



Master internship offer (1st or 2nd year of MSc)

What are the effects of land-use intensity and changes on soil biodiversity?

Subject description

One of the main objectives of the European project DIVERCROP ARINMET2 (<http://www.arimnet2.net/index.php/researchprojects/projects-2nd-call-2/divercrop>) is to characterize the effects of land-use (LU) intensity and changes on biodiversity at the Mediterranean basin scale. During the first year of the DIVERCROP project, datasets on biodiversity (emblematic and ordinary) and LU status and changes in the Mediterranean basin were collected between 2005 and 2015.

Soil biodiversity which plays a major role in the agroecosystems functioning and ecosystem services provision, is not centralized in the datasets. The main objective of this internship is to establish relationships between the cultivated habitats and soil biodiversity, through a meta-analysis of studies published between 1950 and 2018 in the Mediterranean climatic context. A particular focus will be required to establish relationships between different factors (cultivated habitat types, soil types and cropping systems (*i.e.*, rotation and tillage practices, cover crop management, amendment, fertilization and irrigation)) and soil biodiversity.

Required profile

1st or 2nd year of MSc student in agroecology or soil ecology. Motivation for research and statistical analyses (R software) are requested. The candidate should present scientific rigor and good level in English (TOEIC B1). He (she) will have to appreciate the work in autonomy.

Place of work

UniLaSalle, Beauvais, France (60). The trainee will benefit from the many services of the Beauvais campus (more than 100 student organizations, gymnasium, university restaurant, ...). He (she) will appreciate the campus landscape consisting of 30 ha of forest area, 150 ha of culture in conservation agriculture and agroforestry. <https://www.unilasalle.fr>.

This internship will be carried out in collaboration with the different partners of the DIVERCROP project (in Landscape Agronomy) and more particularly with Alberte Bondeau (physicist and environmental systems modeler, CNRS), Michel-Pierre Faucon (plant ecology and agroecology), Anne-Maïmiti Mercadal (animal ecology and agroecology) and David Houben (soil sciences and biogeochemistry) (UniLaSalle).

Duration and starting date: 4 to 6 months position between October, 2018 and March, 2019.

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Salary: 510.30 € / month. Possible accommodation on UniLaSalle Campus (not supported).

Bibliography

Newbold, T., Hudson, L. N., Hill, S. L., Contu, S., Lysenko, I., Senior, R. A., ... & Day, J. (2015). Global effects of land use on local terrestrial biodiversity. *Nature*, 520, 45-50.

Kleijn, D., Kohler, F., Báldi, A., Batáry, P., Concepción, E. D., Clough, Y., ... & Kovács, A. (2009). On the relationship between farmland biodiversity and land-use intensity in Europe. *Proceedings of the Royal Society of London B: Biological Sciences*, 276, 903-909.