Untitled

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# Model 1

Calculate BLUPs, random effects G

Here, is the yield observation with expected value which is linked to the linear predictor through a log-link function. Thus, the process model for includes which is an matrix of genotypes (), while is a vector of length of random effects for or BLUPs. Similarly, is a matrix of size representing the incidence of each environment (). is a vector of length containing the random effects. Finally, is a matrix of size for random effects and the corresponding random effects for interaction.

To explore the genetic trends over time of grain yield per se and yield plasticity we defined the following models independently for each region:

where represents the genotype-specific yield BLUPs () or yield plasticity () within a given region of interest. The expected value of the response variable is which is linked to the linear predictor through a log-link function.

Linear plateau

# Model 2