

## Report findings of the analysis of Data in 2011/12 for the Yala and Maha seasons

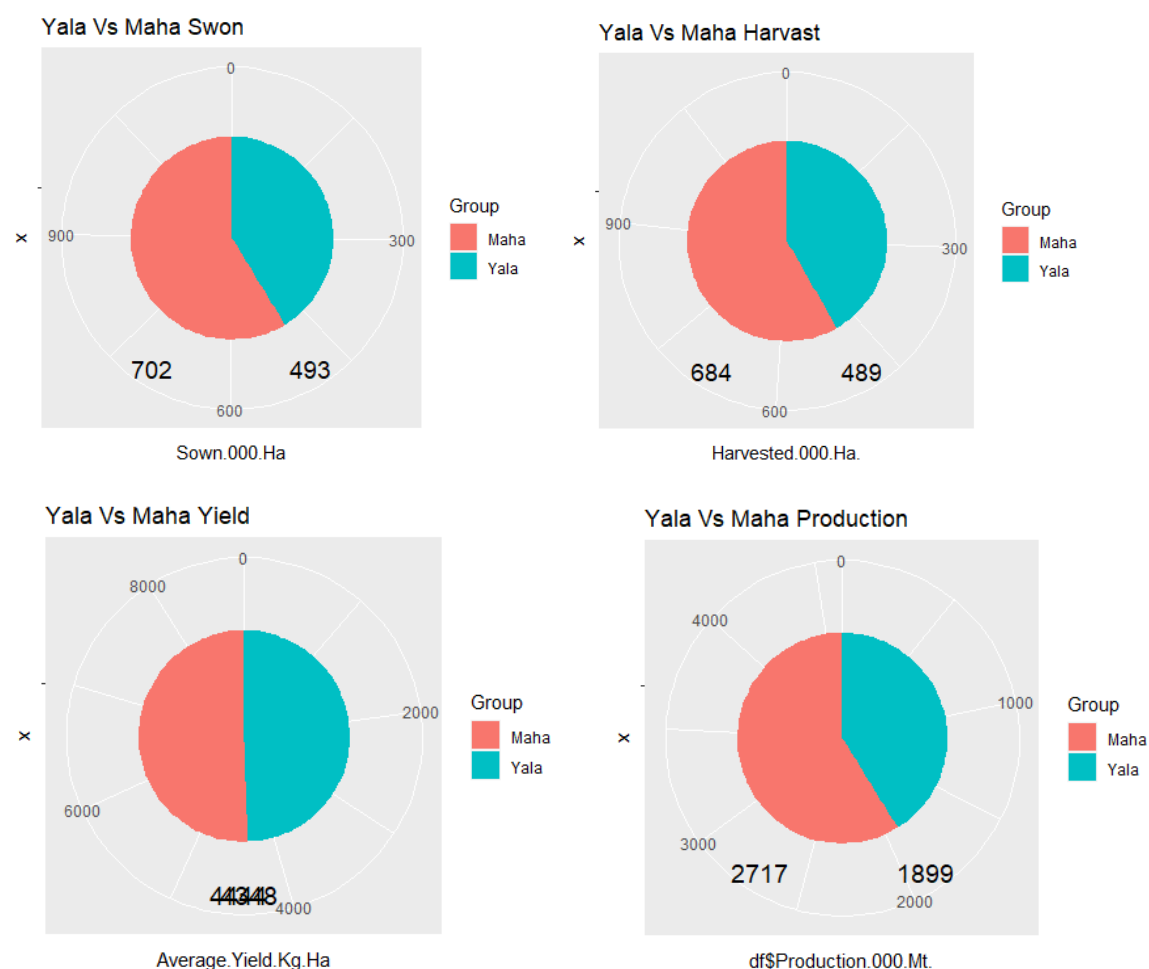
To: The Secretary, Ministry of Agriculture, Sri Lanka

### Executive Summary

Cultivating rice was a traditional practice in Sri Lanka and from the ancient sources, there were two main seasons in cultivating rice. They are Yala and Maha where Yala starts from May to end August and Maha starts from September to March.

### Report findings

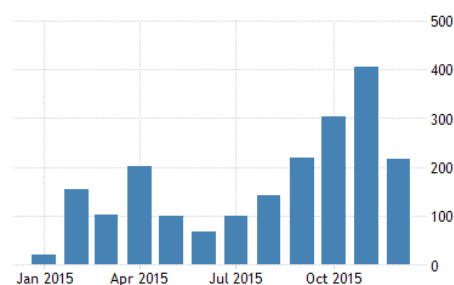
We analyzed both Yala and Maha in a same year and found following insights.



By referring to the above data, we can clearly state that there is more Sown, Harvest and Production during the Yala Season but the Yield in both season were close.

### Conclusion

As per the findings given by in figure 1 (reference : <https://tradingeconomics.com/sri-lanka/precipitation>), the main reason for low production in Maha Season will be the rain. Therefore it's recommended to cultivate other plants mized with rice in those highly effected areas. (Fig1: SL rainfall pattern)



## Annexures (GitHub : <https://github.com/ChinthakaAsiri>)

The Code :

```
library(ggplot2)
#Load data files
df_yala=read.csv("paddy_production_in_yala_season_1952_2012.csv",header=TRUE)
df_maha=read.csv("paddy_production_in_maha_season_1952-2012.csv",header=TRUE)

#Filter necessary columns
df_yala=df_yala[60,]
df_maha=df_maha[61,]
#df_yala
#df_maha

#Replace Columns 'Yala.Season' and 'Maha.Season' with Season
colnames(df_yala)[1]<-"Season"
colnames(df_maha)[1]<-"Season"
df_yala$Season[1]<-"Yala"
df_maha$Season[1]<-"Maha"
#Connct two dataframes into one dataframe
df=rbind(df_yala,df_maha)
df

#Analyse the dataset
pie_sown <- ggplot(df, aes(x="", y=Sown.000.Ha, fill=Season)) +
  geom_bar(width = 1, stat = "identity")+
  coord_polar("y", start=0)+
  geom_text(aes(label = paste0(round(Sown.000.Ha))), size=5, show.legend = F, nudge_x = 1) +
  guides(fill = guide_legend(title = "Group"))+
  ggtitle("Yala Vs Maha Swon")
pie_sown

pie_harvast <- ggplot(df, aes(x="", y=Harvested.000.Ha., fill=Season)) +
  geom_bar(width = 1, stat = "identity")+
  coord_polar("y", start=0)+
  geom_text(aes(label = paste0(round(df$Harvested.000.Ha))), size=5, show.legend = F, nudge_x = 1) +
  guides(fill = guide_legend(title = "Group"))+
  ggtitle("Yala Vs Maha Harvast")
pie_harvast

pie_yield <- ggplot(df, aes(x="", y=Average.Yield.Kg.Ha, fill=Season)) +
  geom_bar(width = 1, stat = "identity")+
  coord_polar("y", start=0)+
  geom_text(aes(label = paste0(round(Average.Yield.Kg.Ha))), size=5, show.legend = F, nudge_x = 1) +
  guides(fill = guide_legend(title = "Group"))+
  ggtitle("Yala Vs Maha Yield")
pie_yield

pie_production <- ggplot(df, aes(x="", y=df$Production.000.Mt., fill=Season)) +
  geom_bar(width = 1, stat = "identity")+
  coord_polar("y", start=0)+
  geom_text(aes(label = paste0(round(df$Production.000.Mt))), size=5, show.legend = F, nudge_x = 1) +
  guides(fill = guide_legend(title = "Group"))+
  ggtitle("Yala Vs Maha Production")
pie_production
```