

```
df = pd.read_csv('Data/fertilizer.csv')
nr = df[df['Crop'] == crop_name]['N'].iloc[0]
pr = df[df['Crop'] == crop_name]['P'].iloc[0]
kr = df[df['Crop'] == crop_name]['K'].iloc[0]
```

```
n = nr - N
p = pr - P
k = kr - K
temp = (abs(n) * 8)
max_value = temp / 10
if max_value == 0:
    if n < 0:
        key = 'High'
    else:
        key = 'Low'
elif max_value == 1:
    if p < 0:
        key = 'High'
    else:
        key = 'Low'
else:
    if k < 0:
        key = 'High'
    else:
        key = 'Low'
response = Markup(
    return render_temp
render disease predic
app.route('/disease-pr
def disease prediction
    title = 'Harvestify
    if request.method ==
        if 'file' not in
            return redi
        file = request
        if not file:
            return rend
        try:
            img = file.
```

```
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
- RESTART: C:\Users\RAFINA\Fertilizer recommendation system for disease predicti
on\app\app.py
Warning (from warnings module):
  File "C:\Users\RAFINA\AppData\Local\Programs\Python\Python310\lib\site-package
s\sklearn\base.py", line 329:
    warnings.warn(
UserWarning: Trying to unpickle estimator DecisionTreeClassifier from version 0.
23.2 when using version 1.1.3. This might lead to breaking code or invalid resul
ts. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-
limitations
Warning (from warnings module):
  File "C:\Users\RAFINA\AppData\Local\Programs\Python\Python310\lib\site-package
s\sklearn\base.py", line 329:
    warnings.warn(
UserWarning: Trying to unpickle estimator RandomForestClassifier from version 0.
23.2 when using version 1.1.3. This might lead to breaking code or invalid resul
ts. Use at your own risk. For more info please refer to:
https://scikit-learn.org/stable/model_persistence.html#security-maintainability-
limitations
* Serving Flask app 'app'
* Debug mode: off
[31m[WARNING: This is a development server. Do not use it in a production de
ployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
[33mPress CTRL+C to quit
```



[Home](#) [Crop](#) [Fertilizer](#) [Disease](#)

FERTILIZER RECOMMENDATION SYSTEM FOR DISEASE PREDICTION

Get Informed Decisions About Your Farming Strategy.

About Us



IMPROVING AGRICULTURE, IMPROVING LIVES, CULTIVATING CROPS TO MAKE FARMERS INCREASE PROFIT.

We use state-of-the-art machine learning and deep learning technologies to help you guide through the entire farming process. Make informed decisions to understand the demographics of your area, understand the factors that affect your crop and keep them healthy for a super awesome successful yield.

Our Services



CROP

Recommendation about the type of crops to be cultivated which is best suited for the respective conditions



FERTILIZER

Recommendation about the type of fertilizer best suited for the particular soil and the recommended crop



CROP DISEASE

Predicting the name and causes of crop disease and suggestions to cure it

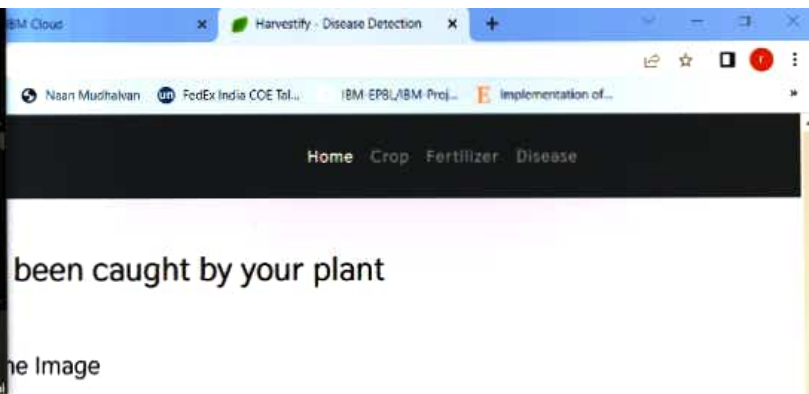


Find out which disease has been caught by your plant

Please Upload The Image

Choose File No file chosen

Predict



Choose File No file chosen

Predict





Find out which disease has been caught by your plant

Please Upload The Image

Choose File Oadab1d4-569...L.Mold 8689.JPG



Predict

Crop: Tomato
Disease: Leaf Mold

Cause of disease:

1. Leaf mold is caused by the fungus *Passalora fulva* (previously called *Fulvia fulva* or *Cladosporium fulvum*). It is not known to be pathogenic on any plant other than tomato.
2. Leaf spots grow together and turn brown. Leaves wither and die but often remain attached to the plant.
3. Fruit infections start as a smooth black irregular area on the stem end of the fruit. As the disease progresses, the infected area becomes sunken, dry and leathery.

How to prevent/cure the disease

How to prevent/cure the disease

1. Use drip irrigation and avoid watering foliage.
2. Space plants to provide good air movement between rows and individual plants.
3. Stake, string or prune to increase airflow in and around the plant.
4. Sterilize stakes, ties, trellises etc. with 10 percent household bleach or commercial sanitizer.
5. Circulate air in greenhouses or tunnels with vents and fans and by rolling up high tunnel sides to reduce humidity around plants.
6. Keep night temperatures in greenhouses higher than outside temperatures to avoid dew formation on the foliage.
7. Remove crop residue at the end of the season. Burn it or bury it away from tomato production areas.



Get informed advice on fertilizer based on soil

Nitrogen

Phosphorous

Pottasium

Crop you want to grow

Predict

The K value of your soil is high.

Please consider the following suggestions:

1. *Loosen the soil* deeply with a shovel, and water thoroughly to dissolve water-soluble potassium. Allow the soil to fully dry, and repeat digging and watering the soil two or three more times.
2. *Sift through the soil*, and remove as many rocks as possible, using a soil sifter. Minerals occurring in rocks such as mica and feldspar slowly release potassium into the soil slowly through weathering.
3. Stop applying potassium-rich commercial fertilizer. Apply only commercial fertilizer that has a '0' in the final number field. Commercial fertilizers use a three number system for measuring levels of nitrogen, phosphorous and potassium. The last number stands for potassium. Another option is to stop using commercial fertilizers all together and to begin using only organic matter to enrich the soil.
4. Mix crushed eggshells, crushed seashells, wood ash or soft rock phosphate to the soil to add calcium. Mix in up to 10 percent of organic compost to help amend and balance the soil.
5. Use NPK fertilizers with low K levels and organic fertilizers since they have low NPK values.
6. Grow a cover crop of legumes that will fix nitrogen in the soil. This practice will meet the soil's

2. Sit through the soil, and remove as many rocks as possible, using a soil sifter. Minerals occurring in rocks such as mica and feldspar slowly release potassium into the soil slowly through weathering.
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5. Use NPK fertilizers with low K levels and organic fertilizers since they have low NPK values.
6. Grow a cover crop of legumes that will fix nitrogen in the soil. This practice will meet the soil's needs for nitrogen without increasing phosphorus or potassium.



Find out the most suitable crop to grow in your farm

Nitrogen

40

Phosphorous

50

Pottasium

50

ph level

5

Rainfall (in mm)

80

State

50

ph level

5

Rainfall (in mm)

80

State

Tamil Nadu

City

Chennai

Predict

Harvestify



You should grow *papaya* in your farm