Experimental design and statistical analysis of phenotyping platform experiments

High throughput phenotyping platforms allow analysis of the genetic variability of traits at several scales of plant organization under contrasting and well-defined environmental scenarios. After that a large number of platforms has been built, the priority now is to design methods for the analysis of heterogeneous datasets involving thousands/millions of data points, contrasting environmental conditions and tens/hundreds of measured traits. This course will firstly discuss criteria for choosing a suitable experimental design for phenotyping experiments. Subsequently we will show options for analysing features extracted from phenotyping platforms with a focus on spatial and longitudinal modelling (in R). We aim at increasing the precision of estimation new phenotypic traits and parameters thereby facilitating the combined analysis of data from multiple scales and platforms.

Organised by	Biometris
Date	Tuesday 7th May 2019 from 13:30 to 17:30
Duration	½ day
Setup	Campus WUR
Venue	Radix, building number 107, Droevendaalsesteeg 1 6708 PB Wageningen
Room	PC0088

Programme

The statistical analysis techniques will be presented in lectures complemented by hands-on computer demonstrations / training.

Tuesday 7th of May

13:30	13:45	Registration and Welcome
13:45	14:15	General introduction to the course
14:15	15:30	Experimental design
15:30	15:50	*Coffee*
15:50	17:30	Single experiment analysis
17:30		*Drinks (Orion building)*

Course Leaders

Teachers are **Emilie Millet** and **Fred van Eeuwijk** (WUR-Biometris).