

2008

Weather and Growing Season Summary, 2007

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Weather and Growing Season Summary, 2007

Abstract

Includes:

Weather Summary

Growing Season

Crop Yield and Quality

Disciplines

Agricultural Science | Agriculture

Weather and Growing Season Summary, 2007

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Weather Summary

The 2007 growing season resulted in mean monthly temperatures generally 1 to 2°F above the 30-year average (Table 1). This year there were a total of ten days above 90°F, down from 25 days in 2006. However, this growing season will be remembered for the abnormally cold temperatures in early April resulting in frost that killed alfalfa stands and pastures.

Precipitation was a roller coaster in 2007; above normal in April and May by nearly 2.5 in., below normal in June and July by nearly 7.25 in., and above normal in August by nearly 3.25 in. (Table 1 and Figure 1). Rains continued in September and October with 1.46 and 2.30 in., respectively.

Growing degree days were accumulating below the 5-year average from April to mid-May then tracked above normal in June and July (Figure 2). Growing degree days were approximately 150 units above the 5-year average at the time of tasseling in 2007.

Growing Season

The spring started with a later than normal killing frost that adversely affected alfalfa and cool season pastures. Temperatures rebounded quickly and therefore did not slow the start of planting. However, the spring planting season was disrupted by several rainfall events causing corn planting to occur in three distinct periods. The spring moisture also resulted in less than ideal planting conditions that caused problems with early season root development and disease pressure. Soybean planting was slightly later than previous years but mostly finished by late May. Harvest conditions were challenging due to untimely rainfall in late September through late October. As a result, harvest was delayed and completion was in mid-November.

Crop Yield and Quality

Corn and soybean yields were better than expected across the area considering the challenging growing conditions. There were areas where both corn and soybean lodging was a problem. Also, due to wet conditions preceding harvest there were some concerns with corn and soybean grain quality, however, this was isolated.

Table 1. Monthly precipitation, average monthly temperature, and departure from normal for 2007.

	Precipitation		Temperature		Days 90°F or above
	Total	Departure*	Mean	Departure*	
January	0.78	0.15	20	- 1	
February	2.12	1.47	18	- 8	
March	1.04	- 1.01	44	7	
April	5.00	1.61	48	- 2	
May	5.08	0.83	64	3	
June	0.46	- 4.03	71	1	
July	0.71	- 3.20	76	1	8
August	6.01	2.43	74	1	2
September	1.46	- 1.76	64	- 1	
October	2.30	0.07	55	3	
November	0.11	- 1.36	38	1	
December	1.50	0.72	21	- 4	
Total	22.07	- 8.41	n/a	n/a	n/a

*Departure from 30-year average as recorded at the ISU Western Research Farm weather station.

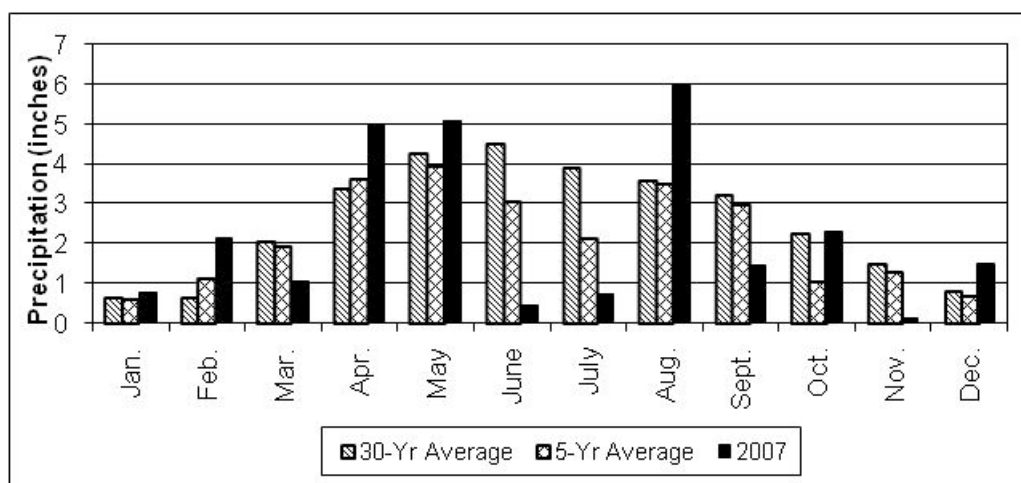


Figure 1. 2007 monthly average precipitation compared with 30-year and 5-year average precipitation recorded at the ISU Western Research Farm weather station.

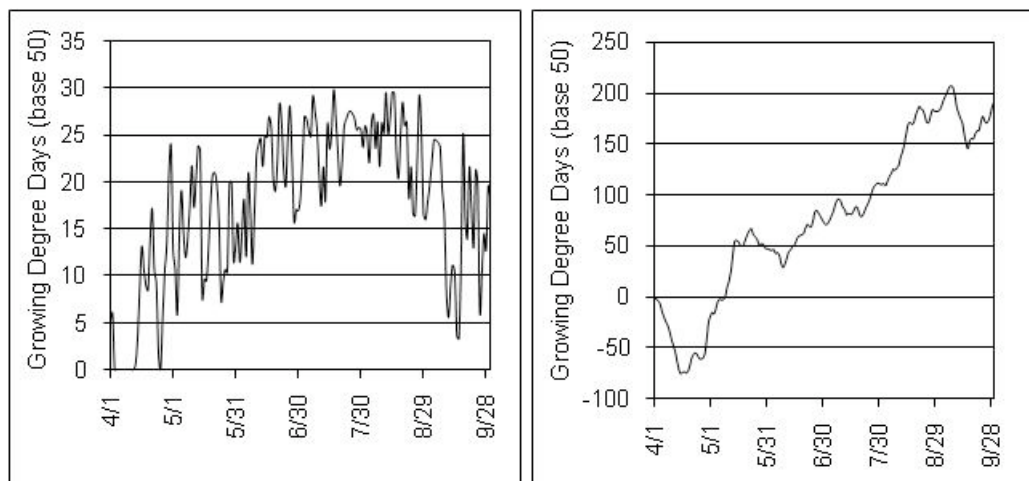


Figure 2. Daily growing degree day units (base 50) for the 2007 growing season from April 1 to September 30 (left) and 2007 growing degree day deviation from the 5-year average (right) based on ISU Western Research Farm weather station high and low temperatures.