

MSc internship: Towards circularity: Assessing agronomic N use efficiency of mineral or organic fertilisers in Europe

Do you like to work at the edge between agriculture and environmental science? Do you like data crunching? Do you have experience with statistical analyses and/or programming languages such as R?

Then this internship might just be for you!

Team Sustainable Soil Use of Wageningen Environmental Research (WEnR) is, in collaboration with the Plant Production System group, searching for an MSc intern within the Connected Circularity project to assess agronomic N use efficiency of different sources of nutrients (mineral or organic fertilisers) to improve models on circular food systems.

About the project

The Connected Circularity project aims to provide an integrated system analysis of potential futures (dreams) of a circular bio-economy, and to study associated “small wins” to accelerate a transformation towards a circular economy. During your internship you will contribute to Flagship 1 which aims to assess at what scale and to what extent loops of materials and substances can be closed to ensure enough safe and high quality human materials (food, clothes, bio-energy) while maintaining the biological and physical resources of the planet (<https://research.wur.nl/en/projects/flagship-1-alternative-futures-of-a-circular-bio-based-society-th>).

Objective of the internship

To assess and model potential nutrient cycling in European agro-food systems, understanding the nitrogen (N) uptake and losses of different sources of nutrients is pivotal. Moreover, crop yield responses to nutrient (N,P,K) inputs are an important variable when modelling environmental impacts of circularity scenarios. However, we know fairly little about agronomic N use efficiencies and internal nutrient use efficiencies of main cereal crops. This makes parameterization of crop and nutrient models difficult. We would like you to do a systematic literature review, analyze the factors that influence these efficiencies and set-up a database where information on these efficiencies can be extracted easily.

About the groups

WEnR is an applied research institute working on a diversity of topics that contribute to the transition towards sustainable agriculture. Plant Production Systems group is chair group at the Plant Science department, integrating biological knowledge to analyse and design sustainable production systems for crops.

Internship period: 4-6 months. Preferred start: in 2020

Contact

Curious? For more information, please contact dr. Renske Hijbeek (renske.hijbeek@wur.nl) or dr. Chantal Hendriks (chantal.hendriks@wur.nl) and we'll get in touch.