



Pôle d'expérimentation et d'analyse
des sols et sédiments tropicaux

Soil physics laboratory –Bondy

SOPHIE Workshop
30/01/2019

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Laboratory staff

Number of staff: 2 persons

Experience in lab testing: > 5 years

Experience in lab management: 5 years

About 80m² of laboratory space (5 rooms)

Soil samples : usually a tropical soil (Laos, Thailand, India, Vietnam, Tunisia, Peru...)

Skills of team members : the influence of biotic and abiotic factors and their interactions, on soil structuration (by studying a hydro-structural properties).

What resources are available in laboratory?

Soil physics analysis :

Water retention Curves of soil

Saturated and unsaturated conductivity



Richards pressure plates, suction greater than 1 Bar



Sandbox, suction lower than 1 Bar



Metergroup, Hyprop 1



Ksat

Soil particle size

Bulk density (Archimedes)

Particle density

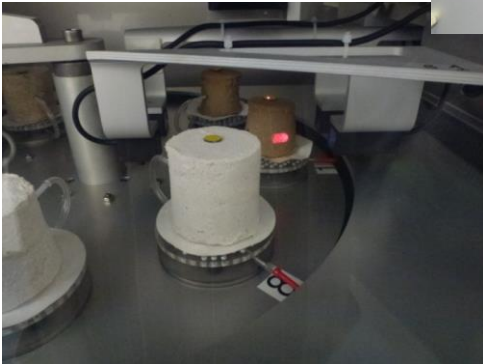
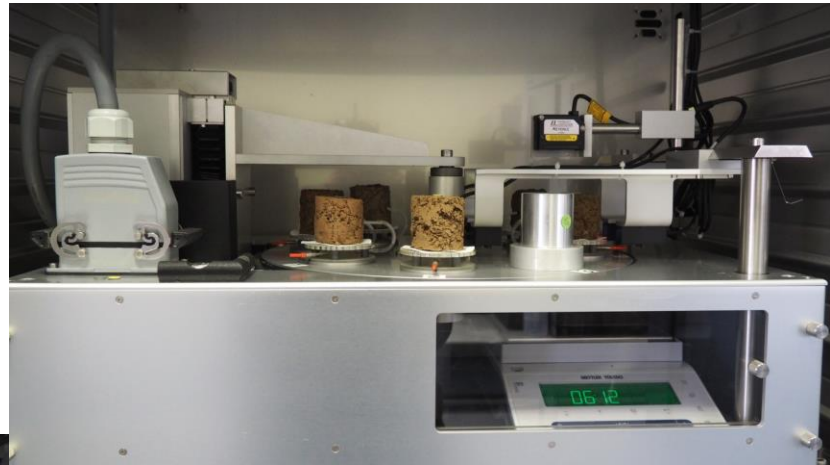
Structural stability of soil (Le Bissonnais)

What resources are available in laboratory?

Soil Shrinkage

+

Water
Retention



the soil volume variation, as a
function of soil water content



What resources are available in laboratory?

Soil chemical analysis :

pH

Electrical conductivity

**Quantitative and qualitative analysis of organic matter
and mineral matter :**

Near-Infrared Spectroscopy (NIRS)

Mid-infrared spectroscopy (MIRS)

Strength/weakness

Different and modern tools of soil physics analysis

Different kind of soil

Laboratory space

Partners and students from around the world

2 persons

Network with soil physics analysis

Thank you for your attention...