



Ecological intensification in horticulture

Increasing crop quantity and quality by understanding relationships between functional diversity, ecosystem services and genotype-specific traits



Bachelor thesis opportunity

Research question: Do flower visitors and their visitation rates differ between cherry cultivars?

Project significance: Alternatives to conventional agriculture are urgently needed to sustain ecosystem functions and services. Ecological intensification is a promising concept, aiming to improve agricultural system performance and efficiency through actively managing functional biodiversity to sustainably enhance delivery of production-supporting ecosystem services.



The aim of this bachelor thesis is to assess whether different cherry cultivars attract a different number and diversity of flower visitors. Specifically, you will record flower visitors on multiple cherry cultivars at two commercial cherry orchards (Springe, Stadthagen), aiming to identify whether differences in cultivar attractiveness exist. The outcome can change orchard management, encouraging the use of cultivars which attracted most flower visitors. Your data will also be synthesised with a Master's thesis (taking place simultaneously) looking at cultivar-specific floral traits.

Methods to be applied in the bachelor thesis:

- identifying common flower visitors in the field (Apis, Bombus, Andrena)
- conducting transect walks and record pollinators in cherry orchards (April/May 2024)
- using R for statistical analysis



Requirements: You should be interested in field work and willing to perform an intensive, 4-week-field period in spring to collect your data. A driving license and good physical fitness is necessary for field work. Good management skills, an independent and thorough work ethic and enthusiasm for field work are essential. Experience identifying pollinators, and knowledge of R would be beneficial, but not necessary. Thesis commencement: 03/2024

If you are interested to contribute to the EU project ECO-INTENS-HORT (<https://www.uni-goettingen.de/de/676295.html>) with your bachelor thesis, please contact me for further details: Dr Wiebke Kämper (wiebke.kaemper@uni-goettingen.de) at Functional Agrobiodiversity – DNPW, Georg-August-University Göttingen

