Glossary

Linear model: A linear function of parameters of the from $E(y_i) = a_{i1}\beta_1+a_{i2}\beta_2+\ldots a_{ip}\beta_p$, i=1…n with unknown parameters β_1, β_2, …β_p, (p≤n) with known coefficients a_{ij}'s and whose variances are a constant σ^2.

Estimable function: A linear function $a^1\beta$ of parameters estimable if there exists a linear function response variables L^1y such that $E(L^1y) = a^1\beta$ for all β

Analysis of Variance: breaking down of total variation into orthogonal components

Treatment: A combination of the levels of the factors.

Response Variable - dependent variable

Fixed effects – levels of the factor are fixed

Factors: Factors are the independent variable

Replicates - Number of experimental units (i.e. plants in this example) per treatment

ANOVA - a statistical method for making simultaneous comparisons between two or more means;
degrees of freedom"- number of independent values in the final calculation of a statistic
null hypothesis : is a term that often use to indicate the statistical hypothesis tested

SST- Total Sum of Square-Total variability in the data

SSE-Error sum of square=a sum of squares of the differences of the observations within treatments averages
SSTR – Treatment sum of squares:sum of squares of the differences between the treatment averages and the grand average