

ET and Precipitation during the 120 day corn growing season in 2012

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Cumulative precipitation and corn evapotranspiration for the 120-day corn growing period at Colby, Kansas from May 15, 2012 through September 11, 2012 was 5.64 inches and 26.79 inches, respectively. The long term average (1972-12) precipitation and corn evapotranspiration for the period are 11.82 inches and 23.01 inches, respectively. The difference between corn evapotranspiration and precipitation is the greatest value recorded in the period 1972-2012.

The decreased precipitation and increased evapotranspiration essentially means there was an approximately 10 inches greater irrigation requirement in the year 2012. Timing of precipitation and evapotranspiration periods can increase or decrease the need to schedule irrigation to some extent. Most irrigation systems in northwest Kansas are not sized to make up that large a difference in irrigation needs, so most corn was deficit irrigated in 2012. Rainfall events that occurred at Colby on July 7 and 12 of 1.49 and 0.78 inches were very beneficial at helping irrigated corn through the critical silking period.

The severity of the high ET and low precipitation in 2012 was compounded somewhat by the dry conditions that began in early August of 2010. As a result, there was lower than normal overwinter replenishment of soil water reserves that usually help to buffer plant water stress during the growing season. Marginal capacity irrigation systems without deep soil water reserves often failed to produce an adequate crop in 2012.

