

Lab Topic: Infiltration management
Class: Soil 210 Introduction to Soils
Location: Kosel Family Agriculture Land Lab

Objective: To demonstrate the effect of management practices on soil infiltration using the rain simulator. (this is considered part 2 lab following the soil infiltration lab)



Overview: The class will use the rainfall simulator to describe differences in soil cover and tillage practices on infiltration and runoff. Five trays of different soil conditions will be collected by the instructor prior to the lab meeting. Areas to be collected will be the no till/cover crop demo with live plants, the no till/cover crop demo with crop residue, the conventional tillage demo, the conventional tillage demo with some added straw residue, and a wheel track area. (advance planning is needed to get all trays properly prepared).

As the whole lab group, we will begin with a discussion of the simulator and what is being collected in the jugs.

- The class will be asked to hypothesize the results for each tray. Run the simulator. View results in the jugs.
- Ask the students what happens when rainfall exceeds infiltration.
- Ask the students the effect of slope.
- Ask the students the effect of the soil cover.
- Ask the students to then compare the differing tray results.
- Ask the students to identify management practices that may improve infiltration and reduce runoff.

(There is not an official set of questions to submit for this lab – it was designed for discussion basis. A formal assignment could surely be developed.