# Genome-wide predictions in plant breeding: genotype-phenotype associations and genomic selection

(3 credits, P000145)

This course has been designed by the SLU breeding network and the the Organismal Biology Research School. Experts in plant genomics and breeding collaborate to answer: (1) how to associate phenotypes and genotypes and (2) how to accelerate marker-assisted selection in the era of high throughput genome sequencing. Along this course, students will be able to study bioinformatic methods and statistical models currently available, and do extensive hands-on work on GWAS and GS.

The course will take place in SLU campus Ultuna and is divided in two weeks of full-time work:

**Week1 (v41), October 6th-9th** : GWAS, theory and in silico laboratories (on campus).

**Week2 (v44), October 27th-30th** : Genomic selection, theory and in silico laboratories (on campus).

Course coordinator:
Martha Rendón, Department of Plant Biology

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Application: Registration form open until **September 19**.

The course can accommodate 15 students; priority will be given to PhD students.

Basic R/linux knowledge is required (but not mandatory).