Hohenheim, 1.12.2022

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Announcement of a Master Thesis

Within the framework of the research project "**Real laboratory chickpeas - Establishment of chickpea cultivation in Baden-Württemberg for the sustainable supply of regional, high-quality proteins (CICERO)**", the following thesis is advertised:

Chickpea, Uni Hohenheim

Effect of temperature on germination of chickpea (*Cicer arietinum L.*) and evaluation of Rhizobia inoculants in a greenhouse trial

Chickpea is an important food grain legume with high nutritive value, and lately is gaining more attention due to the consumption shift towards a more plant-based diet. Germination is considered as a critical step in plant growth as it controls the onset of seedling, its connection to the environment and probably its subsequent productivity. Cold temperature at emergence reduces crop establishment and results in plants with low vigour. In some sensitive genotypes, cold temperature causes whole plant necrosis and plant death. Therefore identifying cold tolerant chickpea cultivars is important for establishing a proper cultivation in Baden-Württemberg, and understanding the effect of temperature on the germination will be used to determine an appropriate sowing date. Similar to other legumes, chickpea can obtain a significant fraction of its N requirement through its highly specific symbiotic association with effective and compatible rhizobium strains, which is vital for the formation of nodules and N_2-fixation. Inoculation with an effective strain of Rhizobium is an economical way of enhancing seed yield and quality in chickpea. Therefore, this research study also aims to test different inoculants for chickpea in a greenhouse experiment.

The aims are to be achieved by conducting the germination test in a germination chamber and the rhizobia trial in a greenhouse during January and March 2023.

If you are interested, please contact me. The thesis can be written in English or German.

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