

Topic/Title (Norwegian)

Studie av frysetoleranse og vernalisering åkerbønner

Topic/Title (English)

Study of freezing tolerance and vernalization in faba bean

Picture



Summary

Genetic resources of cultivated species such as landraces and ecotypes conserved at gene banks are precious for the improvement of traits of interest through plant breeding. In this project a world collection of faba bean (about 200) varieties, landraces and ecotypes will be analyzed for different traits related to freezing tolerance (FT) and vernalization (VE). You will get experience in growing plants in the greenhouse, conducting experiments in controlled conditions and statistical analyses of experimental data. Plants will be first grown in the greenhouse, then after a period of cold acclimation plants will be exposed at different freezing temperatures. Finally, plants will be regrown in the greenhouse to score survival and estimating FT. In a second experiment plants will be exposed to different growing conditions in term of light and temperature and their vernalization response will be assessed. These results will have important outcomes for assessing the genetic diversity available for these traits. This information will help to enhance the use of faba bean as a source of plant-based protein in both the food and feed industries.

Subject area (keywords): genetic diversity, freezing tolerance, vernalization, breeding

Language thesis: Norwegian or English

Bachelor or Master thesis: Both Possible

Credits: 60, 30 or 15 ECTS

Project/company: GeneFaba



Bachelor or Master thesis BIOVIT 2022/23

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