



Exact-Trials: Impact of different buckwheat varieties (*Fagopyrum esculentum* Moench) on pollinators and other beneficial insects

BACKGROUND: In recent years, several studies have been published documenting a dramatic decline in insect abundance, species diversity, and biomass. Habitat modification and loss are predominantly considered to be the main causes of insect declines. In particular, the expansion and intensification of agriculture play an important role. Due to its intensive and prolonged flowering phase and its high nectar and pollen supply buckwheat, is considered as a crop that can increase the nectar and pollen supply in an agroecosystem. This can benefit many organisms that depend on such resources. It is therefore of great interest to gain more detailed information on which insect species will benefit from the cultivation of buckwheat in an agricultural landscape.

PROJECT DESCRIPTION: The project aims to establish and test buckwheat cultivation in agricultural practice in the form of on-farm trials involving farmers. Within the scope of a field trial at the experimental station Heidfeldhof, the diversity of pollinators and other beneficial insects in buckwheat stands will be recorded, and thus the contribution to biodiversity regarding the respective cultivation method and environment will be determined.

The aims will be achieved by conducting insect monitoring in cooperation with the Julius-Kühn-Institut (Department of Beneficial Organisms & Functional Biodiversity) and the Center for Biodiversity and Integrative Taxonomy (KomBioTa) at the University of Hohenheim.

Specifically, the following questions will be addressed in this work:

- How many families, genera, and species are attracted by buckwheat and visit buckwheat flowers ?
- Are there differences in the number of insects captured between the different stages of flower development?
- Are there differences in the number of trapped insects between the different varieties of buckwheat?

WHAT WE ARE LOOKING FOR:

- Independent execution and documentation within the scope of the work package defined for the master's thesis
- Reliable and structured way of working
- Interest in insect monitoring and hands-on mentality

PROJECT START: Summer 2023

Please contact me if you are interested or wish for more information.

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