Automatic report for a split-plot design

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# 1. Model specification and data description

There are data for a split-plot design with 6 levels for the main plot factor, 18 levels for the sub-plot factor, and 2 replications for the main plot factor. The statistical model is

where

* is the observed response with level of the main plot factor, level of the sub-plot factor, and replication .
* is the mean response over all levels of factors and replications.
* is the effect for level of the main plot factor.
* is the effect for level of the sub-plot factor.
* is the effect of replication .
* , , , , and the corresponding interactions.

In this model is the error term for the main plot factor, and and are pooled to form the error term for the split-plot factor.

# 2. Analysis for trait barley\_grain\_fresh\_weight\_1000\_grain\_g

## 2.1. ANOVA

## Analysis of Variance Table  
##   
## Response: y  
## Df Sum Sq Mean Sq F value Pr(>F)  
## rep 1 450 450   
## mpf 4 13360 3340   
## Ea 0 0   
## spf 12 0 0   
## mpf:spf   
## Eb

# 3. Analysis for trait barley\_grain\_dry\_weight\_1000\_grain\_g

## 3.1. ANOVA

## Analysis of Variance Table  
##   
## Response: y  
## Df Sum Sq Mean Sq F value Pr(>F)  
## rep 1 1404.5 1404.5   
## mpf 4 11984.0 2996.0   
## Ea 0 0.0   
## spf 12 0.0 0.0   
## mpf:spf   
## Eb