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Soil Moisture

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Abstract

Soil moisture samples were taken at 29 sites in northwest Iowa during late October 2003. 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.

Disciplines

Agricultural Science | Agriculture

Soil Moisture

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

Soil moisture samples were taken at 29 sites in northwest Iowa during late October 2003. 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

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. September precipitation brought many sites back up to the long-term average, but some areas still remain short of subsoil moisture.

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

Site	County	2002 crop	Plant available moisture
Calumet	O'Brien	soybeans	7.0 inches
Sanborn	O'Brien	soybeans	4.9 inches
Doon	Lyon	soybeans	5.6 inches
Sibley	Osceola	soybeans	4.1 inches
Boyden	Sioux	corn	8.8 inches
Ireton	Sioux	corn	8.5 inches
Akron	Plymouth	soybeans	5.9 inches
LeMars	Plymouth	soybeans	5.4 inches
Hinton	Plymouth	corn	4.5 inches
Kingsley	Plymouth	corn	3.4 inches
Aurelia (North)	Cherokee	soybeans	4.5 inches
Aurelia (South)	Cherokee	soybeans	6.3 inches
Cherokee	Cherokee	soybeans	6.0 inches
Marcus (North)	Cherokee	soybeans	8.6 inches
Marcus (South)	Cherokee	soybeans	6.3 inches
Lawton	Woodbury	corn	4.2 inches
Anthon	Woodbury	corn	3.8 inches
Rossie	Clay	corn	4.8 inches
Spirit Lake	Dickinson	soybeans	1.9 inches
Estherville	Emmet	corn	3.1 inches
Newell	Buena Vista	corn	5.9 inches
Ida Grove	Ida	corn	1.3 inches
Holstein	Ida	corn	3.4 inches
Battle Creek	Ida	corn	2.2 inches
Sac City	Sac	corn	4.0 inches
Schaller	Sac	soybeans	2.8 inches
Auburn	Sac	soybeans	6.4 inches
Odebolt (North)	Sac	corn	2.6 inches
Odebolt (South)	Sac	corn	2.8 inches