

2011

Weather and Growing Season Summary

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Recommended Citation

Licht, Mark A.; DeJong, Joel L.; and Roush, Wayne B., "Weather and Growing Season Summary" (2011). *Iowa State Research Farm Progress Reports*. 289.

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Weather and Growing Season Summary

Abstract

The 2010 growing season resulted in mean monthly temperatures that varied from -9 ° F to +6 ° F of the 30-yr average (Table 1). This year there were a total of 14 days above 90 ° F, up from four in 2009 and up from two in 2008. Overall, 2010 was a cooler year than typically experienced through the winter months and nearly typical for the summer months.

Keywords

RFR A1057

Disciplines

Agricultural Science | Agriculture | Agronomy and Crop Sciences

Weather and Growing Season Summary

RFR-A1057

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Weather Summary

The 2010 growing season resulted in mean monthly temperatures that varied from -9°F to +6°F of the 30-yr average (Table 1). This year there were a total of 14 days above 90°F, up from four in 2009 and up from two in 2008. Overall, 2010 was a cooler year than typically experienced through the winter months and nearly typical for the summer months.

Precipitation was generally less than the 30-yr average in 2010, but wetter during June and July (Table 1). The precipitation pattern was similar to the 2009 growing season. Over 17.5 in. of rainfall were received in June, July, and August. Rains did not come until after planting, but ceased prior to harvest. Overall, western Iowa will remember 2010 as a wetter than normal growing season.

With near normal temperatures early in the growing season, overall growing degree days were near normal (Figure 2). The cold spell on May 8 and subsequent days pulled growing degree units behind normal. Above normal

nighttime temperatures in July and August increased the number of growing degree days from typical years. This increased rate of growing degree units accelerated the grain fill period and contributed to the earlier grain maturity and grain harvest in 2010.

Growing Season

The growing season started with spring field operations and planting occurring on time. Then with June rains herbicide applications were delayed due to wet and sometimes flooded conditions. Hay harvest was delayed some, but not to the extent experienced in 2008. Harvest conditions were not the challenge they were in 2009. Most growers finished corn harvest prior to December.

Crop Yield and Quality

Corn and soybean yields were better than expected in 2010, but not as good as 2009. Grain molds were minimal this fall. Grain moisture at harvest was much drier than 2009 with much of the 2010 corn crop being harvested from 14 to 18 percent moisture and the soybean crop being harvested from 10 to 15 percent moisture.

Fall field operations and nutrient applications were made as planned. Some areas did have limited access to anhydrous ammonia.

Table 1. Monthly precipitation, average monthly temperature, and departure from normal for 2010.

	Precipitation		Temperature		Days 90°F Or above	Nights 28°F Or below
	Total	Departure *	Mean	Departure *		
January	1.35	0.73	13	-9		28
February	0.67	0.00	17	-9		28
March	2.42	0.42	37	-1		12
April	1.76	-1.63	56	6		
May	1.14	-3.10	60	-1		
June	8.37	3.44	72	1	3	
July	6.96	2.73	76	1	3	
August	2.27	-1.24	76	4	6	
September	2.85	-0.19	65	0	1	
October	0.44	-1.88	55	3	1	2
November	0.91	-0.56	38	1		14
December	0.41	-0.44	22	-2		31
Total	29.55	-1.57	n/a	n/a	n/a	n/a

*Departure from 30-yr average as recorded at the ISU Western Research Farm weather station. When inaccurate data was available from the ISU Western Research Farm weather station, data was retrieved from Iowa Department of Agriculture and Land Stewardship, Climatology Bureau and National Agricultural Statistics Service, Crop and Weather reports.

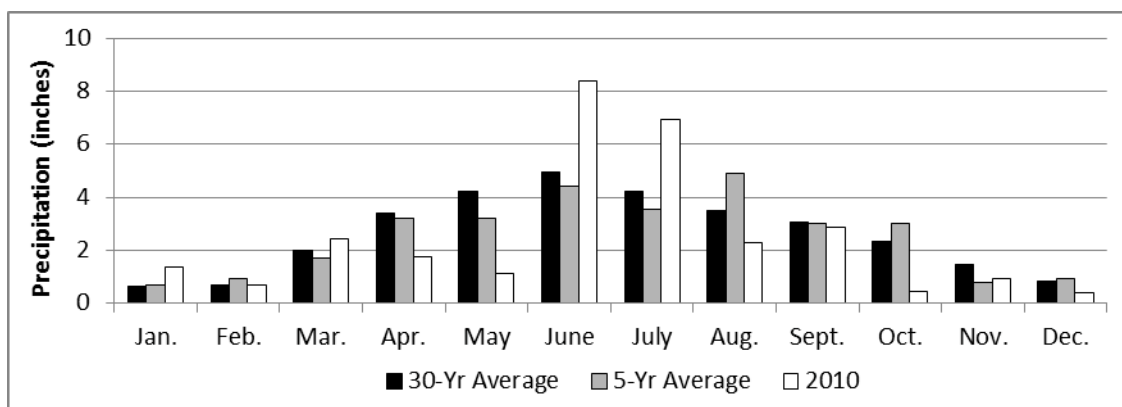


Figure 1. The 2010 monthly average precipitation compared with 30-yr, and 5-yr average precipitation recorded at the ISU Western Research Farm weather station.

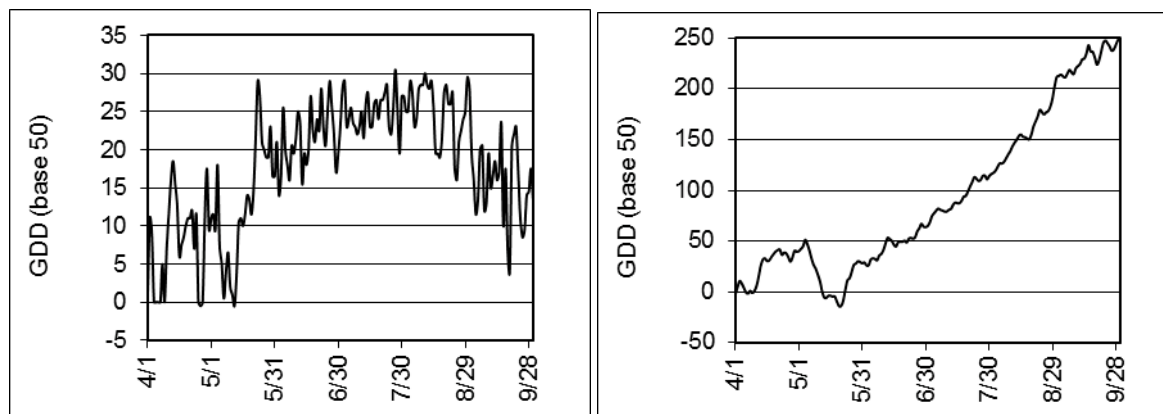


Figure 2. Daily growing degree day units (GDD base 50) for the 2010 growing season from April 1 to September 30 (left) and 2010 cumulative growing degree day (GDD base 50) deviation from the 5-yr average (right) based on ISU Western Research Farm weather station high and low temperatures.