# RESULTS AND DISCUSSION

## Test Results

There are several ways to evaluate the “AgroAgri” model that has been developed. Firstly, for the crop recommendation, the ML model is used to predict the crop, in that accuracy of the algorithm tells us how effective the solution is. The applied algorithms are Decision Tree, Naïve Bayes, SVM and Random Forest which has the accuracy of 96%. Fertilizer recommendation is just a dictionary based solution. In pesticide recommendation if the user uploads a picture and the pests are identified through DL model called CNN.

## Output

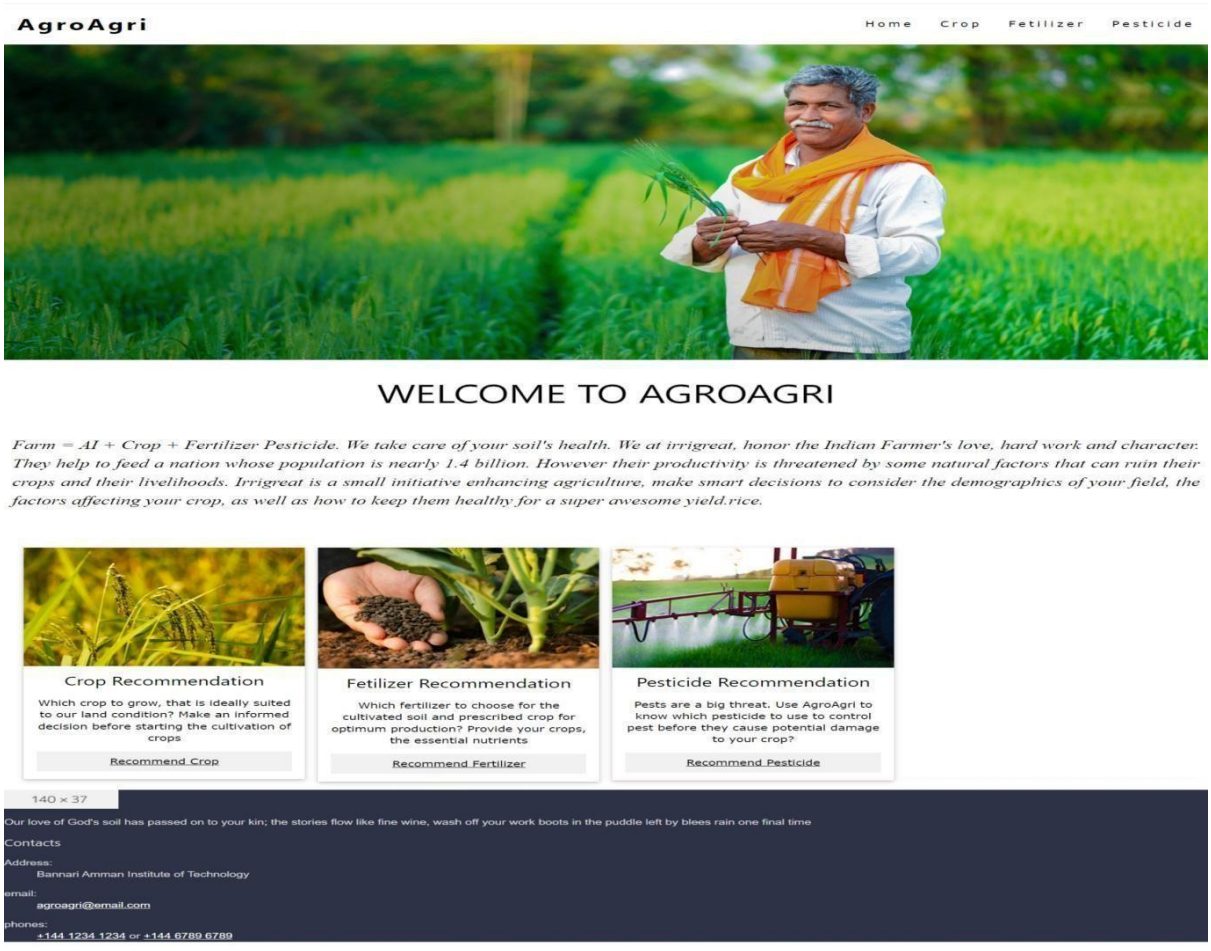


Fig 1.1 Home Page

Let's say the user wishes to use the Crop Suggestion service. In order to find out what crop they should grow on their farm, they can fill out the N, P, K, pH, rainfall, temperature, and relative humidity values in the units indicated. Fig 1.2 represents the crop recommendation.

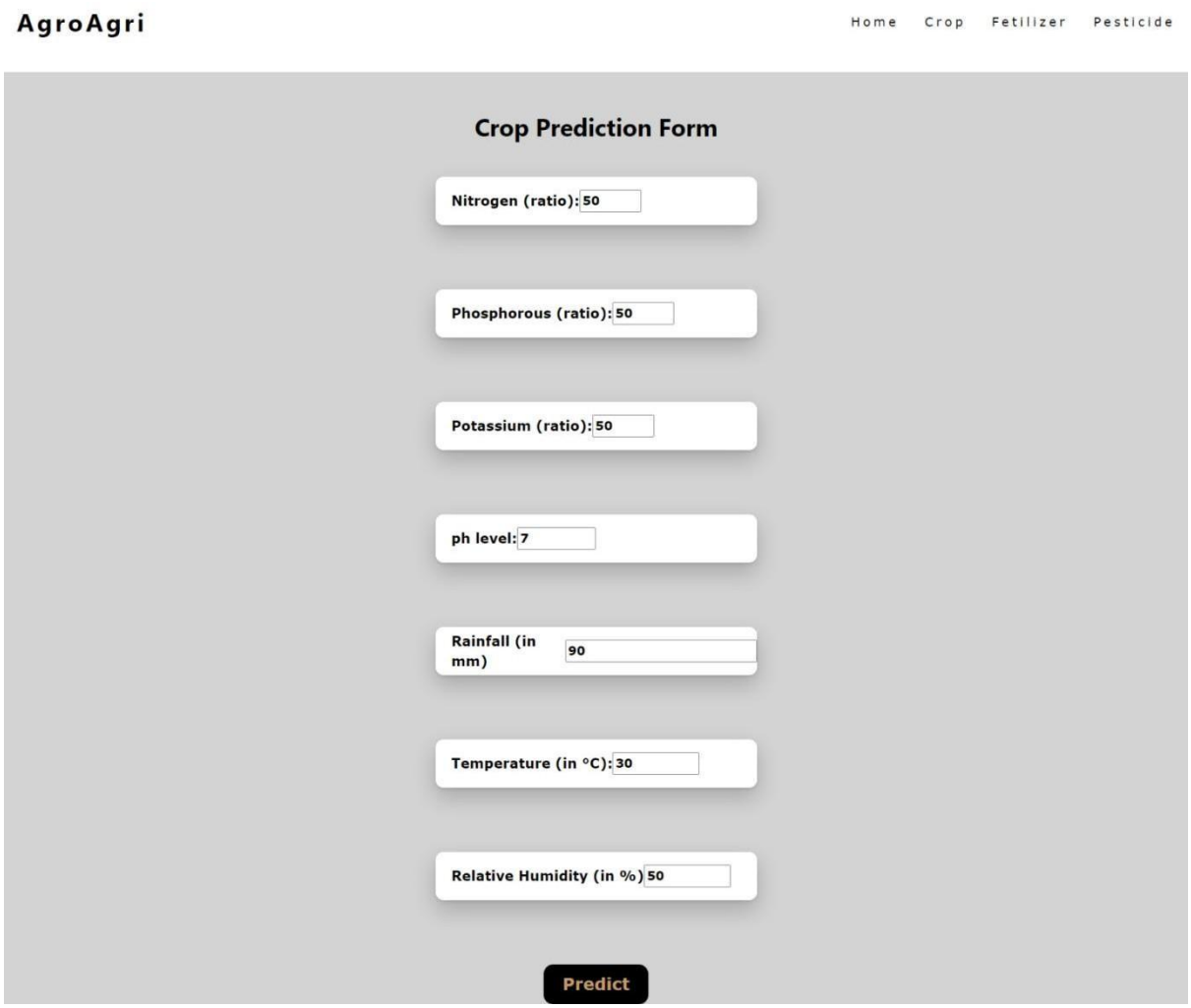


Fig 1.2 Crop Recommendation page

After entering all the corresponding values it recommends the suitable crops for our land , here it recommends mango. The predicted crop is given below for you reference.

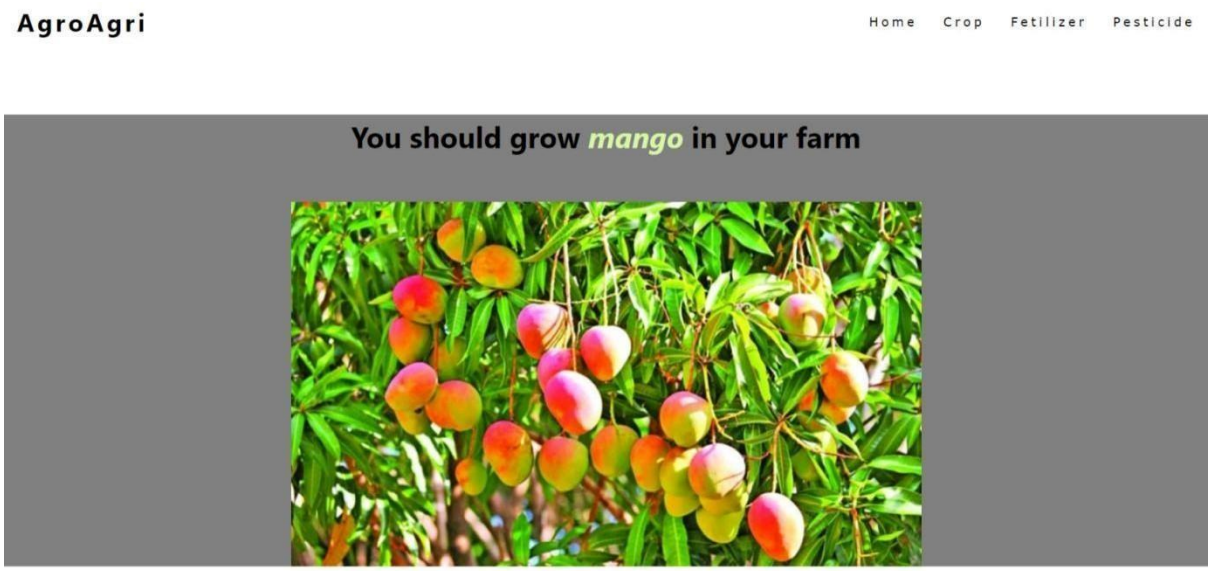


Fig 1.3 Crop Recommendation Output

The user can also use the "Fertilizer Suggestion" Service by entering the crop, N, P, and K values (Fig 1.2). After the user has gained knowledge of the soil's condition and can distinguish between the nutrients required and those present on their farm, "AgroAgri" will provide knowledgeable advise on the best organic fertilisers to employ given the soil's current state. For references, see figure 1.3.

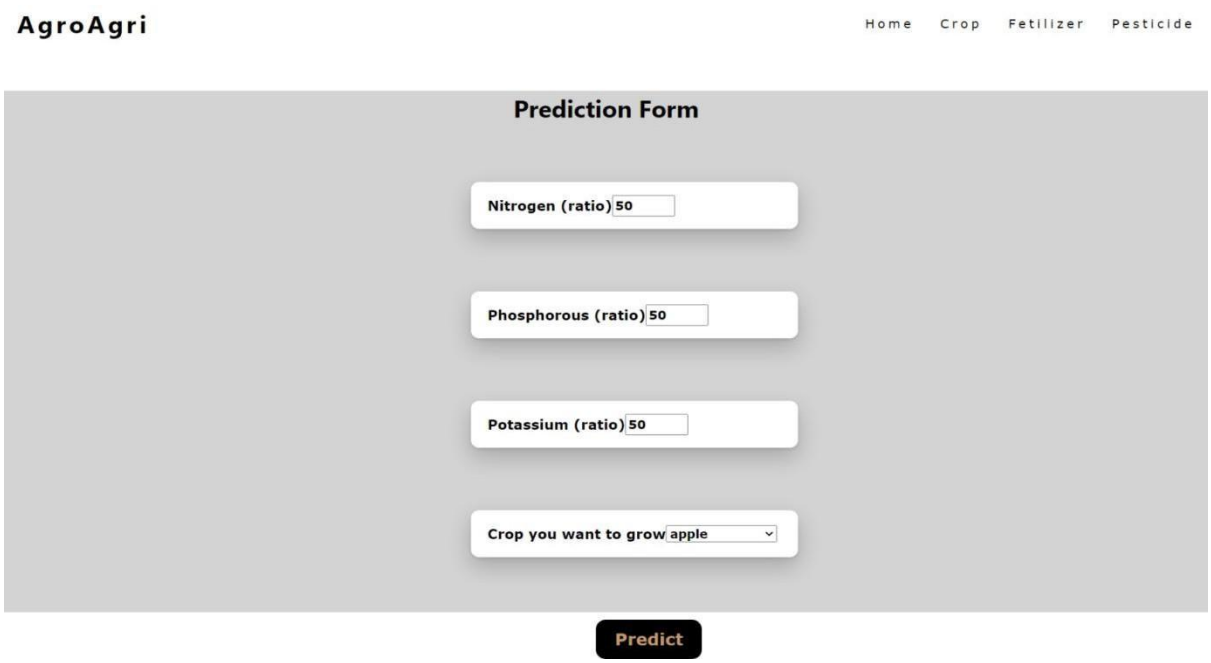


Fig 1.4 Fertilizer Recommendation Page

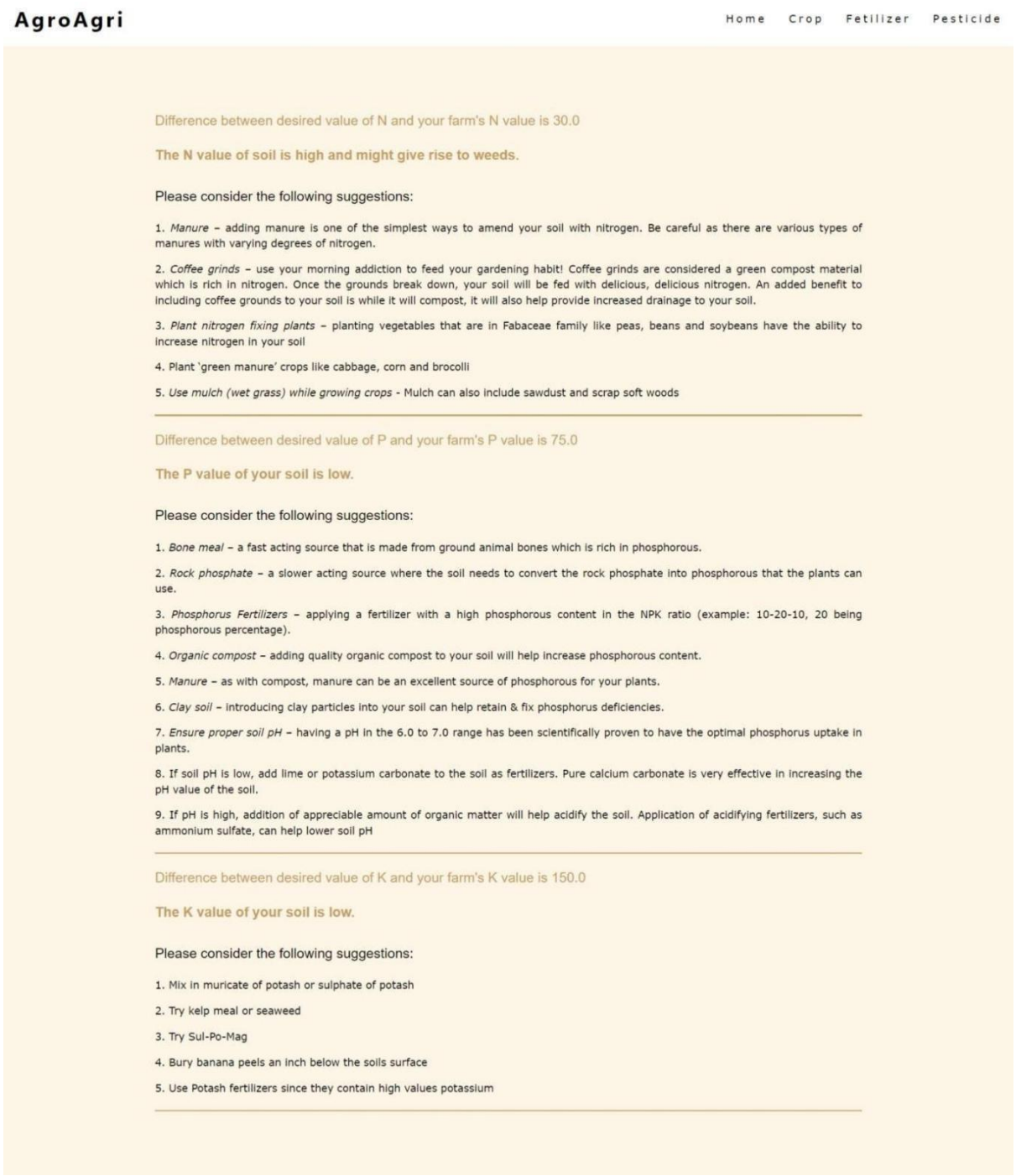


Fig 1.5 Fertilizer Recommendation Output

The third module, "Pesticide Recommendation," is depicted. Here, the user has the option to upload an image of the pest. If the user is not familiar with the pests, he or she can upload a picture of the pest that clearly depicts it (Fig 1.6), and "AgroAgri" will identify the insect and prescribe the 21 appropriate pesticides(Fig 1.8). The user must be careful to ensure that the image is not blurry as this could result in the pest being incorrectly identified.


Fig 1.6 Pesticide Recommendation Page

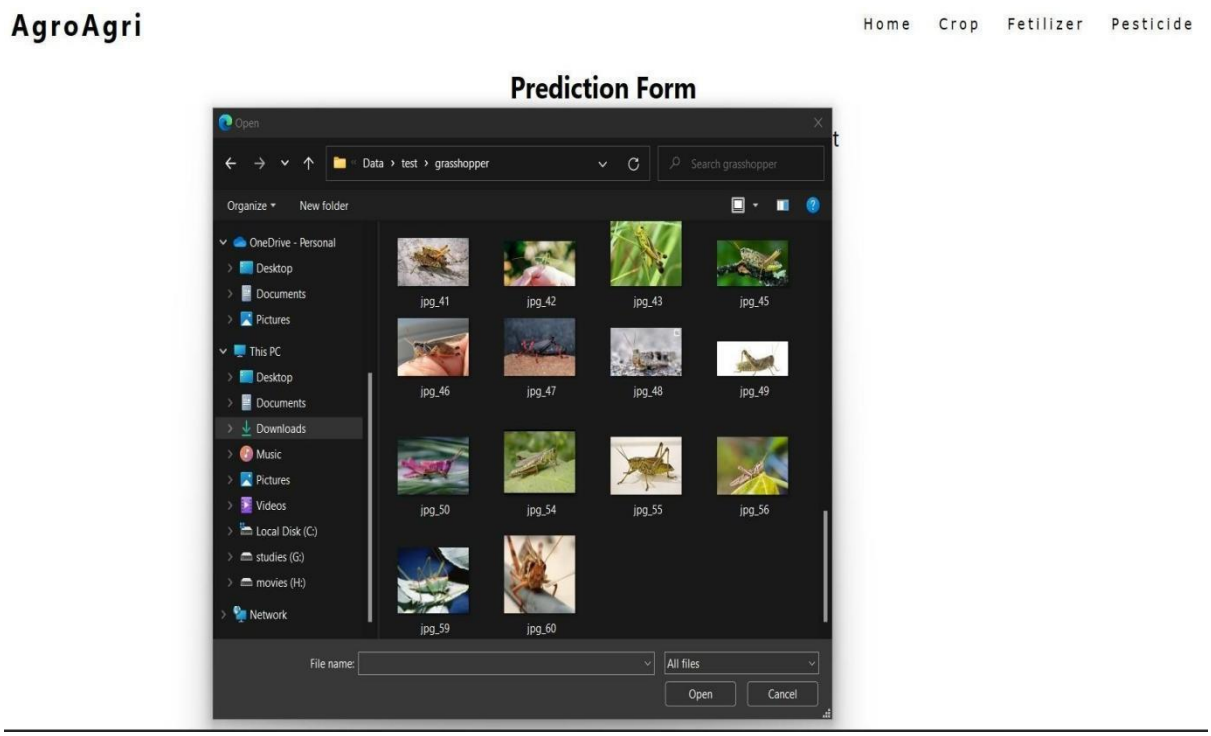


Fig 1.7 Uploading Image - Pesticide Recommendation


Fig 1.8 Pesticide Recommendation Output 1