



**Master-/Bachelor-Thesis on vitality and climate resilience of apples**  
**- a QGis-supported variety- and site-specific analysis -**

Within the **agroforestry living lab** of TransRegINT we are addressing traditional and modern forms of agroforestry. Through networking and research, we learn from established and older meadow orchards and fruit plantations in order to build on regional knowledge when establishing modern fruit-growing agroforestry systems. Following a living lab approach our research is based on cooperation with practice partners such as LiKK e.V. and Berkhöfel fruit farm.

We are offering **2 thesis research fields**:

1. **Apple:** Your thesis work will include the extension of a **QGis database** for orchards in our region. By doing **field work** you will assess the **tree vitality** in selected meadow orchards and apple plantations selected based on **location conditions** and studied **apple varieties**. By choosing apple **trees of different ages** we will create a chronosequence (false time series).
2. **Sweet chestnut:** Building on our apple research, we want to include a comparison with sweet chestnuts. As a first step you will map **regional sweet chestnut trees** by **field work** and using **QGis**. Based on this you will develop a research question regarding sweet chestnut's **drought tolerance, vitality** and **site adaption**.

Through writing your **thesis** within our project you will get the opportunity to get involved in various types of data assessment and analysis as well as the exchange with our project partners. **QGis** is a free open-source geographic information system (GIS) software used for the analysis and display of spatial data. Previous QGis-experience is helpful but not essential. Data collection can also be limited to **field** and/or **laboratory work**.

**Time Schedule: start possible from March 25**

**1<sup>st</sup> supervisor:** Prof. Florian Wichern / Prof. Jens Gebauer / Prof. Natalie Laibach

**2<sup>nd</sup> supervisor:** Anna-Lea Ortmann

In case this sounds interesting to you, I am happy to hear from you!

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