

# Statistical Analysis with GenStat®

## ANOVA Treatment & Block Structure examples

	<b><u>One-way CRD</u></b>	<b><u>Two-way CRD</u></b>
<b>Treatment:</b>	Treatment	Variety*Chemical
<b>Block:</b>	Plot	Plot
	<b><u>RCB</u></b>	<b><u>RCB Combined Analysis</u></b>
<b>Treatment:</b>	Treatment	Location*Treatment
<b>Block:</b>	Block/Plot	(Location.Block)/Treatment
	<b><u>RCB with Subsampling</u></b>	
<b>Treatment:</b>	Treatment	
<b>Block:</b>	Block/Plot/Subsample	
	<b><u>Latin Square</u></b>	<b><u>Latin Square with Replication</u></b>
<b>Treatment:</b>	Treatment	Treatment
<b>Block:</b>	Row_Block*Column_Block	Rep+Row_Block+Column.Block+ Rep.Row_Block.Column_Block
	<b><u>Two-way RCB</u></b>	<b><u>Two-way RCB Combined Analysis</u></b>
<b>Treatment:</b>	Variety*Nitrogen	Location*Variety*Nitrogen
<b>Block:</b>	Block	Location.Block
	<b><u>Split-Plot</u></b>	<b><u>Split-Plot Combined Analysis</u></b>
<b>Treatment:</b>	Nitrogen*Variety	Site*Nitrogen*Variety
<b>Block:</b>	Block/W_Plot/S_Plot	Site.Block/(W_Plot/S_Plot)
	<b><u>Strip-Plot (split-block)</u></b>	<b><u>Strip-Plot Combined Analysis</u></b>
<b>Treatment:</b>	Cultivar*Nitrogen	Location*Cultivar*Nitrogen
<b>Block:</b>	Block/(W_Plot1*W_Plot2)	Location.Block/(W_Plot1*W_Plot2)
	<b><u>Split-Split Plot</u></b>	<b><u>Split-Split Plot Combined Analysis</u></b>
<b>Treatment:</b>	Nitrogen*Management*Variety	Location* Nitrogen*Management*Variety
<b>Block:</b>	Block/W_Plot/S_Plot/S_S_Plot	Location.Block/(W_Plot/S_Plot/S_S_Plot)
	<b><u>Split-Strip Plot</u></b>	<b><u>Strip-Split Plot</u></b>
<b>Treatment:</b>	Cultivar*Row Spacing*Population	Nitrogen*Variety*Planting Method
<b>Block:</b>	Block/W_Plot/(Row*Column)	Block/(Row*Column)/S_Plot

\*The GenStat ANOVA assumes the *explanatory component* (Treatment) as fixed effects and the *structural component* or *strata* (Block) as random effects. When analyzing a linear mixed model (a model where treatments have both fixed and random effects) use REML instead of ANOVA.