Yield Trend & Stability Analyses

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## Rawdata

The rawdata should be formatted like this

head(dat)

## Y tj xj L Env G Rep Group Yield  
## 1 2001 2001 1980 Barisal 2001-Barisal BR10 1 Long 3.500000  
## 2 2001 2001 1980 Comilla 2001-Comilla BR10 1 Long 5.011047  
## 3 2001 2001 1980 Gazipur 2001-Gazipur BR10 1 Long 4.280233  
## 4 2001 2001 1980 Rajshahi 2001-Rajshahi BR10 1 Long 4.480000  
## 5 2001 2001 1980 Rangpur 2001-Rangpur BR10 1 Long 3.176419  
## 6 2001 2001 1980 Satkhira 2001-Satkhira BR10 1 Long 6.885814

str(dat)

## 'data.frame': 7635 obs. of 9 variables:  
## $ Y : int 2001 2001 2001 2001 2001 2001 2001 2002 2002 2002 ...  
## $ tj : int 2001 2001 2001 2001 2001 2001 2001 2002 2002 2002 ...  
## $ xj : int 1980 1980 1980 1980 1980 1980 1980 1980 1980 1980 ...  
## $ L : Factor w/ 9 levels "Barisal","Bhanga",..: 1 3 4 6 7 8 9 1 3 4 ...  
## $ Env : Factor w/ 116 levels "2001-Barisal",..: 1 2 3 4 5 6 7 8 9 10 ...  
## $ G : Factor w/ 29 levels "BR10","BR11",..: 1 1 1 1 1 1 1 1 1 1 ...  
## $ Rep : Factor w/ 3 levels "1","2","3": 1 1 1 1 1 1 1 1 1 1 ...  
## $ Group: Factor w/ 5 levels "Aromatic","Long",..: 2 2 2 2 2 2 2 2 2 2 ...  
## $ Yield: num 3.5 5.01 4.28 4.48 3.18 ...

summary(dat)

## Y tj xj L   
## Min. :2001 Min. :2001 Min. :1973 Gazipur : 993   
## 1st Qu.:2005 1st Qu.:2005 1st Qu.:1988 Rangpur : 990   
## Median :2010 Median :2010 Median :1994 Rajshahi: 984   
## Mean :2009 Mean :2009 Mean :1994 Comilla : 981   
## 3rd Qu.:2013 3rd Qu.:2013 3rd Qu.:2003 Sonagazi: 978   
## Max. :2015 Max. :2015 Max. :2014 Satkhira: 888   
## (Other) :1821   
## Env G Rep Group   
## 2015-Comilla : 96 BR10 : 348 1:2544 Aromatic:1392   
## 2015-Gazipur : 96 BR11 : 348 2:2546 Long :1250   
## 2015-Kustia : 96 BR22 : 348 3:2545 Medium :2583   
## 2015-Rajshahi: 96 BR23 : 348 Short : 941   
## 2015-Rangpur : 96 BR25 : 348 Stress :1469   
## 2015-Satkhira: 96 BR3 : 348   
## (Other) :7059 (Other):5547   
## Yield   
## Min. :0.200   
## 1st Qu.:3.064   
## Median :3.914   
## Mean :3.923   
## 3rd Qu.:4.776   
## Max. :8.800   
##