



Bachelor-/Master-Thesis on drought tolerance of different apple rootstocks

Within the **agroforestry living lab** of TransRegINT we have established an experiment with different **apple rootstock cultivars** at HSRW green house. The choice of surveyed rootstock cultivars was made together with our project partners including tree nurseries, LiKK e.V. and Berkhöfel fruit farm (Bittenfelder, Antonowka, MM111, D2212, M9, G214).

The gained knowledge is of interest for apple growing farms, for example those establishing apple cultivation within agroforestry systems. As water is an increasingly limited resource in times of **climate change**, the **drought tolerance** of apple trees is of particular importance.

The offered thesis focuses on the phytohormone ABA (**Absciscic acid**) which regulates stomatal opening and acts in dry stress regulation. Through writing your **thesis** within our project you will get the opportunity to get involved in experiment management, data assessment and analysis as well as depending on your interest the exchange with our project partners.

Time Schedule

Feb 24: experiment was planted

until Oct 24: experiment management (watering, fertilization) and data assessment:
Phytohormone Absciscic acid (ABA), Amino acid **Proline**, leaf **Chlorophyll** concentration, **Photosynthetic** activity, **Transpiration** rate, **Stomatal conductance**, Number of Leaves, **Leaf Surface**, **Roots** inventory

Since a bachelor's/master's thesis is designed to take 3/6 months, you will be able to accompany part of the experiment through your thesis. We will work out an appropriate schedule together.

Supervision: Prof. Anke Steppuhn
Co-Supervision: Anna-Lea Ortmann

In case this sounds interesting to you, I am happy to hear from you!
anna-lea.ortmann@hochschule-rhein-waal.de | 02821-806739951
(PhD Candidate – Agroforst Reallabor – TransRegINT)

