

iSQAPER Internship Research Information

Research Title

Phosphorus speciation in agricultural soils amended with organic wastes

Abstract

Currently with fast increase of population, the non-renewable resource of “soil” is very important for plant growth and livestock production. So it is imperative improve the soil quality and promote a sustainable agricultural practices. The organic wastes are rich in phosphorus that is a vital macronutrient for plant growth and their use as a source of phosphorus represent a sustainable agricultural practice for improve soil quality instead to use of mineral phosphate fertilizers. This research aims the understanding of changes of soil phosphorus forms after application of organic wastes.

An incubation experiments will be carried out during 3 months at 25 °C. In these experiments the organic waste is directly applied on agricultural soil and the different phosphorus forms will be evaluated. Experiments will be performed using a representative agricultural soil of central part of Portugal.

This study contributes to promote a sustainable management of agricultural soils and improve the agricultural management practices.

Objectives of the research

The main objective of this research are investigate the behavior of phosphorus in agricultural soils amended with organic wastes improving soil quality for plant growth and promote a sustainable agricultural practices.

The specific objectives are select different organic wastes rich in phosphorus and then evaluate the different phosphorus forms after their application in agricultural soils.

iSQAPER Study Site / Work Package

Certima

Partners in this research

ESAC/IPC, partner 15

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