

Soil Moisture

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Soil moisture samples were taken at 29 sites in northwest Iowa during early November 2002. Moisture samples were pulled at 1-foot increments, down to a 5-foot depth. Samples were weighed, oven dried, and reweighed at the Sutherland research farm. The moisture percentage was calculated from these data and used to calculate the inches of plant available

moisture in the soil. The data from these sites are listed in the following table.

Long-term fall averages range from about 4.5–6.0 inches in the top five feet of soil, but averages for the last 10 years have been higher. The maximum plant-available moisture level for most of these soils is approximately 11 inches in the top five feet of soil. Late summer and fall precipitation has brought many sites back up to the long-term average, with only a few areas remaining short of subsoil moisture.

Table 1. Soil moisture available to plants, in inches.

Site	County	2002 crop	Plant available moisture
Calumet	O'Brien	corn	8.8 inches
Sanborn	O'Brien	corn	8.0 inches
Doon	Lyon	corn	7.2 inches
Sibley	Osceola	soybeans	6.3 inches
Boyden	Sioux	corn	9.0 inches
Ireton	Sioux	soybeans	9.0 inches
Akron	Plymouth	corn	4.0 inches
LeMars	Plymouth	corn	6.2 inches
Hinton	Plymouth	soybeans	5.4 inches
Kingsley	Plymouth	corn	8.6 inches
Aurelia(North)	Cherokee	soybeans	9.0 inches
Aurelia(South)	Cherokee	corn	10.2 inches
Marcus (North)	Cherokee	corn	10.6 inches
Marcus (South)	Cherokee	corn	9.2 inches
Lawton	Woodbury	soybeans	7.1 inches
Anthon	Woodbury	soybeans	10.3 inches
Rossie	Clay	corn	11.0 inches
Spirit Lake	Dickinson	corn	7.9 inches
Estherville	Emmet	soybeans	6.6 inches
Rolfe	Pocahontas	soybeans	8.5 inches
Ida Grove	Ida	soybeans	7.6 inches
Holstein	Ida	soybeans	11.3 inches
Battle Creek	Ida	corn	8.5 inches
Sac City	Sac	soybeans	11.5 inches
Schaller	Sac	corn	11.3 inches
Auburn	Sac	corn	8.8 inches
Odebolt (North)	Sac	soybeans	11.5 inches
Odebolt (South)	Sac	soybeans	9.6 inches