



NSABS 2014 (author)

[Help](#) [Sign out](#)

My Submissions

NSABS 2014

EasyChair

NSABS 2014 Submission 106

[Update information](#)
[Update authors](#)
[Withdraw](#)

If you want to **change any information** about your paper or withdraw it, use links in the upper right corner.

For all questions related to processing your submission you should contact the conference organizers. [Click here to see information about this conference.](#)

Paper 106 (abstract only)

Title:	Impacts of organic matter type and biostimulant products on the growth of wheat and the microbial communities of its rhizosphere under contrasted production systems
Category:	Poster or Oral
Author keywords:	- Plant Growth-Promoting Rhizobacteria (PGPR) - Biostimulant - Rhizosphere - Metagenomics
Topics:	(Bio)chemical analysis and synthesis, Biotechnology, Molecular techniques
Abstract:	Plant growth-promoting rhizobacteria (PGPR) formulations are one of the main biostimulant classes due to their capacity to enhance root growth, mineral availability, and nutrient use efficiency in crop rhizosphere. PGPR-containing biostimulants should, therefore, reduce demand for chemical fertilizer and lessen their negative environmental impacts. The aim of this project is to screen PGPR strains to (1) enhance wheat fitness level (growth, photosynthesis efficiency, stress tolerance, and yield) in combination with an optimized fertilizer level, (2) stimulate the increase in beneficial microorganism communities and suppress pathogenic ones in the wheat rhizosphere, (3) link wheat productivity to the composition of the microbial communities found in its rhizosphere, and (4) measure the impacts of such changes on soil fertility. In order to assess changes in the rhizomicrobial communities including fungi and bacteria (either pathogenic, neutral, or beneficial) under controlled or field conditions, metagenomic approaches will be set up. Several levels of nitrogen/ phosphorus supply will be tested to optimize agricultural practices and achieve the highest yield. A soil analysis protocols will also be built up to measure the influence of those PGPR strains on soil fertility changes and root uptake efficiency. Finally, a maximum of three promising PGPR strains will be selected for practical agronomical application in the field trials.
Time:	Nov 20, 10:56 GMT
Address:	Gembloux Agro-Bio Tech (GxABT) Unité de Biologie végétale, Passage des Déportés, 2 Gembloux 5030 Belgium

Authors						
first name	last name	email	country	organization	Web site	corresponding?
Minh Luan	Nguyen	ml.nguyen@ulg.ac.be	Belgium	Gembloux Agro-Bio Tech (GxABT), University of Liege, Belgium		✓
Bernard	Bodson	B.Bodson@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Marc	Ongena	marc.ongena@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Gilles	Colinet	gilles.colinet@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Micheline	Vandenbol	m.vandenbol@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Stijn	Spaepen	stijn.spaepen@biw.kuleuven.be	Belgium	Centre of Microbial and Plant Genetics, KU Leuven		✓
Haïssam	Jijakli	mh.jijakli@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Patrick	Du Jardin	patrick.dujardin@ulg.ac.be	Belgium	Gembloux Agro-Biotech (GxABT), University of Liege		✓
Pierre	Delaplace	pierre.delaplace@ulg.ac.be	Belgium	Gembloux Agro-Bio Tech (GxABT), Université de Liège		✓

Copyright © 2013 EasyChair