

Topic/Title (Norwegian)

Historisk framgang i aks- og kornegenskaper i norsk vårhvete

Topic/Title (English)

Historical kernel and spike trait changes in Norwegian spring wheat



Summary

Spring wheat grain yields have increased in Norway by nearly 20% since the 1970s thanks to the breeding of new varieties, increasing the country's food security and sustainability. Those varieties achieve higher yields mostly due to the increase in number of grains produced per spike. However, little is known about the exact improved traits behind this increase. We plan to take a closer look at both spike traits (length, weight, number of spikelets and grains) and kernel traits (grain weight, size, and density) to gain an insight into the trends present in the varieties released over the past five decades and to attempt to understand the genetics behind them. We are looking for a student to continue the experiment under field conditions, which will involve spike and/or kernel phenotyping, statistical analysis of the data and/or QTL mapping and validation for those traits. There is also a possibility for a summer job in the framework of this master thesis.

Subject area

Spring wheat, grain yield, grain yield increase, spike traits, kernel traits, GWAS

Language thesis: English

Bachelor or Master thesis: Master thesis

Credits: 60 ECTS

Project/company: PhenoCrop (NFR 320090) - Phenotyping for healthier and more productive wheat crops

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