

Job title	Mitigation of soil emissions of the greenhouse gas N₂O using natural additives
Date de mise en ligne souhaitée	07/05/2019
Job type (PhD, Post-doc, Engineer)	PhD position
Contract duration (months)	36
Qualifications (Master degree, PhD...)	A master 2 degree (or equivalent) in Biogeochemistry or Agronomic Sciences
Job hours (full time/ part time)	Full time
Employer	UBFC – Université de Franche-Comté
Host Laboratory	UMR 1347 AgroEcology
URL Host Laboratory	https://www6.dijon.inra.fr/umragroecologie_eng/
Address Host Laboratory	17 rue Sully – BP 86510 21065 Dijon cedex – France
Job description	<p>N₂O is a greenhouse gas with high global warming potential and also involved in ozone depletion. Among the greenhouse gases (GHG), N₂O is estimated to contribute up to 6% of radiative forcing at the global scale (12 % in France). Agricultural soils appear to be the main anthropogenic source of this gas. The production of N₂O by soils primarily occurs through two biological processes (nitrification and denitrification). Different recent publications (Shaaban et al., 2015 ; Hénault and Revellin, 2011 ; Subbarao et al., 2012) have suggested that the use of various natural products or microorganisms can reduce soil N₂O emission rates.</p> <p>The aim of this PhD thesis is to prepare the biotechnical use of different natural products and microorganisms for mitigating GHG emissions by soils. The PhD student will quantify the GHG mitigation potential of different natural products and microorganisms applied to soil samples, and will develop knowledge regarding the microbial and/or biogeochemical mechanisms involved in mitigation.</p>
Supervisor(s)	<p>Dr C. Hénault (INRA – AgroEcology) will be the supervisor. catherine.henault@inra.fr</p> <p>Dr C. Revellin (INRA – AgroEcology) will insure the follow up concerning the microbial approaches and Dr O. Mathieu (UB – Biogeosciences) will insure the follow up concerning the geochemistry approaches</p>
Candidate profile	<p>Strong skills in experiments at different scales ranging from microorganisms to field experiments. Strong skills in biogeochemical analysis.</p>

	Strong skills in applied statistics. Strong skills in written and oral communication
Keywords	Soil, nitrous oxide and carbon dioxide emissions, geochemistry, microbiology, mitigation
Application deadline	July 13 th 2019
Starting Job	Before October 1 st 2019
Application <i>Depending on the type of position</i>	<p>You wish to apply for this PhD thesis.</p> <p>Please send the following documents (all in one PDF file) by e-mail to catherine.henault@inra.fr before July 13th 2019.</p> <ol style="list-style-type: none"> 1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed. 2) Curriculum Vitae (1 page). 3) Letter of motivation relatively to the position (1 page). 4) Copy of your Master degree and/or Engineer degree if already available. 5) Copy of your final marks and ranks. 6) Coordinates of reference persons (maximum 3, at least your master thesis supervisor): Title, Name, organization, e-mail. <p>After the initial selection based on these documents, a specific evaluation committee will audit the candidates shortlisted to select the most suitable one. Auditions will be planned during the period between August 19th to September 13th.</p> <p>If you have questions regarding the application, please contact the supervisor.</p>