



*From  
Field to  
Lab*



*Rosario Vidales, Environmental Studies Jr., gained invaluable skills during her summer internship at the USDA ARS station in Beltsville, Maryland this past summer.*

## 2014 Agroecology Workshop Series

### Soil Analysis

Soil samples from different locations in Miami will be characterized by measuring various soil properties. On the basis of these data soil samples will be compared and differences seen the soil characteristics will be linked to the site management and vegetation history. In this workshop students will learn the sampling techniques of soil samples for the analysis of chemical and physical properties. At the end of this workshop students will be able to determine the fertility of soil, how to improve it and the interaction between the soil chemical, physical and biological characteristics.

Expected time: 40 hours (This is not exact, but it does take a lot of time for the sample processing, prep works, and cleaning). The students are responsible for the entire prep works (preparation of reagents, processing the samples, and cleaning the lab).

Activities: Soil sampling and processing for chemical and physical properties analysis



**When: March 10-14, 2014**

**Where: ECS 161**

**Time: 9:00-5:00pm**

**Pushpa Gautam Soti, Ph.D.**

Pushpa Soti recently completed her dissertation research on a cross continent field study of Australia and Florida leading to three publications. Through green house and shade house experiments, she focused on the soil plant interaction of one of the most problematic weeds in south Florida, *L. microphyllum* (Old World climbing fern).

This opportunity is made possible by USDA- NIFA – HSI grant

### Agroecology Program

Modesto A. Maidique Campus  
11200 SW 8<sup>th</sup> St., ECS 157, Miami, FL 33199  
305-348-0186 | [agroecology.fiu.edu](http://agroecology.fiu.edu)

## Soil Fertility Analysis Workshop

In this workshop students will learn the sampling techniques of soil samples for the analysis of chemical and physical properties. At the end of this workshop students will be able to determine the fertility of soil, how to improve it and the interaction between the soil chemical, physical and biological characteristics.

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### Activities:

Soil sampling and processing for chemical and physical properties analysis	Physical properties
Organic matter	Soil moisture
Total Carbon and Nitrogen	Texture (touch and feel; hydrometer)
Soil pH	Bulk density
Total Phosphorus	Chemical properties

## Schedule of Workshop

March 6th: 2 hr Introductory Meeting and overview of soil Soil Processing, and plant tissue sampling

Monday, March 10th : Labeling and storage of soil samples for chemical and physical properties analysis, weighing of the oven dried samples for soil moisture, grinding soil samples with a mortar and pistle

Tuesday, March 11th: soil organic matter and C/N analysis

Wednesday, March 12th: Soil texture

Thursday, March 13th: Soil pH measurement

Friday, March 14th: Bulk density, processing the samples for total P

Monday, March 17th: preparation of reagents for total P

Tuesday March 18th: Total P measurement using a spectrophotometer

Wednesday, March 19th: Clean up

## Participant List

1. Mariah Redmond
2. Ramon Salazar
3. Joshua Munoz
4. Angie Fleurissaint
5. Luis Garbinski
6. Carlos Pulido
7. Anupama John
8. Nicole Cortez
9. Adis Alvarez
10. Jonathan Otero-Ramos
11. Jose Rodriguez