February, 10th 2022

Leibniz Centre for Agricultural Landscape Research (ZALF), WG Isotope Biogeochemistry and Gas Fluxes offer a  

**Master/ Bachelor Thesis Project (Master-/ Bachelorarbeit)**

We are looking for motivated Bachelor/Master student who is interested in the topic of N cycling in agricultural used landscapes and its spatial and temporal dynamics.

**N₂O Emissions and their relationship to leaf N**

**Background.** The working group Isotope Biogeochemistry and Gas Fluxes studies dynamics of bVOCs, C and N in agricultural landscapes using mass spectrometry, gas chromatography, spectroscopy and optical methods as well as isotope dilution and tracer techniques. Within the project “Optimal-N” (dealing with N cycling in agricultural used landscapes) a ZALF customized, low-cost, handhold, multispectral sensor device was developed with the aim to determine leave N. In addition it is planned to monitor N₂O emissions in highly heterogeneous agricultural landscapes. The coupling of those two approaches will increase the understanding of nitrogen dynamics and losses in new agricultural landscapes.

**Master Thesis Project. What can you expect?**

You will organize and conduct measurements for the monitoring of N₂O emissions, plant measures such as NDVI, RVI, plant height and Leaf N, at the on-farm field trial in Tempelberg (15 min. from ZALF). Additionally you will test the Leaf N Sensor for its ability to obtain leave N. Analyses will be done with the statistical software R. Previous knowledge is advantageous but not a requirement. During the measurements and evaluations you will benefit from a close cooperation in a collegial, dynamic and open-minded team.

If you have any questions, please do not hesitate to contact us:  
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We look forward to receiving your application!