

## SOIL 4400 Soil Ecology Discovering a Famous Soil Method

You are to pick one of the following prominent methods in the history of soil ecology. You will prepare a 10 minute presentation on your famous soil method. You are to address the following within that time:

**Background:** Give info on the discovery of the method. Method name, person or person who developed the method, the year, and where.

**Purpose:** what is the method used for? To provide what type of information?

**How:** How is the method used? Describe setup and procedure.

**Pictures/Diagram:** Illustrate how the method is used.

**Prominent Contribution:** explain their most influential contribution to the field of soil ecology that results using the method have provided. Is the method still being used or has it developed into newer methods and procedures?

**Presentation:** You are to prepare a presentation of your famous soil method to be given to the class during a laboratory session. The presentation can be in PowerPoint, Word or on overhead. Dr. Tenuta needs your presentation at the morning lecture. Your presentation will be 10 minutes with 5 minutes for class discussion. All presentations will posted on the Soil Ecology course website.

**Handout:** You are to prepare a handout of your presentation (max two pages) to be given to me in lecture the day of the laboratory session. Dr. Tenuta will photocopy these and provide them to students.

**Fun:** The purpose of this assignment is to have fun and learn. It will allow you to learn how and why we use particular methods in soil ecology.

You are to pick one Famous Soil Methods from below.

<i><b>Name</b></i>	<i><b>Presenter</b></i>
Microbial Biomass by Chloroform fumigation	
Chamber flux method for GHG emissions	
Plant Root Simulator Probes	
Phospholipid Fatty Acid Analysis	
Species Specific PCR Analysis	
Fluorescence Microscopy	
Most Probable Number Quantification of Nitrifying Bacteria	
Soil Phosphatase Analysis	
Light Fraction Analysis of Soil Organic Matter	
Chlorazol Black Staining for AMF in Roots	
Antibiosis Assays using Agar Media	
Berlese Funnel Method for Microarthropods	
Baermann Funnel Method for Nematodes	
Buried-bag Method for Nitrification Determination	
Acetylene Reduction Technique for Denitrification	
Acetylene Reduction Technique for N <sub>2</sub> Fixation	