

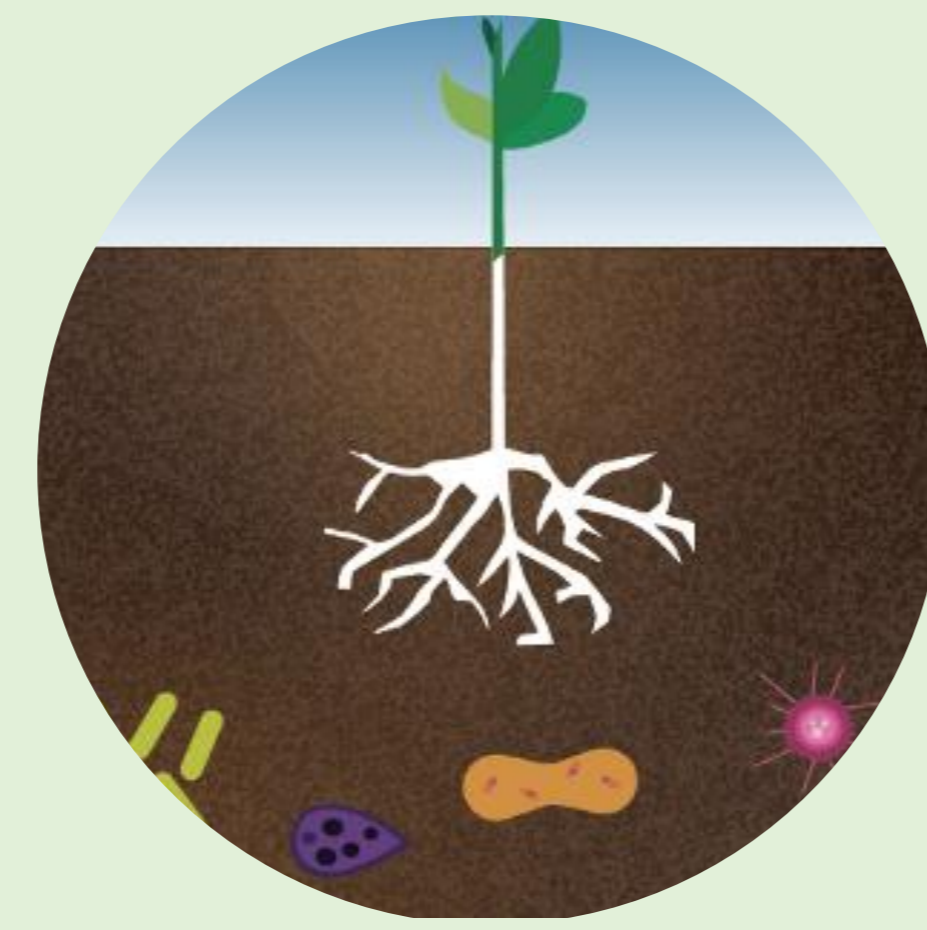
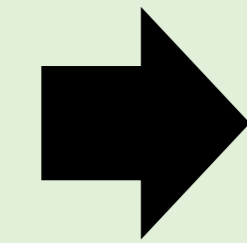
Evaluation of Microbial Biomass in Agroforestry Systems using Forage Cactus and *Leucaena leucocephala* and *Gliricidia sepium*

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INTRODUCTION



Forage cactus

Animal feeding in tropical environments

Forage cactus + tree legumes

- + Protein and fiber
- + Availability of N
- + Litter deposition
- C:N ratio

Plant cover and management practices adopted in agriculture are among the factors responsible for variations in the soil microbial community

Objective: evaluate the effect of intercropping tree legumes with forage cactus on microbial biomass and microbial activity of the soil.

MATERIAL AND METHODS

📍 Instituto Agronômico de Pernambuco, IPA
Soil: Regosol
Climate: Dry and hot semiarid

Treatments

Analysis



Forage cactus IPA-Sertânia + Gliricidia



Forage cactus IPA-Sertânia + Leucaena

Soil basal respiration (SBR)
Microbial biomass carbon (C-mic)
Metabolic quotient (qCO_2)

Soil layers: 0-10 and 10-20 cm

RESULTS

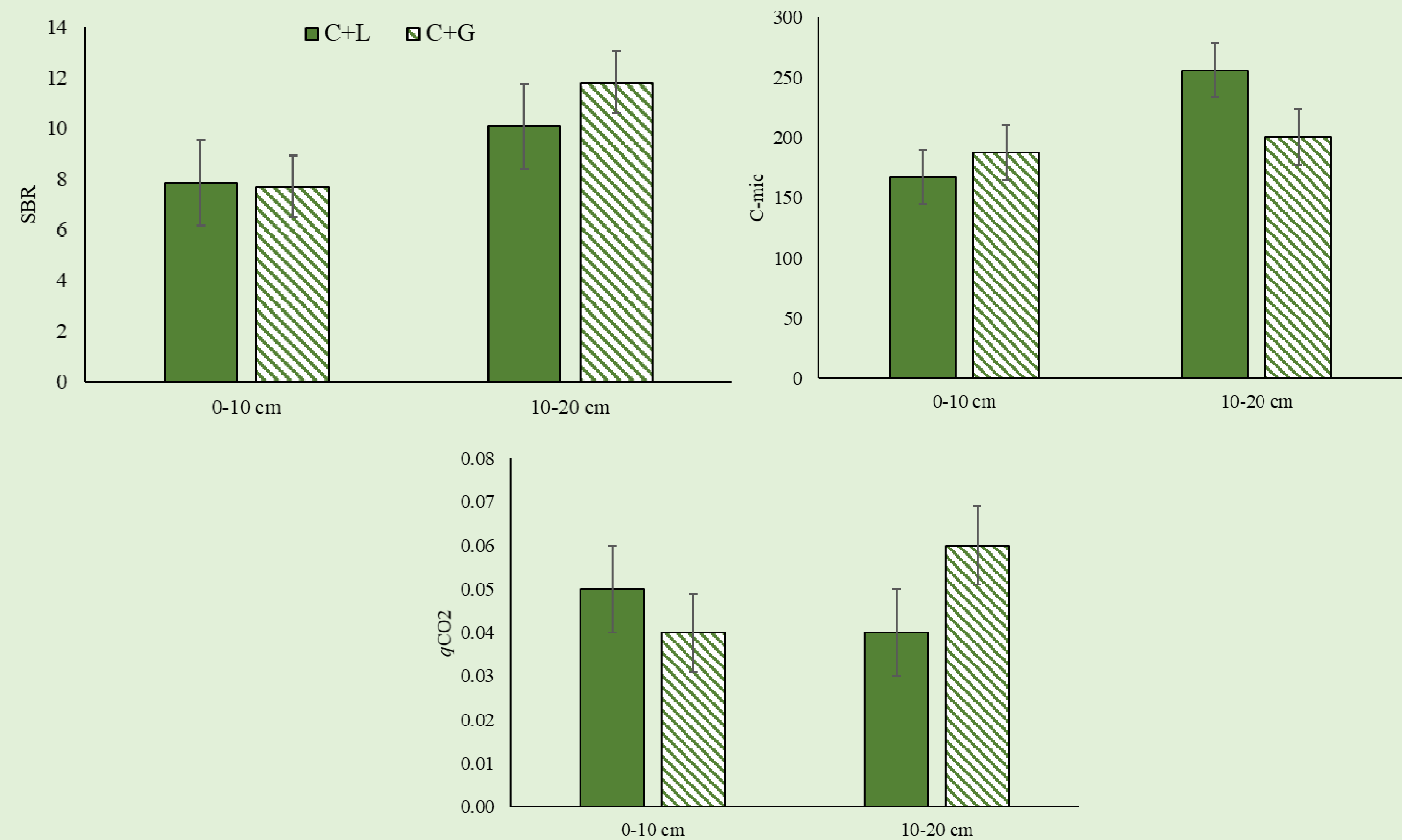


Figure 1. Soil basal respiration (SBR), soil microbial biomass carbon (C-mic) and metabolic quotient (qCO_2) in intercropped systems with forage cactus in the 0- to 10- and 10- to 20-cm soil depths. C+L: intercropped forage cactus and Leucaena; C+G: intercropped forage cactus and Gliricidia. The bars indicate the standard error of the average.

CONCLUSIONS

Microbial activity and microbial biomass were similar in different cropping systems using forage cactus and tree legumes (Leucaena and Gliricidia).

