**EXPLORATORY DATA ANALYSIS**

**Out of Bag**

print(palay.rf$mse)

**R-Squared**

print(palay.rf$mse)

**MAPE**

mape(testpredicted$VOLUMEOFPRODUCTION,test$VOLUMEOFPRODUCTION)

**PLOT**

**Training Dataset: Random Forest**

plot(palay.rf)

**Training Dataset: R-Squared**

plot(palay.rf$rsq,xlab = "TREES", ylab = "RSQUARED")

**Table – Testing Dataset: Predicted Values(2014 – 2020)**

print(test)

**Plot – Testing Dataset: Predicted Values (2014-2020) – YEAR**

barplot(testpredicted$VOLUMEOFPRODUCTION, testpredicted$YEAR,xlab = "YEAR", ylab = "VOLUME OF PRODUCTION")

**Plot – Testing Dataset: Predicted Values (2014-2020) – QUARTER**

plot(testpredicted$QUARTER,testpredicted$VOLUMEOFPRODUCTION,xlab = "QUARTER", ylab = "VOLUME OF PRODUCTION")

**Plot –Predicted Values (2021-2025) – YEAR**

barplot(predicted5ys$VOLUMEOFPRODUCTION, predicted5ys$YEAR ,xlab = "YEAR", ylab = "VOLUME OF PRODUCTION")

**Plot –Predicted Values (2021-2025) – QUARTER**

plot(predicted5ys$QUARTER,predicted5ys$VOLUMEOFPRODUCTION,xlab = "QUARTER", ylab = "VOLUME OF PRODUCTION")

**Table – Predicted Values (2021 -2025)**

print(predicted5ys)

**RANDOM FOREST**

palay5.rf <- randomForest(VOLUMEOFPRODUCTION ~ ., data=palay5, ntree=500,

mtry=2, importance=TRUE, na.action = na.omit)

print(palay5.rf)

**Prediction**

predictions5 = predict(palay5.rf, newdata=topredict5)