



## **Wanted: PhD candidate**

The proposed research will be carried out under the framework of an international project between the National Institute for Agricultural Research (France) and the Landcare Research Institute (New Zealand).

The objective of this international project is to evaluate the impact of different grassland management practices, in particular different grazing regimes versus mowing on the dynamics of soil organic matter (SOM) in contrasting pedoclimatic contexts. The PhD work will contribute towards the understanding of management impacts through the assessment of their influence on elemental and molecular transformations occurring during organic matter degradation and stabilisation processes. The conceptual approach includes an evaluation of SOM stability at field scale and the detailed characterisation of SOM pools reactive towards management interventions. We will study longterm experimental sites situated in France and in New Zealand and also use stable  $^{13}\text{C}$  isotope analyses a natural abundance. The results obtained during the PhD will contribute to ameliorate process information to be used in a biogeochemical model (CenW), which will allow for evaluating the implications of management practices on soil C dynamics and composition in the longterm, as well as resilience of the system to global change. The PhD thesis will provide an answer to these questions by going beyond global C stocks assessment through molecular analyses providing information on the nature and origin of SOM pools, which constitutes a major advance in the research field.

The PhD student will be based in France and carry out his/her laboratory work in the Ecosys laboratory in Thiverval-Grignon (located 30km from Paris). Fieldwork will be carried out in Lusignan at the SOERE ACBB and in New Zealand. He/her will aim for a PhD delivered by the university of Poitiers.

We are seeking a dynamic PhD candidate with a keen interest in soil science and a background in environmental sciences. Knowledge in mass spectrometry would be an asset.

All applications should be emailed to Abad Chabbi ([abad.chabbi@inra.fr](mailto:abad.chabbi@inra.fr)) and include both a resume and cover letter, in English.

**Starting date: as soon as possible**