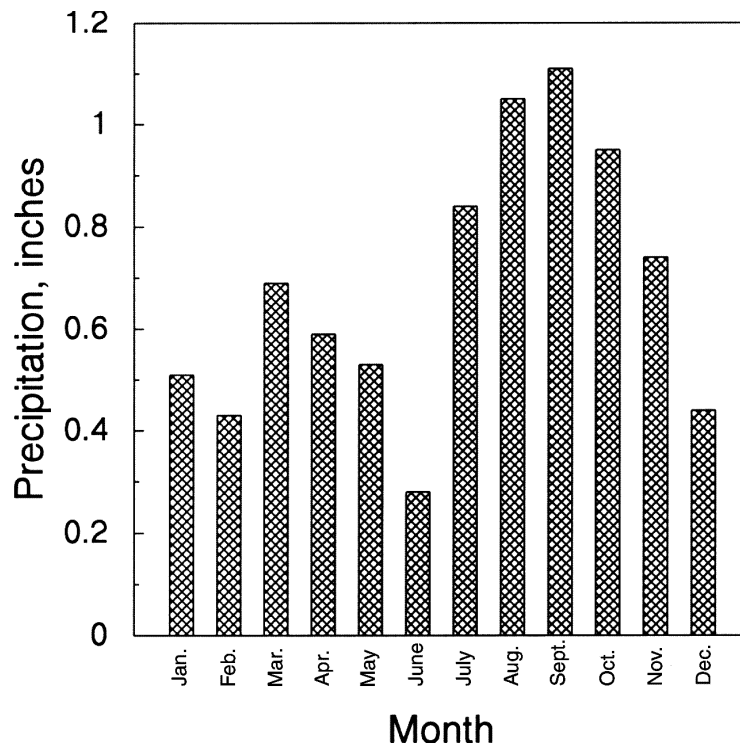
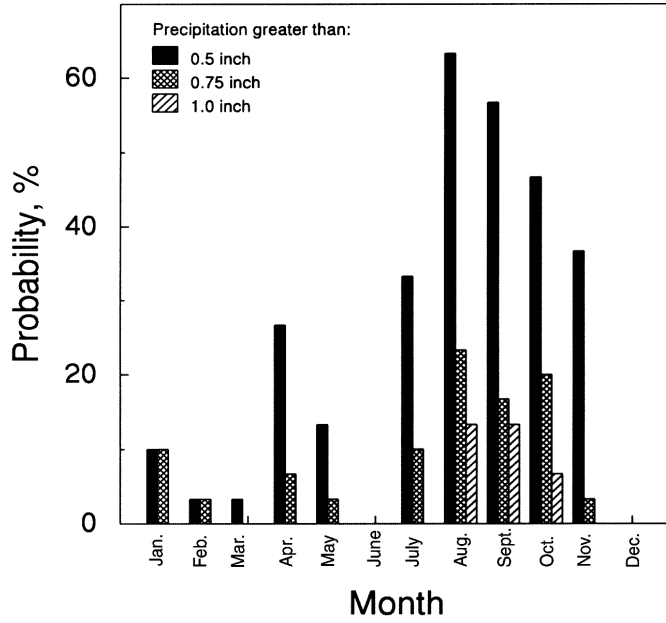
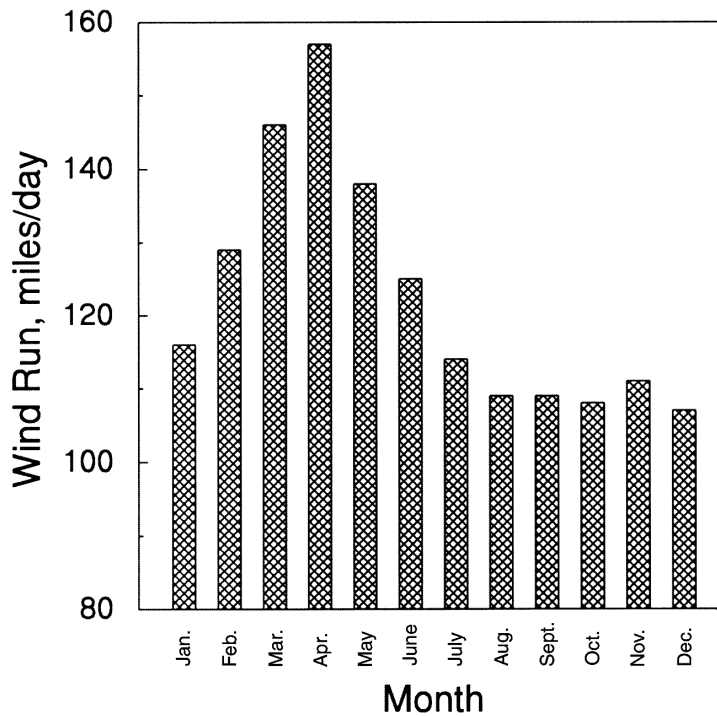


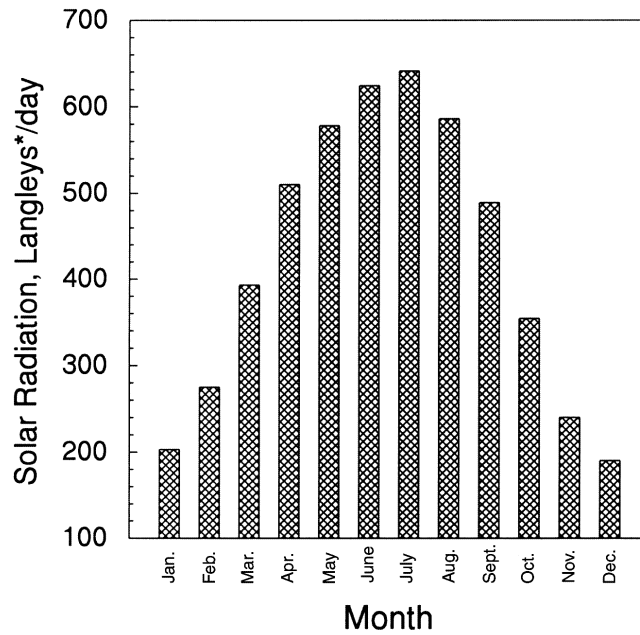
Fig. 4. Average monthly precipitation measured at NMSU’s Agricultural Science Center at Farmington, 1969-1998.



**Fig. 5. Probability of receiving precipitation amounts greater than 0.5, 0.75, and 1.0 inch within a 24-hour period at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

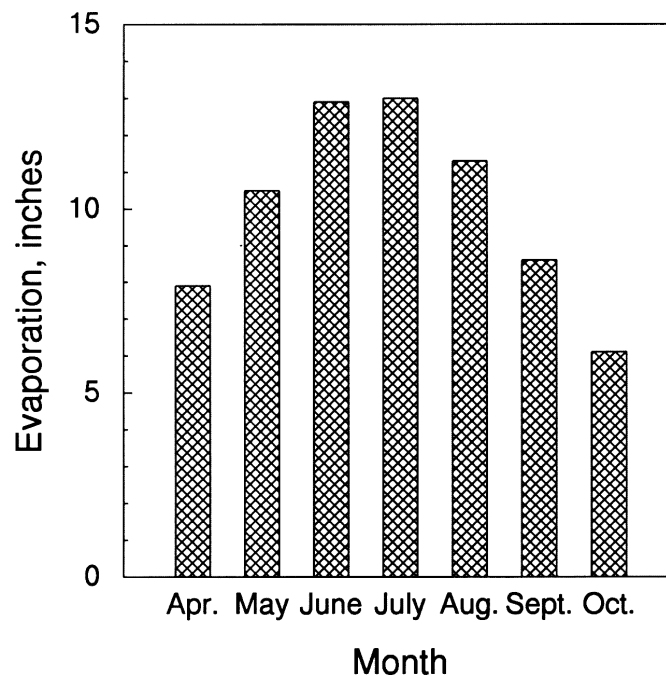


**Fig. 6. Average daily wind run at a height of 6 feet for each month at NMSU's Agricultural Science Center at Farmington, 1980-1998.**



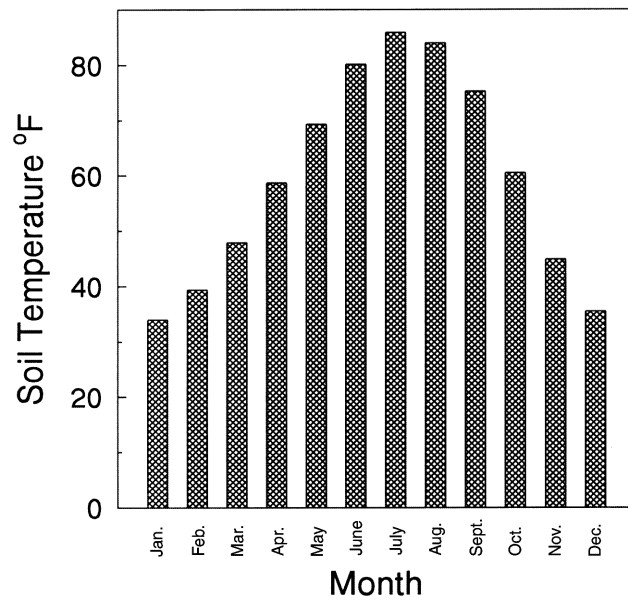
**Fig. 7. Average daily solar radiation for each month at NMSU's Agricultural Science Center at Farmington, 1977-1998.**

*\*Langley's = gram calories/cm<sup>2</sup>.*

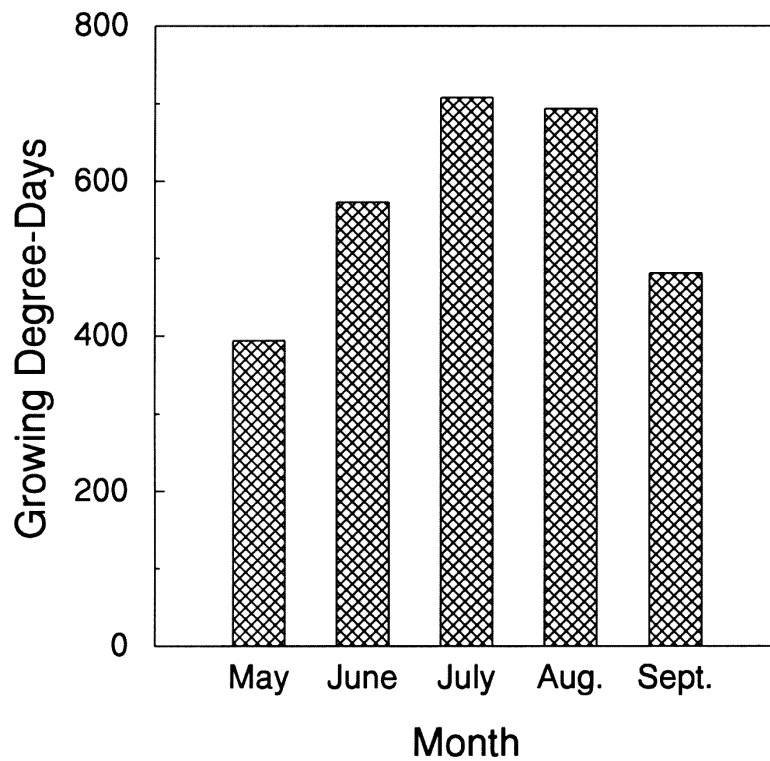


**Fig. 8. Average total monthly pan evaporation at NMSU's Agricultural Science Center at Farmington, 1972-1998.**





**Fig. 9. Average monthly bare soil temperature 4 inches below the surface at NMSU's Agricultural Science Center at Farmington, 1976-1998.**



**Fig. 10. Average total monthly growing degree-day accumulation (May-September) at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

perature). Between the minimum and maximum cutoff temperatures, plant growth rate increases as temperature increases. The average daily temperature (mean of daily minimum and maximum temperatures) minus the base temperature is equal to growing degree-days (GDD) for that day. However, if the observed minimum for the day is less than the minimum cutoff temperature ( $CO_{min}$ ), then it is set equal to  $CO_{min}$ . Correspondingly, if the observed maximum temperature exceeds the maximum cutoff temperature ( $CO_{max}$ ), then it is set equal to  $CO_{max}$  prior to calculating the average. Over the 30 years, total average monthly GDD during the growing season ranged from a low of 394 in May (12.7/day) to a high of 708 (22.8/day) in July, when  $CO_{min}$  and  $CO_{max}$  were set to 50°F and 86°F, respectively (fig. 10 and table 17). These cutoffs represent those commonly used for corn.

## CONVERSION FACTORS

To convert the English units used in this report to their metric equivalents, the following conversion factors can be used:

- **Temperature:** Degrees Celsius (°C) = 0.56 (°F – 32).
- **Precipitation and Evaporation:** Millimeters (mm) = inches x 25.4.
- **Wind Run:** Kilometers (km) = miles x 1.61.
- **Growing Degree-Days (GDD):** GDD (°C based) = GDD (°F based) x 0.56.

**Table 1. Average daily minimum temperature\* (°F) for each month at NMSU’s Agricultural Science Center at Farmington, 1969-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
1969	25	24	24	35	48	51	61	62	55	39	30	22	39.7
1970	20	27	26	29	43	53	62	62	49	36	30	22	38.3
1971	16	20	26	33	42	54	61	60	48	38	28	21	37.3
1972	18	22	31	36	43	55	62	60	53	45	27	15	38.9
1973	12	26	29	32	44	52	60	60	48	40	31	19	37.8
1974	14	17	33	33	46	57	61	59	50	44	28	17	38.3
1975	14	23	28	31	40	48	60	57	50	39	24	19	36.1
1976	16	28	25	36	45	53	62	59	54	37	26	17	38.2
1977	15	22	25	39	44	59	62	61	55	42	31	26	40.1
1978	25	25	33	38	43	53	61	57	52	43	33	15	39.8
1979	16	22	28	34	44	50	58	57	53	40	25	20	37.3
1980	26	28	27	33	41	52	59	58	50	35	27	24	38.3
1981	20	23	29	39	44	54	58	56	50	37	30	22	38.5
1982	18	21	30	34	43	51	58	60	52	35	29	22	37.8
1983	21	26	31	31	41	51	58	61	52	41	29	24	38.8
1984	16	20	27	33	48	53	61	60	52	36	30	25	38.4
1985	20	19	32	38	46	54	61	59	48	41	29	19	38.8
1986	23	26	33	39	44	55	59	60	50	40	29	22	39.8
1987	18	25	26	39	45	53	57	57	49	40	28	19	37.0
1988	13	24	25	36	44	56	61	60	48	43	29	19	38.2
1989	16	24	34	40	47	54	63	58	54	40	26	16	39.3
1990	18	25	35	41	45	59	63	60	56	40	30	11	40.2
1991	16	25	30	34	44	53	59	59	51	40	27	21	38.3
1992	18	27	32	40	48	52	57	58	50	40	22	16	38.4
1993	26	28	30	36	45	52	57	58	48	38	25	20	38.4
1994	19	24	31	38	46	56	60	61	50	39	27	24	39.6
1995	24	29	31	35	43	50	58	61	52	37	29	23	39.3
1996	19	28	29	34	47	54	60	58	47	38	28	21	38.6
1997	19	24	28	32	46	54	59	59	54	37	28	20	38.2
1998	22	25	28	33	45	48	62	59	54	40	29	19	38.5
<b>Mean</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>36</b>	<b>44</b>	<b>53</b>	<b>60</b>	<b>59</b>	<b>51</b>	<b>39</b>	<b>28</b>	<b>20</b>	<b>38.5</b>

\* The average daily minimum temperature represents the sum of the minimum daily temperatures in each month divided by the number of days in that month.

**Table 2. Average daily mean temperature\* (°F) for each month at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
1969	34	35	37	52	63	67	76	76	69	50	40	34	53
1970	31	40	39	44	60	68	76	76	64	50	42	33	52
1971	30	34	43	50	58	71	77	74	64	52	40	30	52
1972	30	38	48	53	60	70	78	74	66	54	36	26	53
1973	22	35	39	45	59	68	75	75	63	55	44	30	51
1974	24	28	48	48	63	74	75	74	65	55	40	48	54
1975	26	34	40	46	56	66	74	72	64	54	38	30	50
1976	28	41	40	52	60	70	77	74	66	51	40	32	53
1977	25	37	39	54	59	74	76	75	68	56	43	36	54
1978	33	34	46	52	56	69	76	71	65	56	42	24	52
1979	24	32	40	50	58	67	74	72	69	56	35	32	51
1980	33	39	40	48	57	71	76	73	65	52	41	37	53
1981	30	37	41	55	59	71	74	72	65	51	44	34	53
1982	30	31	42	49	57	67	73	72	65	50	40	32	51
1983	31	36	42	45	56	66	74	75	68	54	41	34	52
1984	28	34	41	47	64	69	76	74	66	47	42	35	52
1985	30	32	41	53	61	71	76	74	62	54	40	31	52
1986	40	39	47	51	60	70	72	74	62	52	40	33	53
1987	29	36	39	53	59	70	73	71	65	56	39	29	52
1988	24	36	41	51	59	72	76	74	64	58	41	31	52
1989	27	35	49	57	63	70	78	72	69	55	41	31	54
1990	29	36	46	54	59	75	76	73	69	54	42	24	53
1991	25	37	41	49	59	68	75	74	66	56	38	29	51
1992	28	39	45	56	62	68	72	73	66	56	35	26	52
1993	35	38	44	51	61	69	74	71	64	52	38	32	52
1994	33	35	46	52	61	73	77	76	66	53	38	35	54
1995	33	44	44	48	57	67	74	76	67	53	44	35	54
1996	32	41	43	51	64	71	76	73	61	52	40	32	53
1997	29	36	46	47	61	70	74	73	68	52	41	31	52
1998	34	35	42	48	61	67	77	74	70	54	42	32	53
<b>Mean</b>	<b>29</b>	<b>36</b>	<b>43</b>	<b>50</b>	<b>59</b>	<b>70</b>	<b>75</b>	<b>74</b>	<b>66</b>	<b>53</b>	<b>40</b>	<b>32</b>	<b>52</b>

\* The mean daily temperature represents the sum of the average daily temperature ( $[\text{maximum} + \text{minimum}]/2$ ) in each month divided by the number of days in that month.

**Table 3. Average daily maximum temperature\* (°F) for each month at NMSU’s Agricultural Science Center at Farmington, 1969-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
1969	42	46	50	69	78	81	91	90	83	62	51	45	<b>65.1</b>
1970	42	54	52	60	78	84	91	91	78	63	55	44	<b>66.0</b>
1971	43	48	59	66	74	87	93	87	80	65	51	39	<b>66.0</b>
1972	43	54	66	70	78	86	93	87	80	63	46	37	<b>66.9</b>
1973	32	42	50	59	74	84	90	90	79	70	57	42	<b>64.1</b>
1974	34	40	62	64	80	91	89	88	80	66	52	39	<b>65.4</b>
1975	37	44	52	60	71	85	89	88	79	70	53	42	<b>64.2</b>
1976	41	54	56	68	76	87	92	88	79	65	53	45	<b>67.0</b>
1977	34	51	53	69	74	90	90	89	81	71	54	47	<b>66.9</b>
1978	41	44	58	65	70	85	90	86	78	70	51	33	<b>64.1</b>
1979	31	42	52	65	72	84	90	86	84	71	46	43	<b>63.8</b>
1980	41	50	53	64	72	89	93	88	80	66	55	51	<b>66.8</b>
1981	49	51	53	70	74	88	90	88	80	65	58	46	<b>67.7</b>
1982	41	41	54	63	72	84	89	85	78	65	51	41	<b>63.7</b>
1983	40	46	53	59	72	82	90	89	83	68	52	43	<b>64.8</b>
1984	41	48	56	61	80	84	91	87	80	60	55	45	<b>65.7</b>
1985	41	44	55	67	75	88	91	89	76	67	51	43	<b>66.0</b>
1986	49	51	61	64	75	84	86	89	75	65	50	44	<b>66.0</b>
1987	40	47	52	68	74	87	90	86	80	71	51	40	<b>65.5</b>
1988	35	47	57	65	75	87	92	87	80	73	53	43	<b>66.2</b>
1989	38	45	63	73	79	86	93	87	84	69	56	45	<b>68.2</b>
1990	41	47	58	67	73	90	90	87	82	68	54	36	<b>65.9</b>
1991	35	49	53	65	75	84	90	88	80	71	49	37	<b>64.7</b>
1992	38	50	58	71	76	84	86	87	81	72	48	36	<b>65.5</b>
1993	44	48	59	67	76	86	91	85	79	66	50	43	<b>66.2</b>
1994	46	46	61	66	76	90	93	91	81	66	50	46	<b>67.7</b>
1995	42	58	58	61	71	83	91	90	81	69	59	47	<b>67.5</b>
1996	45	54	58	68	82	87	91	89	76	66	53	43	<b>67.7</b>
1997	39	48	63	61	77	86	90	87	82	67	54	42	<b>66.4</b>
1998	45	46	57	62	78	85	92	90	86	68	56	45	<b>67.5</b>
<b>Mean</b>	<b>40</b>	<b>48</b>	<b>56</b>	<b>65</b>	<b>75</b>	<b>86</b>	<b>91</b>	<b>88</b>	<b>80</b>	<b>67</b>	<b>52</b>	<b>42</b>	<b>66.0</b>

\* The average daily maximum temperature represents the sum of the maximum daily temperatures in each month divided by the number of days in that month.

**Table 4. Frost dates and number of consecutive frost-free days at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

Date	Less than or equal to 32 °F			Less than or equal to 28 °F		
	Last Spring Frost (date)	First Fall Frost (date)	Frost-Free Period (days)	Last Spring Killing Frost (date)	First Fall Killing Frost (date)	Killing Frost-Free Period (days)
1969	Apr. 27	Oct. 5	161	Apr. 26	Oct. 6	163
1970	May 2	Oct. 8	159	May 1	Oct. 9	161
1971	May 9	<b>Sept. 18*</b>	132	Apr. 27	<b>Sept. 18*</b>	<b>144*</b>
1972	May 2	Oct. 30	181	Apr. 27	Oct. 31	187
1973	May 2	Oct. 11	162	May 2	Oct. 27	178
1974	May 21	Oct. 30	162	May 20	Nov. 4	168
1975	May 8	Oct. 14	159	May 7	Oct. 14	160
1976	Apr. 27	Oct. 7	164	Apr. 27	Oct. 19	175
1977	Apr. 21	Oct. 31	<b>193**</b>	Apr. 5	Nov. 2	211
1978	May 6	Oct. 26	173	May 6	Nov. 13	191
1979	May 12	Oct. 21	162	Apr. 20	Oct. 22	185
1980	<b>May 26**</b>	Oct. 16	143	<b>May 25**</b>	Oct. 17	145
1981	May 9	Oct. 16	160	Apr. 5	Oct. 17	194
1982	May 6	Oct. 6	153	Apr. 21	Oct. 10	172
1983	May 19	Sept. 21	<b>125*</b>	May 17	Nov. 9	176
1984	May 8	Oct. 15	160	May 8	Oct. 16	161
1985	May 14	Sept. 30	139	Apr. 1	Nov. 1	214
1986	Apr. 27	Oct. 12	168	Apr. 27	Oct. 13	169
1987	Apr. 21	Oct. 19	181	Apr. 21	Nov. 11	204
1988	May 7	<b>Nov. 12**</b>	189	Apr. 11	<b>Nov. 16**</b>	<b>219**</b>
1989	Apr. 30	Oct. 18	171	<b>Mar. 21*</b>	Oct. 27	<b>219**</b>
1990	<b>Apr. 10*</b>	Oct. 9	181	Mar. 31	Oct. 21	204
1991	May 5	Oct. 28	176	Mar. 29	Oct. 29	214
1992	Apr. 21	Oct. 8	170	Mar. 19	Oct. 8	203
1993	May 9	Oct. 19	163	Apr. 20	Oct. 27	190
1994	Apr. 30	Oct. 17	170	Apr. 8	Oct. 31	206
1995	Apr. 25	Oct. 6	164	Apr. 18	Oct. 06	171
1996	Apr. 30	Sept. 19	142	Apr. 29	Oct. 18	172
1997	May 2	Oct. 13	163	May 2	Oct. 13	163
1998	May 15	Oct. 6	144	Apr. 19	Oct. 6	170
<b>Mean</b>	<b>May 4</b>	<b>Oct. 14</b>	<b>162</b>	<b>Apr. 22</b>	<b>Oct. 22</b>	<b>183</b>

\*Earliest date (or shortest frost-free period).

\*\*Latest date (or longest frost-free period).

**Table 5. Number of days 32 °F or below and 0 °F or below in the winter, spring, and fall months at NMSU’s Agricultural Science Center at Farmington, 1969-1998.**

Year	Number of Days 32 °F or Below										Number of Days 0 °F or Below			
	Jan.	Feb.	Mar.	Apr.	May	Sept.	Oct.	Nov.	Dec.	Total	Jan.	Feb.	Dec.	Total
1969	22	26	25	7	0	0	7	22	29	<b>138</b>	0	0	0	<b>0</b>
1970	29	25	26	23	2	0	12	23	30	<b>170</b>	1	0	0	<b>1</b>
1971	29	27	22	13	1	2	8	26	27	<b>155</b>	4	0	0	<b>4</b>
1972	31	27	19	10	2	0	2	24	31	<b>146</b>	0	0	0	<b>0</b>
1973	31	26	25	17	1	0	5	16	28	<b>149</b>	0	0	0	<b>0</b>
1974	30	28	14	14	2	0	2	24	30	<b>144</b>	2	0	0	<b>2</b>
1975	29	27	24	15	3	0	6	25	30	<b>159</b>	2	0	0	<b>2</b>
1976	31	22	24	8	0	0	10	22	31	<b>148</b>	2	0	0	<b>2</b>
1977	31	28	26	8	0	0	1	20	30	<b>144</b>	3	0	0	<b>3</b>
1978	28	21	12	6	2	0	1	14	29	<b>113</b>	0	1	5	<b>6</b>
1979	29	27	25	11	3	0	5	24	31	<b>155</b>	3	1	0	<b>4</b>
1980	23	21	25	15	2	0	12	18	28	<b>144</b>	0	0	0	<b>0</b>
1981	29	26	24	3	1	0	11	19	31	<b>144</b>	0	0	0	<b>0</b>
1982	29	25	18	12	1	0	12	22	29	<b>148</b>	1	2	0	<b>3</b>
1983	31	25	18	15	6	1	0	18	26	<b>140</b>	0	0	0	<b>0</b>
1984	31	29	24	15	1	0	12	18	29	<b>159</b>	0	0	0	<b>0</b>
1985	31	25	16	5	1	1	2	19	30	<b>130</b>	0	1	0	<b>1</b>
1986	28	21	20	6	0	0	6	18	29	<b>128</b>	0	0	0	<b>0</b>
1987	28	25	24	10	0	0	3	22	31	<b>143</b>	0	0	0	<b>0</b>
1988	31	25	27	9	2	0	0	16	29	<b>139</b>	2	0	0	<b>2</b>
1989	31	24	13	5	0	0	6	27	31	<b>137</b>	0	2	0	<b>2</b>
1990	30	21	14	3	0	0	6	19	28	<b>121</b>	2	0	7	<b>9</b>
1991	31	22	20	11	2	0	4	23	31	<b>144</b>	2	0	0	<b>2</b>
1992	31	23	15	3	0	0	2	28	29	<b>131</b>	0	0	1	<b>1</b>
1993	28	22	24	11	3	0	9	25	31	<b>153</b>	0	0	0	<b>0</b>
1994	30	24	14	8	0	0	4	22	28	<b>130</b>	0	0	0	<b>0</b>
1995	28	18	15	15	0	0	7	23	28	<b>134</b>	0	0	0	<b>0</b>
1996	31	23	21	11	0	2	9	24	28	<b>149</b>	0	0	0	<b>0</b>
1997	29	27	23	16	1	0	11	22	31	<b>160</b>	1	0	0	<b>1</b>
1998	31	23	20	17	1	0	4	22	30	<b>148</b>	0	0	0	<b>0</b>
<b>Mean</b>	<b>29.4</b>	<b>24.4</b>	<b>20.6</b>	<b>10.7</b>	<b>1.2</b>	<b>0.2</b>	<b>6.0</b>	<b>21.5</b>	<b>29.5</b>	<b>143.5</b>	<b>0.83</b>	<b>0.23</b>	<b>0.43</b>	<b>1.50</b>

**Table 6. Lowest temperatures\* (°F) recorded in each month at NMSU’s Agricultural Science Center at Farmington, 1969-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	9	12	13	27	37	44	<b>43</b>	52	46	26	14	7
1970	0	15	11	20	27	39	53	54	34	21	18	14
1971	<b>-18</b>	5	<b>6</b>	17	31	38	54	54	<b>28</b>	18	17	4
1972	2	2	14	24	30	47	56	54	37	22	15	2
1973	1	10	20	18	28	41	52	49	37	26	14	9
1974	-11	1	20	18	28	38	53	52	33	30	14	1
1975	-2	9	9	19	<b>23</b>	38	55	49	40	20	7	6
1976	-4	12	11	23	34	38	54	52	42	22	<b>1</b>	9
1977	-2	13	12	21	33	51	57	54	46	32	20	10
1978	12	0	20	26	31	45	51	46	32	31	18	-9
1979	-8	5	17	<b>16</b>	29	<b>36</b>	51	51	42	23	6	9
1980	14	18	13	18	27	<b>36</b>	53	<b>41</b>	37	17	12	11
1981	10	11	21	19	32	<b>36</b>	44	49	42	21	13	4
1982	-1	-3	19	22	30	38	47	54	38	21	17	6
1983	9	20	22	20	27	<b>36</b>	61	55	30	35	11	10
1984	2	11	14	18	27	40	53	54	39	23	15	13
1985	6	-1	13	28	29	39	53	51	31	31	8	8
1986	8	8	19	23	33	42	53	52	40	28	16	8
1987	2	8	9	24	35	43	50	47	40	32	14	1
1988	-2	16	9	21	30	38	54	54	33	36	12	1
1989	4	<b>-14</b>	14	29	36	41	55	48	36	<b>15</b>	9	3
1990	0	4	19	30	39	47	55	52	45	26	16	<b>-16</b>
1991	-3	12	17	24	30	39	53	54	39	20	11	3
1992	10	17	20	30	40	41	47	48	37	28	7	-2
1993	10	18	18	24	32	39	49	52	38	17	8	8
1994	7	4	12	26	35	46	50	57	39	26	8	11
1995	12	21	18	24	34	38	45	55	36	24	13	9
1996	6	12	16	20	39	41	54	52	29	16	19	3
1997	-1	13	13	19	26	46	51	53	43	19	17	8
1998	12	15	13	25	31	40	59	52	46	27	16	3

\*The lowest monthly temperatures recorded are in bold.

**Table 7. Number of days 95 °F or above and 100 °F or above in the summer months at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

Year	Number of Days 95 °F or Above					Number of Days 100 °F or Above		
	June	July	Aug.	Sept.	Total	June	July	Total
1969	1	3	5	1	10	0	0	0
1970	5	13	5	0	23	0	0	0
1971	5	11	0	0	16	0	2	2
1972	0	13	4	0	17	0	1	1
1973	5	6	6	0	17	0	0	0
1974	17	1	0	0	18	0	0	0
1975	1	1	3	0	5	0	0	0
1976	3	11	0	0	14	0	1	1
1977	3	6	3	0	12	0	0	0
1978	1	2	0	0	3	0	0	0
1979	1	9	3	0	13	0	0	0
1980	6	11	5	0	22	0	0	0
1981	5	5	1	0	11	0	0	0
1982	0	4	1	0	5	0	0	0
1983	0	3	1	0	4	0	0	0
1984	0	3	0	0	3	0	0	0
1985	3	12	1	0	16	0	0	0
1986	0	2	2	0	4	0	0	0
1987	0	2	0	0	2	0	0	0
1988	5	7	0	0	12	0	0	0
1989	2	16	0	0	18	0	5	5
1990	8	3	0	0	11	2	1	3
1991	0	3	0	0	3	0	0	0
1992	0	2	1	0	3	0	0	0
1993	4	3	2	0	9	0	0	0
1994	6	11	5	0	22	1	0	1
1995	0	12	6	1	19	0	3	3
1996	0	6	4	0	10	0	0	0
1997	0	4	0	0	4	0	0	0
1998	3	16	1	0	20	0	2	2
<b>Mean</b>	<b>2.8</b>	<b>6.7</b>	<b>2.0</b>	<b>0.1</b>	<b>11.5</b>	<b>0.1</b>	<b>0.5</b>	<b>0.6</b>



**Table 8. Highest temperatures\* (°F) recorded in each month at NMSU’s Agricultural Science Center at Farmington, 1969-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	57	61	74	82	89	96	96	<b>99</b>	95	78	63	56
1970	56	65	65	72	86	98	98	<b>99</b>	90	76	64	61
1971	60	64	77	77	84	97	101	91	90	67	70	57
1972	61	66	76	78	86	94	100	98	89	82	57	52
1973	47	61	63	76	85	98	99	97	88	81	73	<b>65</b>
1974	45	60	72	75	93	99	95	94	93	83	64	56
1975	61	58	65	77	85	96	95	95	89	84	73	57
1976	54	68	71	77	86	96	100	93	94	78	70	55
1977	46	65	69	81	91	98	97	98	93	82	<b>74</b>	63
1978	53	59	79	77	88	95	95	94	90	83	67	47
1979	46	60	62	78	82	96	97	96	94	83	60	54
1980	55	64	67	81	86	99	97	97	88	84	73	63
1981	60	67	71	82	84	<b>100</b>	97	96	85	78	68	56
1982	60	64	64	75	75	93	97	95	91	79	64	53
1983	53	68	68	83	89	92	96	<b>99</b>	93	74	70	50
1984	51	60	68	79	<b>93</b>	94	95	93	89	75	68	54
1985	50	60	70	79	85	95	100	95	93	75	68	51
1986	<b>64</b>	<b>70</b>	75	79	85	94	96	96	88	75	63	55
1987	56	61	69	80	82	93	98	93	89	83	66	58
1988	49	62	77	78	87	99	96	93	93	83	70	56
1989	50	67	<b>81</b>	85	90	98	<b>103</b>	92	91	<b>85</b>	67	53
1990	56	64	74	80	86	<b>100</b>	<b>103</b>	94	93	79	69	55
1991	44	58	67	79	85	94	97	93	91	82	67	46
1992	52	58	67	<b>86</b>	85	92	95	95	89	83	61	49
1993	54	61	72	81	86	96	96	96	88	84	61	56
1994	58	63	74	81	90	<b>100</b>	98	97	89	80	70	55
1995	53	68	74	77	82	92	101	97	<b>97</b>	83	68	64
1996	56	65	71	82	90	93	96	96	90	83	66	57
1997	58	60	75	76	88	93	98	92	91	84	68	54
1998	56	62	77	80	87	99	100	95	90	<b>85</b>	67	60

\*Highest monthly temperatures recorded are in bold.

**Table 9. Total monthly precipitation depth (inches) recorded at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

<b>Year</b>	<b>Jan.</b>	<b>Feb.</b>	<b>Mar.</b>	<b>Apr.</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>	<b>Total</b>
1969	0.85	0.31	0.21	0.30	1.13	1.00	0.69	0.47	2.07	2.88	0.38	0.29	<b>10.58</b>
1970	0.06	0.03	0.49	0.60	0.11	0.81	0.68	0.02	2.48	0.48	0.46	0.20	<b>6.42</b>
1971	0.18	0.09	0.05	0.11	0.41	0.00	0.31	1.72	1.06	1.15	0.77	0.16	<b>6.01</b>
1972	0.03	trace	0.03	0.00	0.02	0.18	0.04	1.34	0.57	1.51	0.19	0.93	<b>6.86</b>
1973	0.28	0.17	1.82	1.54	0.65	0.95	0.27	0.61	1.49	0.35	0.30	0.37	<b>8.80</b>
1974	1.10	0.13	0.01	0.20	0.02	0.09	1.48	0.12	0.37	2.39	0.48	0.38	<b>6.77</b>
1975	0.11	0.61	1.52	0.78	0.35	0.13	0.84	0.24	0.80	0.14	0.22	0.20	<b>5.94</b>
1976	0.06	0.16	0.00	0.10	0.41	0.09	0.62	0.80	1.31	0.01	0.01	trace	<b>3.57</b>
1977	0.42	trace	0.00	0.01	0.29	0.04	1.01	1.41	0.38	0.30	0.62	0.63	<b>5.15</b>
1978	0.90	0.64	1.27	0.71	0.96	0.00	0.07	0.18	1.55	1.46	2.24	0.59	<b>10.57</b>
1979	0.88	0.19	0.46	0.28	0.58	0.43	1.40	0.49	0.08	1.37	0.97	0.73	<b>7.86</b>
1980	1.45	0.70	0.63	0.25	0.25	0.07	0.08	0.89	1.05	0.84	0.02	trace	<b>6.23</b>
1981	trace	0.30	1.76	0.21	1.05	0.16	1.34	0.35	0.69	0.89	0.36	0.03	<b>7.14</b>
1982	0.32	0.77	1.18	0.67	0.82	0.00	1.27	2.78	1.50	0.16	0.92	0.76	<b>11.15</b>
1983	0.94	0.69	1.84	0.31	0.13	0.35	1.67	0.72	0.53	0.52	0.91	0.67	<b>9.28</b>
1984	trace	0.12	0.54	1.00	trace	0.67	0.62	1.64	0.45	1.13	0.23	0.87	<b>7.27</b>
1985	0.39	0.13	1.74	1.76	0.29	0.01	1.38	0.43	1.31	1.21	0.52	0.22	<b>9.39</b>
1986	0.11	0.77	0.51	0.97	0.13	0.81	4.10	0.93	2.18	0.65	2.73	0.76	<b>14.65</b>
1987	0.10	1.75	0.66	trace	0.68	0.02	0.28	1.17	0.27	1.07	1.65	0.59	<b>8.24</b>
1988	0.63	0.82	0.02	0.72	1.11	0.33	0.58	2.34	0.27	0.22	0.78	0.19	<b>8.01</b>
1989	1.19	0.56	0.06	0.00	trace	trace	1.24	1.62	0.14	0.51	0.00	trace	<b>5.32</b>
1990	0.53	0.53	0.74	0.85	1.07	0.07	0.35	1.32	1.97	1.12	0.78	0.59	<b>9.92</b>
1991	0.59	0.26	0.67	0.01	0.27	0.69	0.35	0.58	1.38	0.38	2.07	1.01	<b>8.26</b>
1992	0.15	0.18	0.74	0.25	1.75	0.05	0.98	1.25	0.85	0.42	0.31	0.63	<b>7.56</b>
1993	2.05	0.82	0.93	0.28	0.38	0.04	0.03	2.06	0.84	1.25	0.47	0.15	<b>9.30</b>
1994	0.09	0.48	0.24	0.57	1.32	0.07	0.20	0.66	1.37	1.18	0.96	0.64	<b>7.78</b>
1995	0.57	0.14	1.45	1.28	0.9	0.03	0.23	1.88	2.04	0.10	0.14	0.39	<b>9.15</b>
1996	0.09	0.43	0.28	0.17	0.00	0.64	0.24	1.07	0.63	2.21	0.72	0.22	<b>6.70</b>
1997	1.03	0.48	0.03	2.88	0.82	0.62	1.28	1.12	2.68	0.43	0.67	0.80	<b>12.84</b>
1998	0.12	0.61	0.65	0.73	0.03	0.02	1.38	1.48	0.68	2.07	1.27	0.06	<b>9.10</b>
<b>Mean</b>	<b>0.51</b>	<b>0.43</b>	<b>0.69</b>	<b>0.59</b>	<b>0.53</b>	<b>0.28</b>	<b>0.84</b>	<b>1.05</b>	<b>1.11</b>	<b>0.95</b>	<b>0.74</b>	<b>0.44</b>	<b>8.19</b>

**Table 10. Average daily wind run (miles/day) measured at two heights (2 feet and 6 feet) during each month at NMSU's Agricultural Science Center at Farmington, 1980-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
-----2 feet (6 inches above evaporation pan)-----													
1980	64	66	100	97	80	57	44	41	27	30	23	14	<b>53.6</b>
1981	50	80	94	85	71	64	58	60	20	55	56	52	<b>62.1</b>
1982	69	36	63	89	78	42	59	75	77	86	77	89	<b>70.0</b>
1983	82	101	107	101	108	98	76	70	62	73	94	98	<b>89.2</b>
1984	63	101	104	114	78	94	66	61	70	71	99	67	<b>82.3</b>
1985	49	87	128	98	76	66	70	76	70	72	148	55	<b>82.9</b>
1986	53	61	72	95	78	64	52	66	60	45	50	45	<b>61.8</b>
1987	60	41	50	50	31	22	25	19	21	48	71	79	<b>43.1</b>
1988	76	73	99	88	99	81	75	71	75	64	82	82	<b>80.4</b>
1989	84	75	96	86	69	73	78	72	73	68	68	59	<b>75.1</b>
1990	78	97	90	91	91	84	82	82	76	72	71	83	<b>83.1</b>
1991	61	73	106	98	99	75	79	67	72	57	59	47	<b>74.4</b>
1992	64	66	80	76	72	74	66	70	62	58	68	66	<b>68.5</b>
1993	103	86	105	107	91	81	71	75	74	65	82	79	<b>84.9</b>
1994	81	96	83	94	71	61	72	72	63	58	84	59	<b>74.5</b>
1995	76	65	83	81	80	61	63	59	52	64	58	49	<b>65.9</b>
1996	92	79	88	93	72	73	72	60	44	51	53	71	<b>70.7</b>
1997	43	79	78	73	70	62	55	48	50	48	39	35	<b>56.8</b>
1998	59	75	83	81	66	72	70	66	62	78	66	59	<b>69.5</b>
<b>Mean (mi/d)</b>	<b>68.8</b>	<b>75.6</b>	<b>90.0</b>	<b>89.3</b>	<b>77.9</b>	<b>68.6</b>	<b>64.9</b>	<b>63.6</b>	<b>58.4</b>	<b>61.2</b>	<b>70.9</b>	<b>62.5</b>	<b>71.0</b>
<b>Mean (mi/hr)</b>	<b>2.9</b>	<b>3.2</b>	<b>3.8</b>	<b>3.7</b>	<b>3.3</b>	<b>2.9</b>	<b>2.7</b>	<b>2.7</b>	<b>2.4</b>	<b>2.6</b>	<b>3.0</b>	<b>2.6</b>	<b>3.0</b>
-----6 feet-----													
1980	---	---	---	---	134	132	116	96	82	78	80	84	---
1981	112	124	141	124	102	81	62	82	71	81	76	58	<b>92.8</b>
1982	88	63	97	127	100	122	103	91	99	95	86	99	<b>97.5</b>
1983	111	139	147	154	141	120	116	102	113	107	130	136	<b>126.3</b>
1984	64	115	93	136	88	96	52	46	49	44	136	110	<b>85.7</b>
1985	95	127	183	155	142	136	136	133	125	127	72	117	<b>129.0</b>
1986	113	129	145	179	154	139	128	134	128	118	116	99	<b>131.9</b>
1987	139	131	143	158	139	126	122	119	132	108	123	117	<b>129.7</b>
1988	121	122	163	148	166	138	132	126	120	91	98	98	<b>126.8</b>
1989	97	133	151	147	132	123	126	120	125	115	112	104	<b>123.8</b>
1990	125	152	146	170	165	154	141	136	127	135	127	130	<b>142.2</b>
1991	101	120	190	191	167	138	140	119	129	111	109	85	<b>133.4</b>
1992	117	119	137	142	133	137	118	118	111	110	113	106	<b>121.6</b>
1993	164	139	153	171	144	86	57	80	103	87	92	---	---
1994	130	156	144	166	135	130	136	127	120	119	154	115	<b>136.0</b>
1995	137	129	147	176	185	137	128	118	115	137	129	100	<b>136.5</b>
1996	171	145	161	182	149	140	127	119	112	134	119	147	<b>142.3</b>
1997	106	149	146	153	137	113	112	101	105	115	118	110	<b>122.1</b>
1998	100	133	145	144	112	120	111	100	105	131	111	106	<b>118.2</b>
<b>Mean (mi/d)</b>	<b>116.0</b>	<b>129.1</b>	<b>146.1</b>	<b>156.8</b>	<b>138.1</b>	<b>124.5</b>	<b>113.8</b>	<b>108.8</b>	<b>109.1</b>	<b>107.5</b>	<b>110.6</b>	<b>106.6</b>	<b>121.7</b>
<b>Mean (mi/hr)</b>	<b>4.8</b>	<b>5.4</b>	<b>6.1</b>	<b>6.5</b>	<b>5.8</b>	<b>5.2</b>	<b>4.7</b>	<b>4.5</b>	<b>4.6</b>	<b>4.5</b>	<b>4.6</b>	<b>4.4</b>	<b>5.1</b>

**Table 11. Average daily solar radiation (gram cal/cm<sup>2</sup> or Langley's) at NMSU's Agricultural Science Center at Farmington, 1977-1998.**

<b>Year</b>	<b>Jan.</b>	<b>Feb.</b>	<b>Mar.</b>	<b>Apr.</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>	<b>Mean</b>
1977	204	305	386	552	438	530	501	464	396	360	—	—	—
1978	157	168	334	459	490	586	641	491	401	292	185	166	<b>364.2</b>
1979	166	261	302	423	445	527	489	477	459	267	165	155	<b>344.7</b>
1980	141	192	300	429	459	529	595	501	436	342	280	145	<b>362.4</b>
1981	190	296	292	473	499	607	550	489	422	314	248	200	<b>381.7</b>
1982	129	207	369	536	594	707	651	565	470	393	227	208	<b>421.0</b>
1983	188	294	345	518	6*54	734	793	725	583	332	230	176	<b>464.6</b>
1984	250	345	486	540	688	494	736	744	595	317	226	188	<b>467.2</b>
1985	242	—	—	499	618	816	843	801	557	410	256	184	—
1986	243	304	505	584	837	736	1,028	1,223	918	513	282	205	<b>615.1</b>
1987	229	289	506	566	551	665	638	542	483	352	246	197	<b>438.7</b>
1988	220	305	474	496	626	623	621	555	486	470	251	216	<b>445.3</b>
1989	224	280	419	550	628	633	619	570	498	361	277	219	<b>439.8</b>
1990	222	282	316	479	593	662	620	541	462	361	234	203	<b>414.6</b>
1991	212	309	356	554	651	556	613	537	450	340	249	146	<b>414.4</b>
1992	189	268	358	509	530	616	560	501	451	324	238	167	<b>392.6</b>
1993	160	230	374	514	532	599	614	464	456	331	240	187	<b>391.8</b>
1994	223	262	371	439	482	564	555	496	411	300	225	178	<b>375.5</b>
1995	189	288	358	438	481	552	520	459	373	324	212	157	<b>362.6</b>
1996	240	309	463	580	651	609	676	604	458	357	250	226	<b>451.9</b>
1997	215	314	516	513	613	657	640	567	491	390	267	220	<b>450.3</b>
1998	236	260	443	563	661	725	604	565	506	331	266	244	<b>450.3</b>
<b>Mean</b>	<b>203</b>	<b>275</b>	<b>393</b>	<b>510</b>	<b>578</b>	<b>624</b>	<b>641</b>	<b>586</b>	<b>489</b>	<b>354</b>	<b>240</b>	<b>190</b>	<b>423</b>

**Table 12. Total monthly evaporation (inches) from a Class-A pan at NMSU's Agricultural Science Center at Farmington, 1972-1998.**

<b>Year</b>	<b>Apr.</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Oct.</b>	<b>Total*</b>
1972	—	—	14.31	14.82	11.81	9.57	4.40	—
1973	—	10.76	11.10	11.53	10.66	9.57	—	<b>53.6</b>
1974	—	12.99	15.36	12.87	12.25	9.33	4.59	<b>62.8</b>
1975	6.18	9.27	12.03	12.28	12.49	8.10	7.50	<b>54.2</b>
1976	9.27	11.78	15.45	13.76	13.11	9.06	5.89	<b>63.2</b>
1977	9.12	12.28	14.94	13.11	12.21	9.51	6.60	<b>62.1</b>
1978	9.30	9.64	12.81	14.54	13.08	9.63	7.97	<b>59.7</b>
1979	8.34	8.62	10.86	10.97	10.60	9.51	7.10	<b>50.6</b>
1980	7.74	9.98	14.67	14.01	12.59	8.16	8.68	<b>59.4</b>
1981	7.62	9.21	14.10	12.03	11.25	7.65	5.12	<b>54.2</b>
1982	7.35	10.01	12.81	12.14	9.73	7.28	8.06	<b>52.0</b>
1983	—	8.85	11.51	12.51	11.06	8.72	6.35	<b>52.7</b>
1984	6.37	12.15	11.66	11.74	10.43	7.84	3.29	<b>53.8</b>
1985	6.35	8.74	12.27	12.68	11.61	6.99	4.44	<b>52.3</b>
1986	7.36	9.82	10.97	11.34	11.34	6.75	—	<b>50.2</b>
1987	—	6.64	11.47	12.19	10.39	8.23	3.12	<b>48.9</b>
1988	—	11.55	11.06	13.05	9.74	8.55	6.16	<b>54.0</b>
1989	—	12.18	12.54	13.83	11.04	9.37	—	<b>59.0</b>
1990	7.65	11.56	15.48	12.74	11.35	8.82	5.77	<b>60.0</b>
1991	8.68	11.68	10.99	12.77	11.11	8.53	—	<b>55.1</b>
1992	7.76	8.67	12.15	11.89	10.80	8.19	6.53	<b>51.7</b>
1993	9.66	10.52	13.94	14.78	10.17	9.11	5.57	<b>58.5</b>
1994	8.35	11.90	15.04	15.63	12.46	9.28	7.38	<b>64.3</b>
1995	7.48	9.78	12.72	13.81	11.63	9.74	7.48	<b>57.7</b>
1996	9.10	13.50	12.72	13.99	11.10	7.08	5.66	<b>58.4</b>
1997	7.37	9.33	11.84	12.36	9.59	7.78	5.80	<b>50.9</b>
1998	7.27	11.37	14.12	13.03	11.36	10.03	5.85	<b>59.9</b>
<b>Mean</b>	<b>—</b>	<b>10.5</b>	<b>12.9</b>	<b>13.0</b>	<b>11.3</b>	<b>8.6</b>	<b>—</b>	<b>56.3</b>

\*Total from May through September.

**Table 13. Average daily evaporation (inches) in each month from a Class-A pan at NMSU's Agricultural Science Center at Farmington, 1972-1998.**

<b>Year</b>	<b>Apr.</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Oct.</b>	<b>Mean*</b>
1972	—	—	0.477	0.478	0.381	0.319	0.142	—
1973	—	0.347	0.370	0.372	0.344	0.319	—	<b>0.350</b>
1974	—	0.419	0.512	0.415	0.415	0.395	0.311	<b>0.411</b>
1975	0.206	0.299	0.401	0.396	0.403	0.270	0.242	<b>0.354</b>
1976	0.309	0.380	0.515	0.444	0.423	0.302	0.190	<b>0.413</b>
1977	0.304	0.396	0.498	0.423	0.394	0.317	0.213	<b>0.406</b>
1978	0.310	0.311	0.427	0.469	0.422	0.321	0.257	<b>0.390</b>
1979	0.278	0.278	0.362	0.354	0.342	0.317	0.229	<b>0.331</b>
1980	0.258	0.322	0.489	0.452	0.406	0.272	0.280	<b>0.385</b>
1981	0.254	0.297	0.470	0.388	0.363	0.255	0.165	<b>0.354</b>
1982	0.245	0.323	0.427	0.392	0.314	0.193	0.260	<b>0.340</b>
1983	—	0.328	0.384	0.404	0.357	0.291	0.203	<b>0.344</b>
1984	0.245	0.391	0.389	0.379	0.334	0.261	0.106	<b>0.352</b>
1985	0.212	0.282	0.409	0.409	0.374	0.233	0.141	<b>0.342</b>
1986	0.245	0.317	0.366	0.366	0.366	0.225	0.242	<b>0.328</b>
1987	—	0.277	0.383	0.393	0.335	0.274	0.101	<b>0.332</b>
1988	0.234	0.373	0.369	0.421	0.314	0.285	0.198	<b>0.353</b>
1989	0.330	0.393	0.418	0.446	0.356	0.312	0.219	<b>0.386</b>
1990	0.255	0.373	0.516	0.411	0.366	0.294	0.186	<b>0.392</b>
1991	0.299	0.377	0.366	0.411	0.358	0.284	0.238	<b>0.360</b>
1992	0.277	0.280	0.405	0.383	0.348	0.272	0.211	<b>0.338</b>
1993	0.322	0.339	0.465	0.477	0.328	0.304	0.180	<b>0.382</b>
1994	0.278	0.383	0.501	0.504	0.402	0.309	0.246	<b>0.420</b>
1995	0.249	0.315	0.424	0.445	0.375	0.324	0.241	<b>0.377</b>
1996	0.303	0.435	0.424	0.451	0.358	0.236	0.182	<b>0.382</b>
1997	0.246	0.301	0.395	0.399	0.309	0.259	0.187	<b>0.333</b>
1998	0.242	0.367	0.471	0.420	0.366	0.334	0.189	<b>0.392</b>
<b>Mean</b>	<b>0.269</b>	<b>0.342</b>	<b>0.432</b>	<b>0.418</b>	<b>0.365</b>	<b>0.285</b>	<b>0.199</b>	<b>0.368</b>
<b># of Years</b>	<b>22</b>	<b>26</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>26</b>	<b>26</b>

\*Mean daily evaporation from May through September.

**Table 14. Average soil temperature (°F) 4 inches below the surface at NMSU's Agricultural Science Center at Farmington, September 1976-December 1998.**

Month	Mean High	Mean Low	Mean*	Mean Extreme High	Mean Extreme Low
January	35.7	31.5	33.6	41.8	25.7
February	43.3	35.0	39.2	53.9	30.0
March	54.8	41.2	48.0	64.0	34.9
April	65.9	49.4	57.7	77.4	40.2
May	78.1	59.2	68.7	88.1	48.2
June	88.6	70.1	79.4	97.2	61.5
July	95.5	75.4	85.5	101.4	68.2
August	92.2	73.4	82.8	99.7	65.9
September	84.2	65.5	74.9	94.0	56.2
October	67.6	51.8	59.7	79.1	41.6
November	49.6	39.5	44.6	60.1	32.6
December	37.3	32.4	34.9	46.1	27.2

\*Average of mean high and low.

**Table 15. Soil low temperature (°F) extremes for each month, 4 inches below the bare surface at NMSU's Agricultural Science Center at Farmington, 1976-1998.**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	-	-	-	-	-	-	-	-	53.0	39.0	36.0	18.0
1977	6.0	22.0	24.0	32.0	52.0	73.0	70.0	73.0	62.0	43.0	31.0	20.0
1978	31.0	34.0	37.0	49.0	44.0	68.0	75.0	70.0	52.0	44.0	38.0	27.0
1979	19.0	30.0	38.0	39.0	49.0	62.0	70.0	69.0	68.0	44.0	32.0	31.0
1980	36.0	38.0	40.0	40.0	54.0	63.0	72.0	68.0	61.0	41.0	37.0	35.0
1981	33.0	31.0	39.0	40.0	52.0	56.0	67.0	71.0	62.0	43.0	36.0	28.0
1982	22.0	29.0	35.0	43.0	47.0	63.0	72.0	68.0	57.0	40.0	37.0	30.0
1983	26.0	34.0	38.0	39.0	47.0	60.0	64.0	65.0	58.0	49.0	33.0	30.0
1984	23.0	32.0	32.0	38.0	42.0	56.0	69.0	65.0	53.0	34.0	30.0	30.0
1985	29.0	22.0	35.0	37.0	45.0	60.0	66.0	64.0	47.0	41.0	31.0	24.0
1986	29.0	29.0	35.0	37.0	49.0	62.0	60.0	62.0	48.0	37.0	31.0	33.0
1987	28.0	32.0	31.0	36.0	41.0	65.0	75.0	71.0	61.0	50.0	38.0	37.0
1988	32.0	34.0	38.0	44.0	45.0	53.0	68.0	66.0	56.0	49.0	31.0	26.0
1989	20.0	33.0	35.0	45.0	53.0	65.0	63.0	65.0	60.0	38.0	30.0	24.0
1990	23.0	26.0	33.0	43.0	47.0	59.0	71.0	63.0	55.0	42.0	35.0	28.0
1991	23.0	25.0	37.0	43.0	50.0	56.0	71.0	68.0	58.0	40.0	35.0	34.0
1992	28.0	35.0	40.0	46.0	54.0	62.0	66.0	62.0	59.0	50.0	27.0	26.0
1993	30.0	34.0	36.0	39.0	45.0	63.0	71.0	57.0	49.0	34.0	26.0	22.0
1994	24.0	20.0	33.0	38.0	51.0	64.0	70.0	65.0	53.0	37.0	26.0	26.0
1995	28.0	29.0	34.0	38.0	45.0	59.0	62.0	66.0	-	42.0	31.0	20.0
1996	22.0	26.0	32.0	41.0	54.0	58.0	58.0	57.0	44.0	37.0	35.0	31.0
1997	27.0	33.0	34.0	38.0	46.0	-	-	68.0	57.0	35.0	32.0	22.0
1998	22.0	31.0	31.0	37.0	54.0	64.0	68.0	65.0	63.0	41.0	33.0	24.0
<b>Mean</b>	<b>25.5</b>	<b>30.0</b>	<b>34.8</b>	<b>40.2</b>	<b>48.5</b>	<b>61.4</b>	<b>68.0</b>	<b>65.8</b>	<b>56.2</b>	<b>41.3</b>	<b>32.6</b>	<b>27.3</b>

**Table 16. Soil high temperature (°F) extremes for each month, 4 inches below the bare surface at NMSU's Agricultural Science Center at Farmington, 1976-1998.**

<b>Year</b>	<b>Jan.</b>	<b>Feb.</b>	<b>Mar.</b>	<b>Apr.</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
1976	-	-	-	-	-	-	-	-	107.0	80.0	64.0	46.0
1977	44.0	57.0	68.0	95.0	106.0	117.0	117.0	112.0	103.0	90.0	67.0	53.0
1978	45.0	51.0	60.0	88.0	95.0	108.0	112.0	110.0	105.0	86.0	68.0	45.0
1979	40.0	53.0	64.0	80.0	91.0	101.0	107.0	107.0	100.0	89.0	63.0	44.0
1980	38.0	62.0	65.0	79.0	89.0	104.0	106.0	106.0	92.0	84.0	65.0	55.0
1981	52.0	61.0	69.0	86.0	88.0	95.0	98.0	95.0	88.0	76.0	58.0	45.0
1982	44.0	53.0	57.0	78.0	88.0	99.0	102.0	99.0	94.0	78.0	56.0	47.0
1983	39.0	53.0	60.0	71.0	88.0	91.0	97.0	97.0	92.0	74.0	64.0	43.0
1984	37.0	45.0	62.0	68.0	91.0	92.0	97.0	102.0	94.0	76.0	61.0	47.0
1985	45.0	54.0	63.0	76.0	90.0	100.0	108.0	101.0	103.0	77.0	66.0	49.0
1986	50.0	59.0	70.0	78.0	86.0	97.0	101.0	102.0	96.0	72.0	54.0	44.0
1987	37.0	54.0	56.0	77.0	87.0	93.0	99.0	97.0	96.0	80.0	63.0	49.0
1988	36.0	57.0	68.0	75.0	88.0	99.0	98.0	97.0	91.0	79.0	66.0	43.0
1989	35.0	57.0	69.0	76.0	85.0	94.0	100.0	98.0	90.0	80.0	59.0	44.0
1990	44.0	55.0	66.0	75.0	84.0	95.0	97.0	94.0	92.0	78.0	61.0	45.0
1991	37.0	50.0	61.0	76.0	86.0	94.0	100.0	99.0	95.0	85.0	60.0	42.0
1992	38.0	53.0	60.0	79.0	85.0	95.0	96.0	98.0	88.0	82.0	53.0	37.0
1993	42.0	52.0	67.0	77.0	89.0	92.0	99.0	100.0	88.0	77.0	53.0	42.0
1994	45.0	52.0	65.0	80.0	86.0	95.0	98.0	99.0	92.0	75.0	57.0	43.0
1995	41.0	60.0	65.0	72.0	79.0	90.0	98.0	99.0	-	70.0	60.0	50.0
1996	42.0	55.0	65.0	77.0	91.0	96.0	100.0	92.0	91.0	78.0	54.0	48.0
1997	45.0	49.0	64.0	69.0	84.0	-	-	95.0	91.0	81.0	57.0	47.0
1998	39.0	48.0	64.0	74.0	90.0	98.0	102.0	96.0	90.0	79.0	54.0	49.0
<b>Mean</b>	<b>41.7</b>	<b>54.1</b>	<b>64.0</b>	<b>77.6</b>	<b>88.5</b>	<b>97.3</b>	<b>101.5</b>	<b>100.0</b>	<b>94.4</b>	<b>79.4</b>	<b>60.1</b>	<b>46.0</b>



**Table 17. Total monthly Growing Degree-Days\* from May through September and to the first fall frost at NMSU's Agricultural Science Center at Farmington, 1969-1998.**

Year	May	June	July	Aug.	Sept.	Total Through Sept.	Total to 1st Frost (32 °F)	Date of 1st Frost
1969	434	510	729	744	570	2,987	3,017	Oct. 5
1970	434	555	744	744	420	2,897	2,949	Oct. 8
1971	372	600	729	713	450	2,864	2,684	Sept. 18
1972	434	615	744	713	495	3,001	3,201	Oct. 30
1973	372	640	713	713	435	2,873	2,990	Oct. 11
1974	465	645	729	698	450	2,987	3,227	Oct. 30
1975	326	525	713	667	435	2,666	2,806	Oct. 14
1976	403	585	744	698	495	2,925	2,978	Oct. 7
1977	372	675	744	729	540	3,060	3,386	Oct. 31
1978	310	570	729	667	450	2,726	2,576	Sept. 20
1979	341	510	682	667	555	2,755	2,986	Oct. 22
1980	341	570	698	682	450	2,741	2,869	Oct. 16
1981	372	600	682	651	450	2,755	2,875	Oct. 16
1982	341	525	682	698	450	2,696	2,741	Oct. 6
1983	341	495	682	729	525	2,772	2,615	Sept. 21
1984	465	555	729	713	480	2,942	3,017	Oct. 15
1985	397	600	710	692	416	2,815	2,926	Sept. 30
1986	377	574	661	693	395	2,700	2,790	Oct. 12
1987	366	592	674	646	473	2,751	2,873	Oct. 19
1988	396	607	722	697	476	2,898	2,981	Nov. 12
1989	468	565	731	670	540	2,974	3,131	Oct. 18
1990	378	635	729	673	532	2,947	3,029	Oct. 9
1991	409	557	704	701	471	2,842	3,153	Oct. 28
1992	385	536	630	639	484	2,674	2,763	Oct. 8
1993	416	538	652	615	454	2,675	2,854	Oct. 19
1994	426	628	729	746	495	3,024	3,169	Oct. 17
1995	330	516	676	729	494	2,745	2,782	Oct. 6
1996	477	612	730	695	410	2,924	2,785	Sept. 19
1997	441	563	685	670	568	2,927	3,081	Oct. 13
1998	417	499	746	716	560	2,938	2,984	Oct. 6
<b>Mean</b>	<b>394</b>	<b>573</b>	<b>708</b>	<b>694</b>	<b>481</b>	<b>2850</b>	<b>2941</b>	<b>Oct. 14</b>

\*Growing Degree-Days =  $(Temp_{(max)} + Temp_{(min)})/2 - Temp_{(base)}$

Temp(max) = 86 °F at temperatures greater than or equal to 86 °F

Temp(min) = 50 °F at temperatures less than or equal to 50 °F

Temp(base) = 50 °F

Refer to text for detailed explanation.



To find more resources for your home, family, or business, visit the College of Agriculture and Home Economics on the World Wide Web at [aces.nmsu.edu](http://aces.nmsu.edu).

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