Bachelor’s thesis project

Exploring variety-specific differences by linking grain volume, weight and number of grains to support climate-adapted wheat breeding

Increased drought and heat due to climate change threatens global wheat yields. Increasing fruiting efficiency in hotter and drier climate is one option to increase resistance to heat and drought. Up to now, high-throughput phenotyping (HTP) methods to select for fruiting efficiency are lacking but measurements of its components hold great promise.
The objective of the Bachelor’s thesis is to measure the spike volume, weight the spikes and count the number of grains per spike to explore differences between varieties in their yield potential.
You will work with a diverse set of genotypes adapted to different climatic conditions of Europe. . The genotypes were monitored in the season 2023 in the FIP.

Tasks will be:
Scanning of spikes with a 3D scanner to measure their volume, weighting the spikes, threshing them and counting the number of grains per spike with the Marvin device. The collected data will be analyzed (with our support if needed) in R (or Python).
Project start: 01.09.2023
Practical work will take place in Eschikon, computer work at LFW / at home.

Contacts

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