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Soil Moisture

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Abstract

Soil moisture samples were taken at 11 sites in northwest Iowa during the first few days of November 2008. Moisture samples were pulled at 1-ft increments down to a 5-ft depth. Samples were weighed, oven dried, and reweighed at the Northwest 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.

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Soil Moisture

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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 15 years have been significantly higher. The maximum plant available moisture level for most of these soils is around 11 in. in the top 5 ft of soil. Not all of the normal sites from NW Iowa had moisture samples pulled this fall. Late summer and fall precipitation in many neighborhoods gave an indicator that soil moisture profiles would be nearly full for the fall, so some of these areas were not sampled. Most areas that reported lower rainfall were included in this data set. Typical spring rainfall amounts should bring all sites to a full soil moisture profile by the time crops will need soil moisture reserves in 2009.

Table 1. Soil moisture available to plants in inches.

<u>Site</u>	<u>County</u>	<u>2008 crop</u>	<u>Plant available moisture (in.)</u>
Calumet	O'Brien	corn	10.1
Sanborn	O'Brien	corn	10.0
Doon	Lyon	corn	8.5
Sibley	Osceola	corn	9.4
Ireton	Sioux	soybean	10.1
Akron	Plymouth	corn	8.9
LeMars	Plymouth	corn	9.4
Hinton	Plymouth	soybean	9.0
Aurelia (North)	Cherokee	corn	9.8
Marcus (South)	Cherokee	corn	8.7
Lawton	Woodbury	soybean	7.6