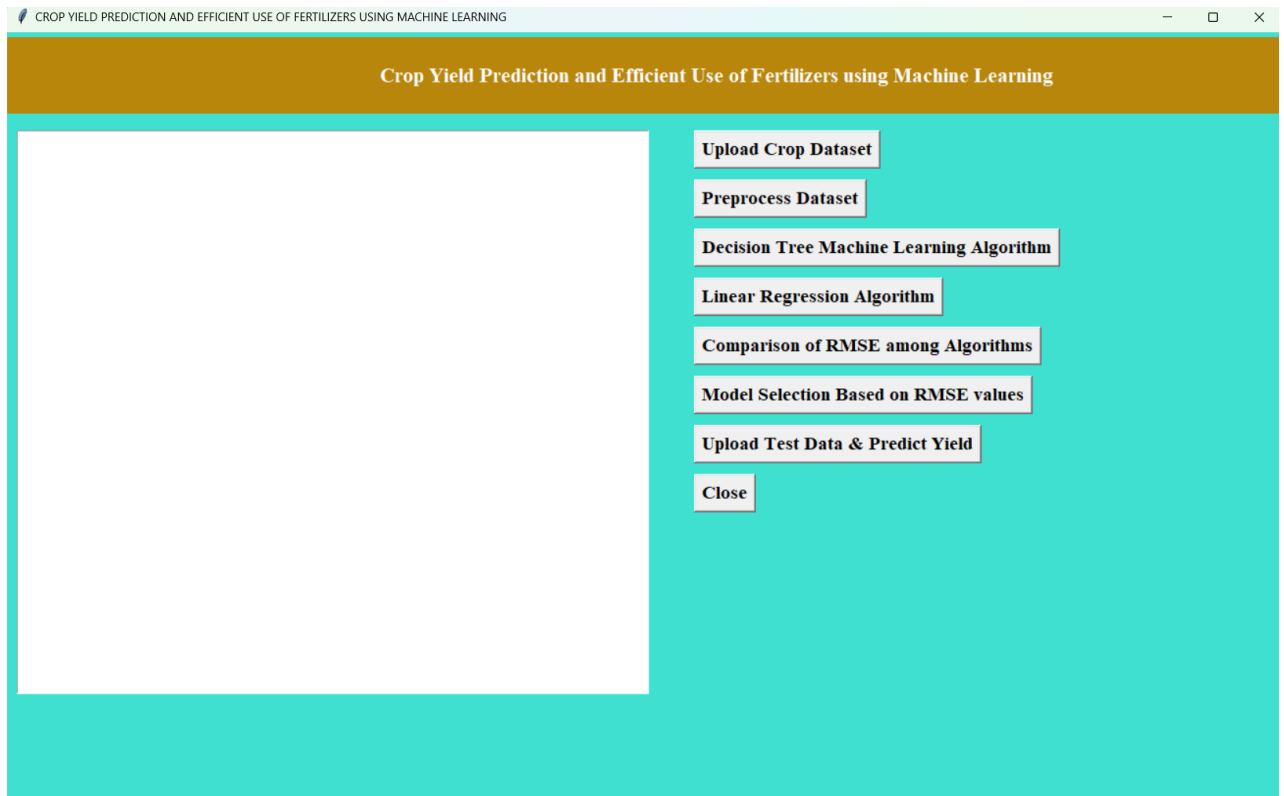


8. OUTPUT SCREENS

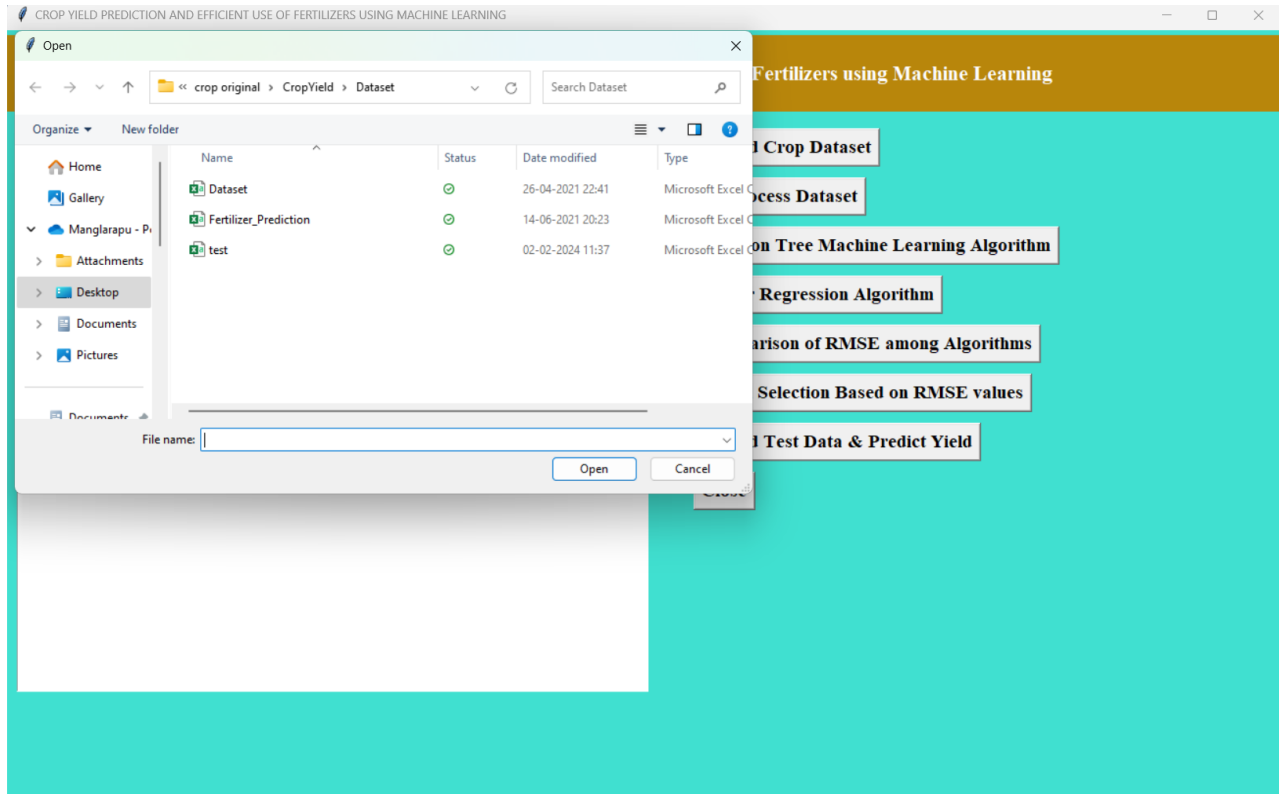
8.1 OUTPUT SCREENS

To run project double, click on run.bat file to get below screen



Screen-8.1. Home page

In above screen click on 'Upload Crop Dataset' button to upload dataset to application and get below output.



Screen-8.2. Uploading dataset

In above screen selecting and uploading dataset folder to application and then click on 'Select Folder' button to load dataset and get below output.

Crop Yield Prediction and Efficient Use of Fertilizers using Machine Learning

Dataset loaded

	State_Name	District_Name	...	Area	Production
0	Andaman and Nicobar Islands	NICOBARS	...	1254.0	2000
1	Andaman and Nicobar Islands	NICOBARS	...	2.0	1
2	Andaman and Nicobar Islands	NICOBARS	...	102.0	321
3	Andaman and Nicobar Islands	NICOBARS	...	176.0	641
4	Andaman and Nicobar Islands	NICOBARS	...	720.0	165

[5 rows x 7 columns]

Upload Crop Dataset

Preprocess Dataset

Decision Tree Machine Learning Algorithm

Linear Regression Algorithm

Comparison of RMSE among Algorithms

Model Selection Based on RMSE values

Upload Test Data & Predict Yield

Close

Screen-8.3. Uploaded dataset

In above screen dataset loaded and displaying attributes found in dataset and now click on 'Preprocess Dataset' button to handle missing values, encode categorical variables and get below output.

Crop Yield Prediction and Efficient Use of Fertilizers using Machine Learning

	State_Name	District_Name	Crop_Year	Season	Crop	Area	Production
0	0	427	2000	1	2	1254.0	2000
1	0	427	2000	1	74	2.0	1
2	0	427	2000	1	95	102.0	321
3	0	427	2000	4	7	176.0	641
4	0	427	2000	4	22	720.0	165

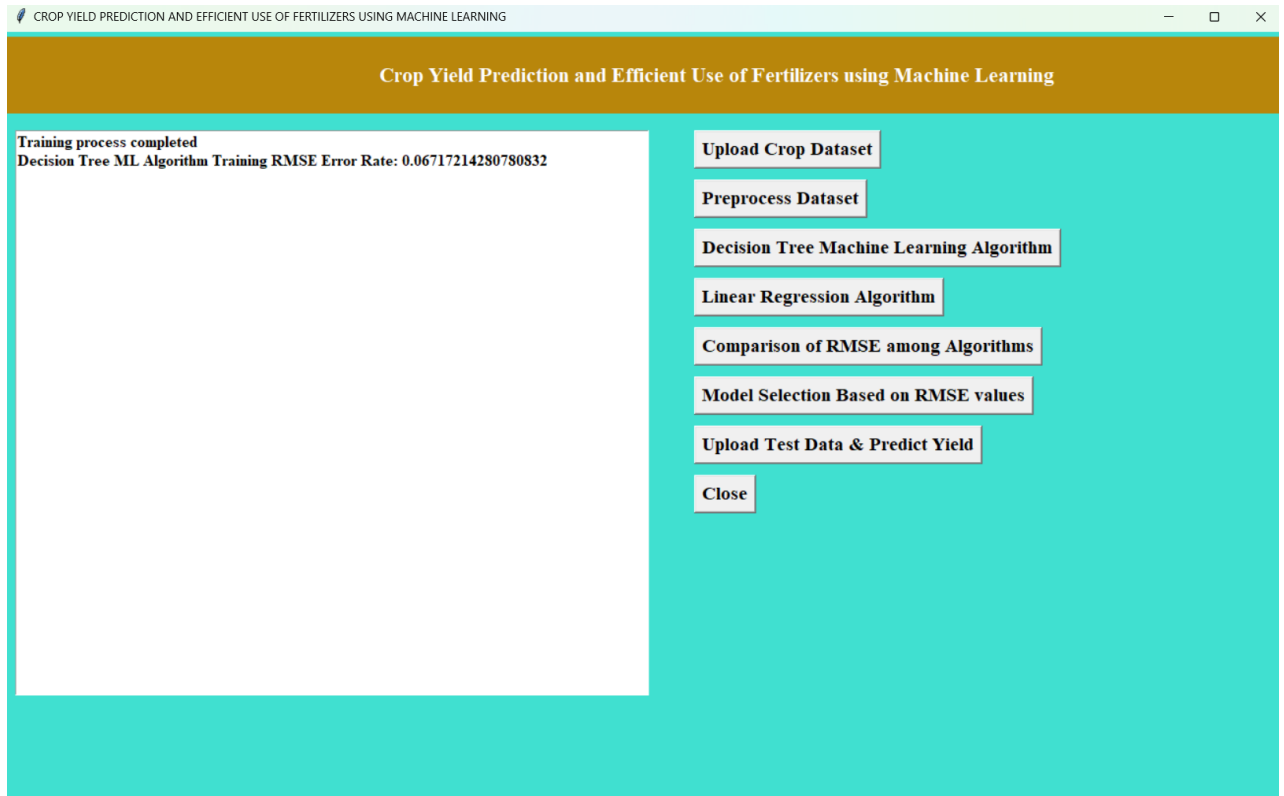
Total records found in dataset: 246091
 80% records used to train ML algorithm: 196872
 20% records used to test ML algorithm: 49219

Buttons:

- Upload Crop Dataset
- Preprocess Dataset
- Decision Tree Machine Learning Algorithm
- Linear Regression Algorithm
- Comparison of RMSE among Algorithms
- Model Selection Based on RMSE values
- Upload Test Data & Predict Yield
- Close

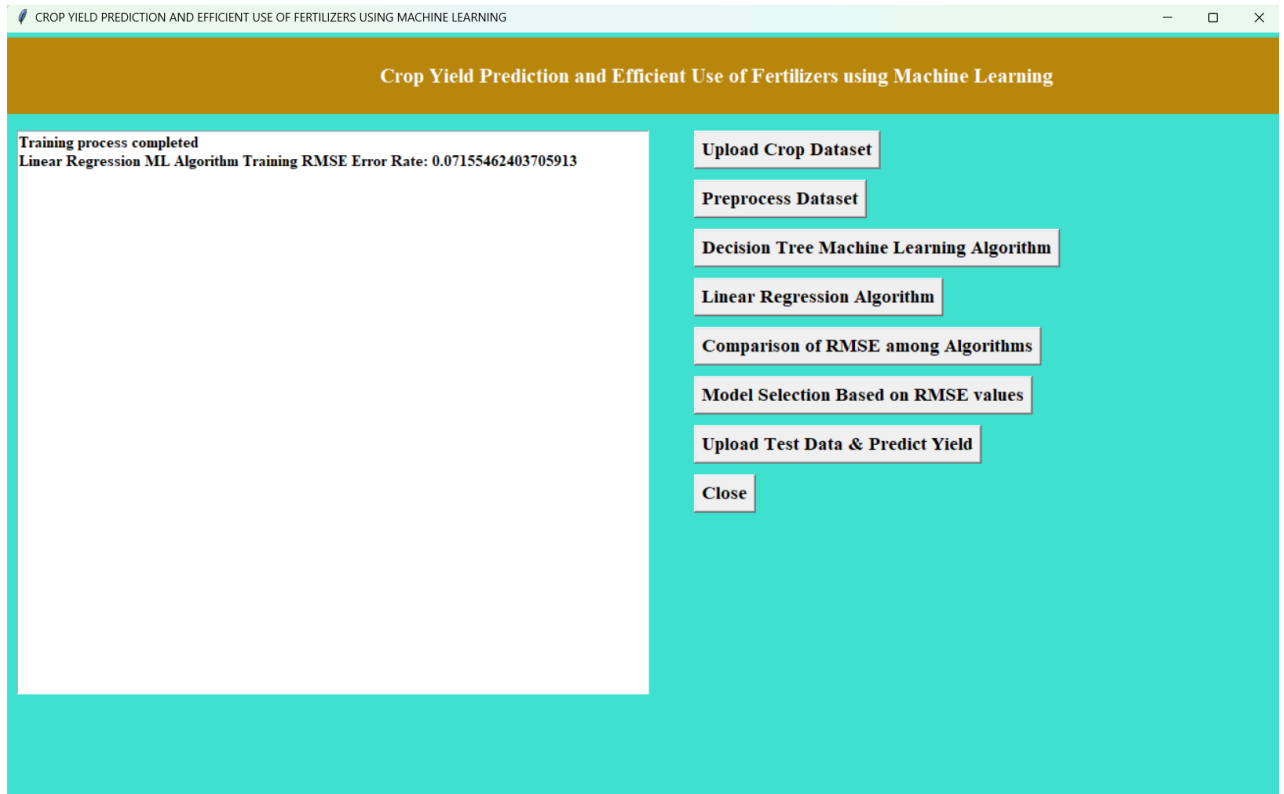
Screen-8.4. Preprocessing dataset

In above screen we can see processed data and the data is splitted into 80% for training and 20% for testing and now click on ‘Decision tree machine learning Algorithm’ button to train Decision tree algorithm and get below output.



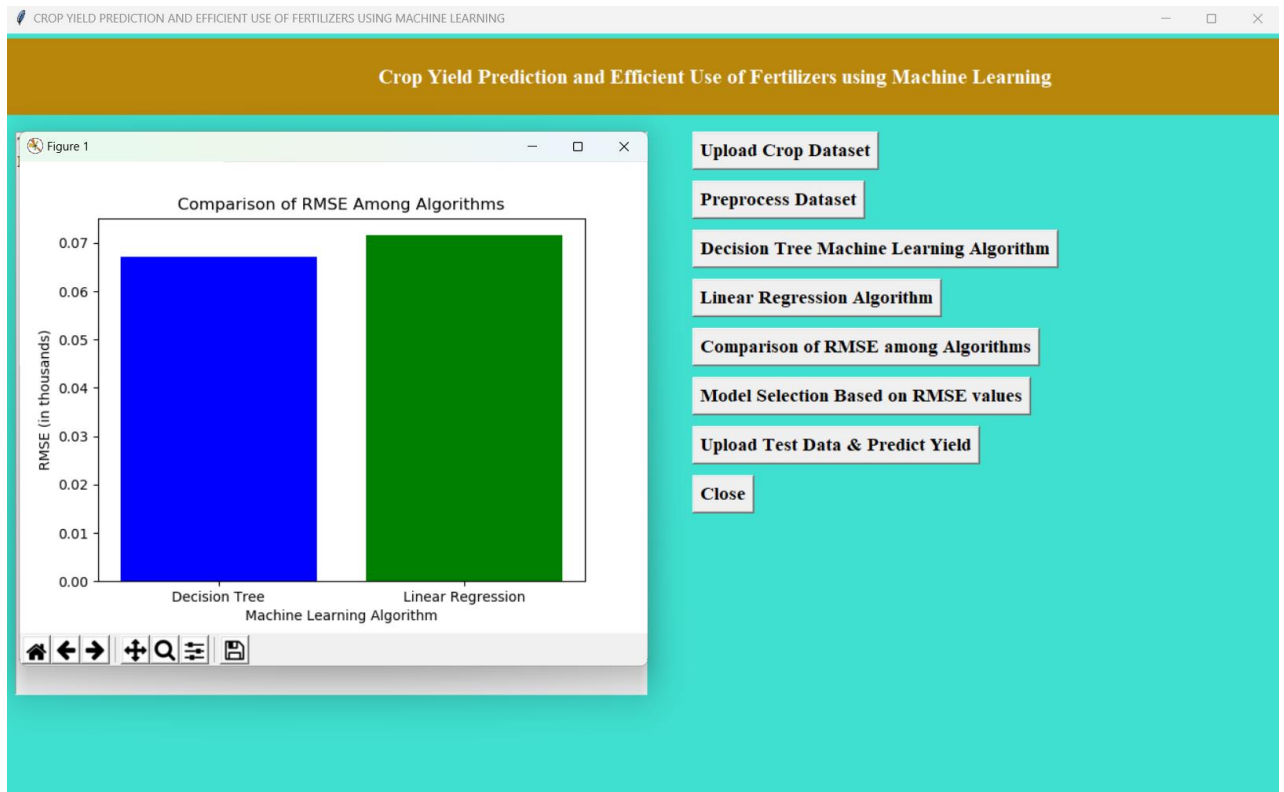
Screen-8.5. Decision tree training

In above screen , the error rate is displayed after training the decision tree algorithm. Now click on 'Linear Regression Algorithm' button to train Linear regression algorithm and get below output.



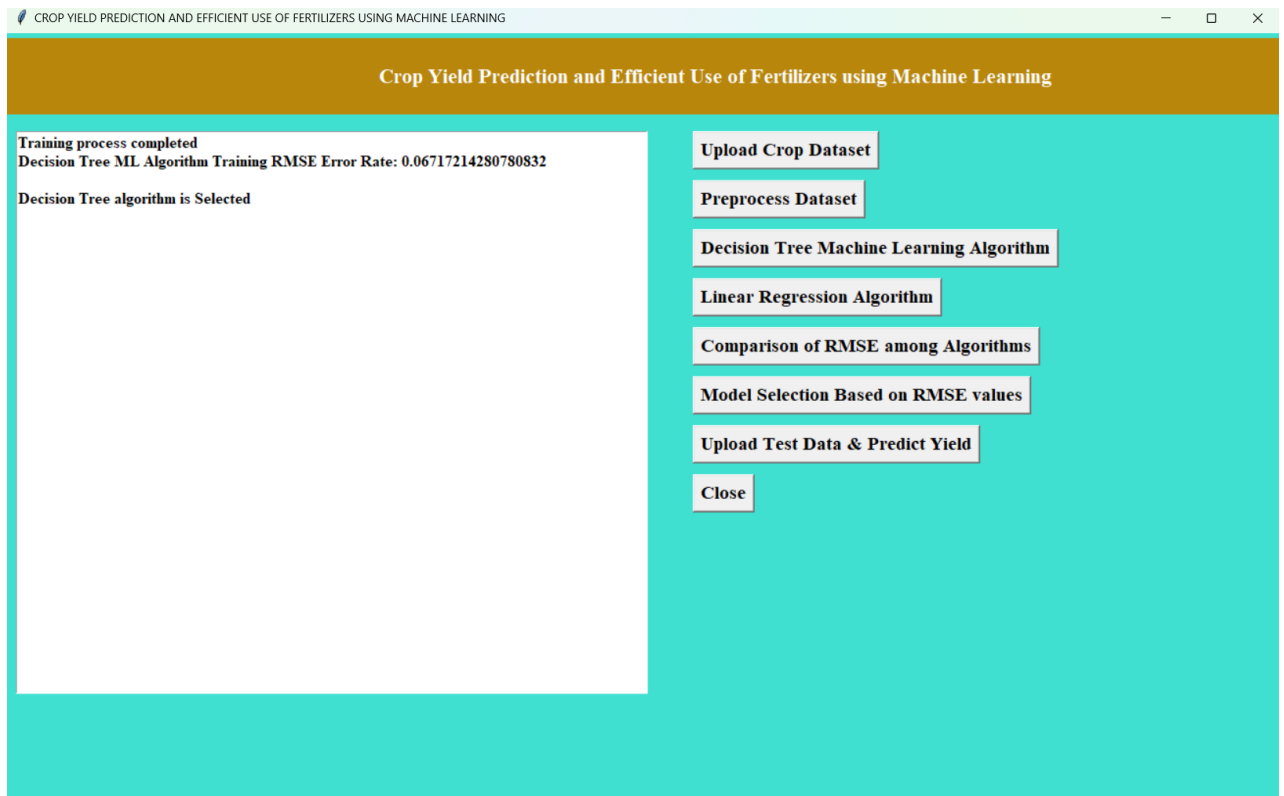
Screen-8.6. Linear regression training

In above screen , the error rate is displayed after training the Linear regression algorithm. Now close above graph and then click on ‘Comparison of RMSE among algorithm’ button to compare error rate and get below output.



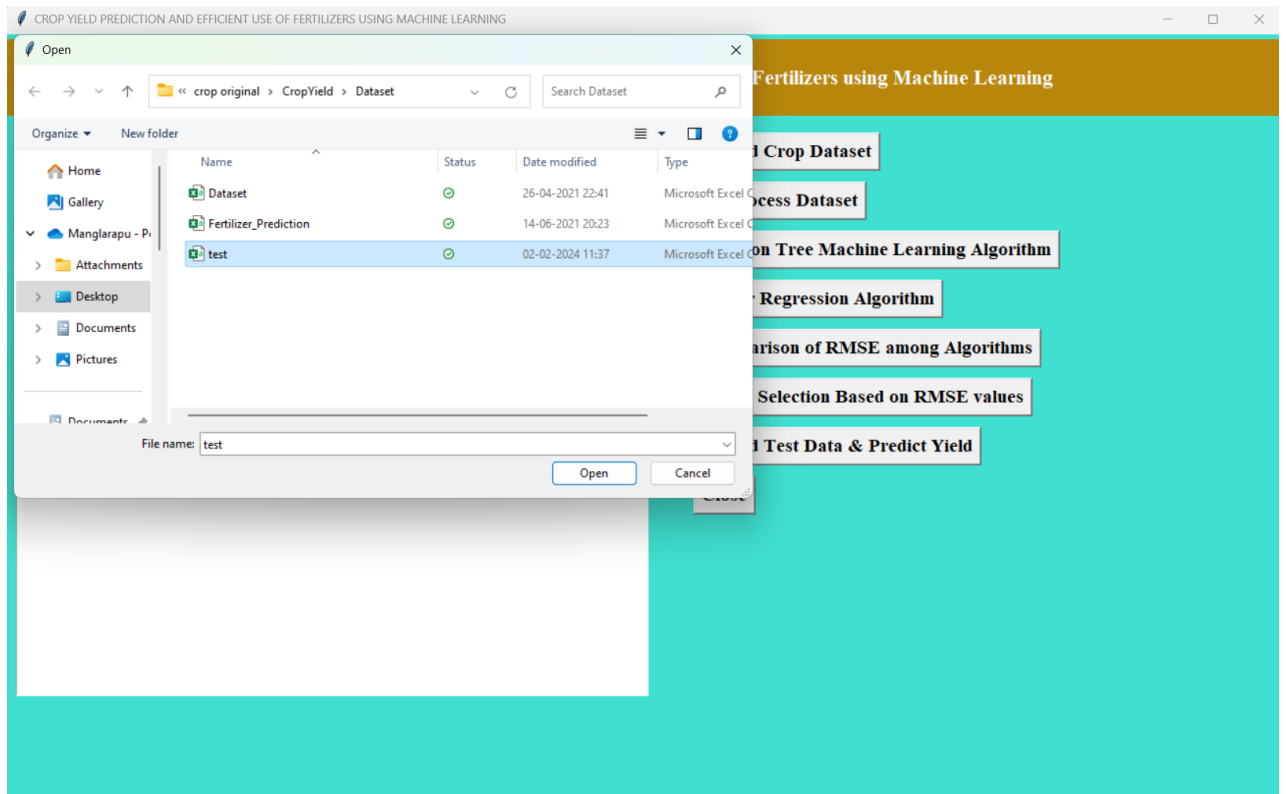
Screen-8.7. Comparison graph

In above screen, the comparison rate is displayed and then click on 'Upload Test Data & Predict Yield' button to upload test data and get below output.



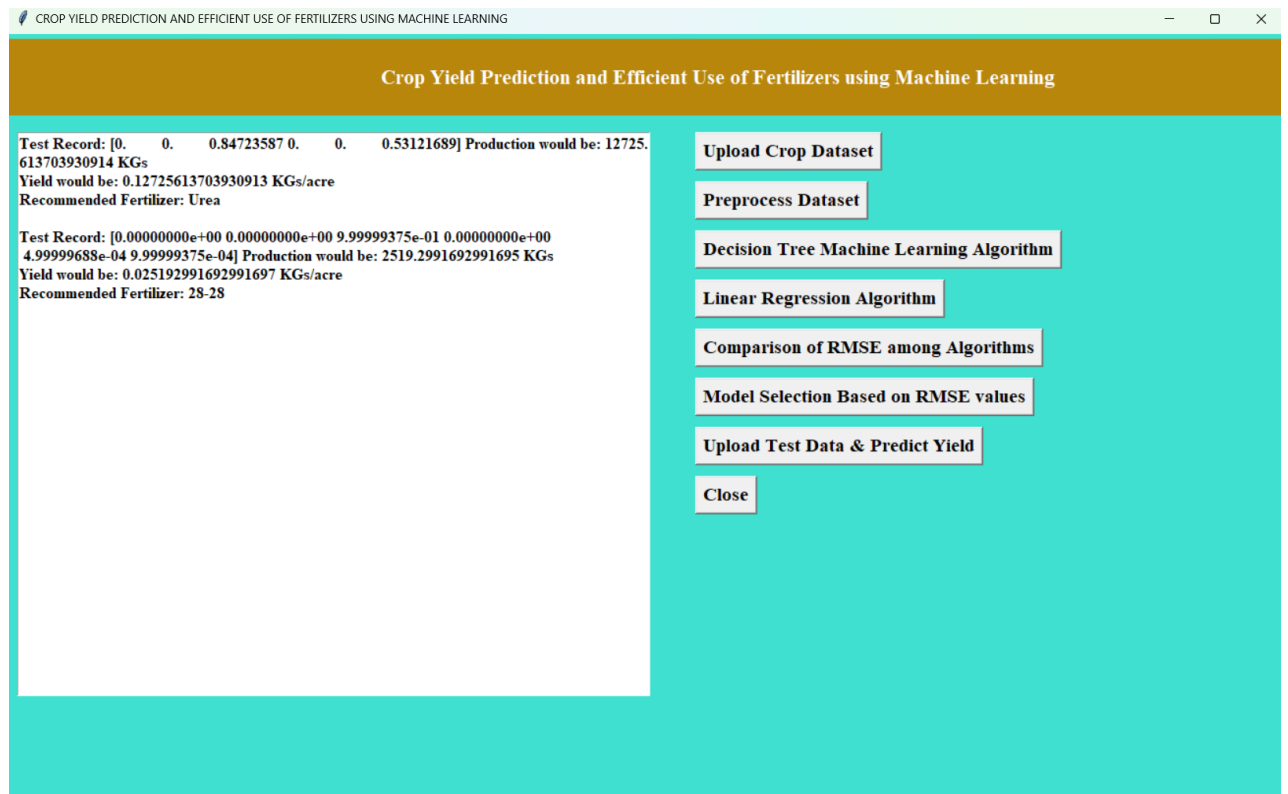
Screen-8.8. Model Selection

In above screen, the Training process is selected i.e., Decision tree algorithm and then click on 'Upload Test Data & Predict Yield' button to upload test data and get below output.



Screen-8.9. Uploading test data

In above screen, the test data will be uploaded and the below screen would be displayed.



Screen-8.10. Predicting the test data

In above screen, the crop yield would be displayed for test data and the fertilizers are suggested.