

Soil Moisture

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Soil moisture samples were taken at twenty-nine sites in northwest Iowa during the last week of October 2000. Moisture samples were pulled at 1-ft increments down to a 5-ft depth. Samples were weighed, oven dried, and reweighed at the Sutherland Research Farm. The moisture percentage was calculated from these data, and then 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 in. to 6.0 in. in the top 5 ft of soil, but averages for the last 10 years have been higher. The maximum plant available moisture level for most of these soils is around 11 in. in the top 5 ft of soil. Fall precipitation has brought many sites back up to the long-term average, with some areas remaining short. Average to above average rainfall next spring is still needed for much of the area.

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

<u>Site</u>	<u>County</u>	<u>2000 crop</u>	<u>Plant available moisture</u>
Calumet	O'Brien	corn	7.8 inches
Sanborn	O'Brien	soybeans	7.4 inches
Doon	Lyon	corn	5.9 inches
Sibley	Osceola	soybeans	5.4 inches
Boyden	Sioux	corn	8.9 inches
Ireton	Sioux	soybeans	8.4 inches
Akron	Plymouth	corn	3.8 inches
LeMars	Plymouth	corn	4.4 inches
Hinton	Plymouth	soybeans	3.8 inches
Kingsley	Plymouth	corn	3.9 inches
Aurelia(North)	Cherokee	soybeans	4.4 inches
Aurelia(South)	Cherokee	corn	5.8 inches
Cherokee	Cherokee	corn	3.2 inches
Marcus (North)	Cherokee	corn	5.5 inches
Marcus (South)	Cherokee	corn	2.8 inches
Lawton	Woodbury	soybeans	4.5 inches
Anthon	Woodbury	soybeans	4.1 inches
Rossie	Clay	corn	9.6 inches
Newell	Buena Vista	soybeans	6.6 inches
Spirit Lake	Dickinson	corn	4.5 inches
Estherville	Emmet	soybeans	4.9 inches
Rolfe	Pocahontas	soybeans	7.0 inches
Ida Grove	Ida	corn	4.0 inches
Holstein	Ida	corn	2.0 inches
Battle Creek	Ida	corn	2.5 inches
Sac City	Sac	soybeans	4.6 inches
Schaller	Sac	corn	3.6 inches
Auburn	Sac	corn	2.7 inches
Odebolt (North)	Sac	soybeans	4.3 inches
Odebolt (South)	Sac	soybeans	3.4 inches