

IOWA PRELIMINARY ANNUAL WEATHER SUMMARY – 2009

General Summary. Iowa temperatures averaged 46.7° or 1.1° below normal while precipitation totaled 39.88 inches or 5.80 inches above normal. This ranks as the 26th coolest and 11th wettest year among 137 years of state records.

Temperatures. Cooler than normal weather was the rule for much of the year. As is typical the coldest weather came in January with a brief period of bitter cold at mid-month. Cedar Rapids recorded a wind chill of -52°F on the morning of January 15 while Coggon reported the state's lowest actual temperature with -40° the next morning. Both readings were the lowest recorded in the state since February 1996. The remainder of the winter, and the spring months, brought fairly seasonal temperatures. The final widespread freeze of the spring came on April 15; however, scattered areas recorded freezes as late as May 17, particularly in the northeast where Cresco and Decorah were at 29°. Unseasonably cool weather was the rule for most of the summer. Temperatures averaged below normal every day from June 2 to 16. However, very warm and humid conditions abruptly moved into Iowa on June 17 and persisted through June 27. Heat indices reached 113° at Ames on the 23rd while actual temperatures peaked at 100° at Ankeny. The quick transition to excessive heat and humidity resulted in hundreds of deaths among livestock that had not become acclimated to the warmer weather. Summerlike heat was conspicuously absent for most of the rest of the year. Temperatures reached 90° only once (July 24) between June 27 and August 2, and even then affected only 10% of the state. There were no 90° temperatures reported in the state after August 14, the earliest end to 90° weather on record in Iowa (old record August 19, 1902). Iowa recorded its coolest July and 10th coolest August on record. Overall this was Iowa's fourth coolest summer on record (behind 1915, 1992 and 2004). September brought very pleasant weather while the final three months were a roller coaster ride for temperatures. October was the third coolest October on record; November the fourth warmest (only 1.4° cooler than October) and December was back on the cold side of normal.

Precipitation. Overall, 2009 was a wet year for most of Iowa. However, intense precipitation episodes were largely absent with significant flooding somewhat limited in extent. The rainfall pattern was very persistent during the year with parts of northern and western Iowa frequently drier than usual while heavy rain fell over east central and southeast Iowa where monthly totals exceeded ten inches in some areas during June, July and August. There was an extended period of relatively dry weather for the first three and one-half weeks of April, allowing spring planting to get off to a good start across the state. Parts of northern and western Iowa were quite dry through much of the growing season but lack of extreme heat prevented severe moisture stress for crops. Frequent and unseasonably heavy precipitation throughout October greatly delayed harvest activities. This was the coolest October since 1925 and wettest since 1881 and resulted in the slowest harvest pace, as of November 1, since 1951. A period of very dry weather during the first one-half of November allowed good harvest progress to resume. However, snow and cold were the rule after December 6, with a few hundred thousand acres of corn remaining unharvested at year's end. Annual precipitation totals ranged

from about 7.5 inches below normal at Sidney to about 19 inches above normal at Sigourney.

Severe Weather. Most of Iowa enjoyed a very welcome reprieve from severe thunderstorms during 2009 after a very active season in 2008. The National Weather Service reported a total of only 25 tornadoes in 2009, Iowa's lowest number since 1997. A tornado near Missouri Valley on the evening of March 23 was the only one to reach EF-2 intensity. However, there were major hail outbreaks on July 24 (northeast Iowa) and August 9 (central Iowa) with each resulting in about \$200 million in damage. At year's end severe weather of a different form affected the state as major winter storms walloped Iowa December 7-9 and 23-27. Each storm brought well over a foot of snow to large areas of the state and were major contributors to the second highest calendar month statewide average snowfall on record (23.3 inches, second only to 25.5 inches recorded in December 2000).

Outlook. Iowa enters 2010 with saturated soils nearly statewide thanks to very wet weather in October and December. Wettest conditions are over east central and southeast Iowa where 2009 was the third consecutive very wet year. A substantial snowpack also exists across the state, with the exception of the southeast one-third which missed the full impact of the two December snow storms. The current wet conditions are no guarantee of unusual flood problems in the spring of 2010 but certainly increase the odds for problems. Also, relatively wet conditions predominate almost all of the eastern one-half of the U.S., thus we are not alone in regards to surplus moisture. El Niño conditions, present since last spring, are expected to persist over the Pacific Ocean until spring. Historically, El Niño favors above normal temperatures in the mid-winter months in Iowa. However, such has not been the case thus far. The past nine El Niño events brought Iowa above normal temperatures for the winter as a whole (the last exception was the event of 1977-1978). There is still plenty of time for the weather pattern to change, but the clock is ticking. Typically, in years when El Niño is already in place, Iowa sees mostly above normal temperatures, particularly in the winter and summer (much lower odds for the spring). Thus, Iowa may finally see a warmer than normal growing season after two consecutive very mild summers. There are no strong precipitation trends one way or the other in relation to El Niño and Iowa in any season. Near normal 2010 precipitation would be welcome given the very wet conditions present as we enter the year. 'Normal' also would seem rather dry following what has been the wettest three year period (2007-2009) of the historical record in Iowa.

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