

2001

Soil Moisture Survey

Carroll Olsen
Iowa State University

Clarke McGrath
Iowa State University, cmcgrath@iastate.edu

Michael L. White
Iowa State University, mlwhite@iastate.edu

Kris Kohl
Iowa State University

Follow this and additional works at: http://lib.dr.iastate.edu/farms_reports



Part of the [Agricultural Science Commons](#), and the [Agriculture Commons](#)

Recommended Citation

Olsen, Carroll; McGrath, Clarke; White, Michael L.; and Kohl, Kris, "Soil Moisture Survey" (2001). *Iowa State Research Farm Progress Reports*. 1704.

http://lib.dr.iastate.edu/farms_reports/1704

This report is brought to you for free and open access by Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State Research Farm Progress Reports by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Soil Moisture Survey

Abstract

Each spring and fall a soil moisture survey is conducted to determine the amount of plant-available moisture in the top five feet of many of the major soils in Iowa. Several of the sites are located in the Wallace Foundation for Rural Research and Development (WFRRD) area. Many producers make or alter their crop management plans according to expected soil moisture levels.

Disciplines

Agricultural Science | Agriculture

Soil Moisture Survey

Carroll Olsen, extension crops specialist
 Clarke McGrath, extension crops specialist
 Mike White, extension crops specialist
 Kris Kohl, extension crops specialist

Each spring and fall a soil moisture survey is conducted to determine the amount of plant-available moisture in the top five feet of many of the major soils in Iowa. Several of the sites are located in the Wallace Foundation for Rural Research and Development (WFRRD) area. Many producers make or alter their crop management plans according to expected soil moisture levels.

An adequate soil moisture reserve increases the probability of average or above average crops in the following season. Most of the soils sampled can hold a maximum of 10.8 inches to 11.3 inches of water in the top five feet. A fall plant-available moisture level of less than 4 inches is considered “dry,” a level between 4 and 7 inches is call “marginal,” and a level greater than 7 inches is termed “favorable.”

Following are measurements taken in the Wallace area in October and November of 1999 and 2000. Samples taken before October 26 would not include significant rainfall events that occurred on or around November 1.

Table 1. Fall soil moisture amounts for soil moisture sampling sites in the WFRRD area, 2000.

<u>Location</u>	<u>Soil Type</u>	<u>Date Sampled</u>	<u>Inches of Water,</u>	
			<u>Five-Foot Depth</u>	
			<u>1999</u>	<u>2000</u>
Armstrong Farm	Marshall	10/20/00	7.4	6.5
Cass County	Marshall	10/20/00	5.0	5.3
Pottawattamie County	Marshall	10/20/00	6.4	5.0
Mills County	Marshall	10/18/00	2.8	5.9
Fremont County	Marshall	10/18/00	1.5	0.9
Page County	Marshall	11/03/00	2.2	5.1
Shelby County	Marshall	10/19/00	6.0	2.4
Audubon County	Marshall	10/19/00	5.6	3.0
Carroll County	Marshall	11/10/00	4.2	5.8
Crawford County	Marshall	11/10/00	3.2	3.8
Adair County	Sharpsburg	11/03/00	6.8	8.6
Taylor County	Sharpsburg	11/03/00	8.1	5.6
Ringgold County	Arispe	11/03/00	9.2	8.3
Guthrie County	Nicollet	10/25/00	4.2	2.4
Madison County	Sharpsburg	10/25/00	7.5	7.4