



Bachelor's / Master's project in environmental biotechnology

Improving the production of biogas from grass silage by reducing the viscosity of the anaerobic sludge

Anaerobic digestion is a common fermentation technology, used to make biogas out of agricultural residues. In central Europe, maize is mainly used in anaerobic digestion, which creates problems of land use for food versus fuel.



Grass silage is a good alternative biogas feedstock, but it creates problems in the biogas reactor because it produces a very viscous sludge and because the long fibres get caught on impellers.



We are looking for a master's student to work on an ongoing project aimed at reducing the viscosity of this sludge using different types of pre-treatment, such as enzymatic pre-treatment. Your duties would include monitoring a continuous lab-scale bioreactor, measuring viscosity, carrying out chemical analysis, cultivating filamentous fungi and assaying enzymes.



An enthusiasm for environmental biotechnology and the ability to work independently are essential. A background in biotechnology, environmental science or process engineering is desirable.

We particularly encourage students who wish to write their thesis in English, although German is also ok.

Start date: now-in the next months

Duration: ~ 6 months

Contact: lucy.montgomery@boku.ac.at

Location: BOKU Tulln (IFA – Institute for Agrobiotechnology)

Salary: Forschungsbeihilfe (~440€/month)