

Irrigation Training Toolbox Irrigation System Evaluation

Lesson Plan Gathering Data for Evaluating Furrow or Corrugation Irrigation

**National Employee Development Center
Natural Resources Conservation Service
Fort Worth, TX
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Irrigation Training Toolbox

Irrigation Systems Evaluation

COURSE:	Irrigation Systems Evaluation
LESSON TITLE:	Gathering Data for Evaluating Furrow or Corrugation Irrigation
OBJECTIVES:	Give each participant field experience in the mechanical procedure of gathering and recording field data for use in evaluating furrow or corrugation irrigation.
REFERENCES:	Agricultural Handbook No. 82
TRAINING AIDS:	Projector and slides
TIME:	4 Hours
DEVELOPED BY:	West National Technical Center

**IRRIGATION SYSTEMS EVALUATION
GATHERING DATA FOR EVALUATING FURROW OR
CORRUGATION IRRIGATION**

INTRODUCTION

BODY

A. Field Evaluation

1. Make field layout
 - a. Choose site.
 - b. Install stakes at measured stations for selected furrow segment to be used
 - c. Run profile survey using stakes for reference points. Record in field notebook.
 - d. Determine measuring devices or methods to be used in measuring inflow and outflow of furrows or corrugation.
 - e. Obtain the information needed to fill out information block on EXHIBIT-1WM-7.

2. Make Intake Measurements.
 - a. Install measuring devices for inflow and outflow at known stations.
 - b. Measure flow into and out of furrow during the last 1/4 period of irrigation set. Record on EXHIBIT - 1WM - 7.

3. Determine moisture content of the soil profile before irrigation.
 - a. Estimating.
 - 1) Obtain soil sample from each significant layer of the root zone by use of an auger.
 - 2) Use the procedure of the feel chart and estimate the moisture content of each sample.
 - 3) Record information on EXHIBIT - 1WM - 4.
 - b. Measuring.
 - 1) Obtain soil sample from each significant layer of the root zone by use of the Eley Volumeter.
 - 2) Determine moisture content of the sample by use of the Speedy Moisture Tester.
 - 3) Record information on EXHIBIT-IWM-1.
 - c. Determine the moisture content of the soil profile at field capacity.
 - 1) Estimating - Obtain from EXHIBIT - 1WM - 20 (base on soil texture). Record on EXHIBIT - 1WM -4,

2) Measuring - Make Speedy Moisture Tester measurements on sample of soil at field capacity. Record on EXHIBIT - 1WM - 1,

4. Equipment and Materials:

1. Stakes.
2. Marking crayon or pencil.
3. Chain.
4. Level, rod and tripod.
5. Measuring devices.
6. Stop watches.
7. Field notebook.
8. Forms to record inflow and outflow, advance and recession, soil moisture content, available water holding capacity of soil.

5. Quizes:

SUMMARY

