

# Agriculture Hub

Paddy, Bees , Cassava Disease Classification and Detection and Many More

## Paddy Disease Detection

Rice (*Oryza sativa*) is one of the staple foods worldwide. Paddy, the raw grain before removal of husk, is cultivated in tropical climates, mainly in Asian countries. Paddy cultivation requires consistent supervision because several diseases and pests might affect the paddy crops, leading to up to 70% yield loss. Expert supervision is usually necessary to mitigate these diseases and prevent crop loss. With the limited availability of crop protection experts, manual disease diagnosis is tedious and expensive. Thus, it is increasingly important to automate the disease identification process by leveraging computer vision-based techniques that achieved promising results in various domains.

[Paddy Disease Detection »](#)

## Cassava Disease Detection

Cassava is a rich, affordable source of carbohydrates. It can provide more calories per acre of the crop than cereal grain crops, which makes it a very useful crop in developing nations. As the 2nd largest provider of carbohydrates in Africa, cassava is a key food security crop grown by small-holder farmers because it can withstand harsh conditions. At least 80% of small-holder farmer households in Sub-Saharan Africa grow cassava and viral diseases are major sources of poor yields. The Cassava Leaf Disease detection system would help the farmers to detect the disease correctly and take preventive measures for the same

[Cassava Disease Detection »](#)

## Bees Disease Detection

Every third bite of food relies on pollination by bees. Honey beehive losses are quite prevalent due to the diseased bees. While many indications of hive strength and health are visible on the inside of the hive, frequent check-ups on the hive are time-consuming and disruptive to the bees' workflow and hive in general. By investigating the bees that leave the hive, we can gain a more complete understanding of the hive itself. For example, an unhealthy hive infected with varroa mites will have bees with deformed wings or mites on their backs. These characteristics can be observed without opening the hive. We aim to detect healthy and various types of diseased bees such as bees having ant problems and varro and hive beetles

[Bees Disease detection »](#)

## Predictions

[Predict](#) [All Predictions](#)

Prediction for 107010.jpg

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bacterial\_pinacle\_blight : 0.9999995

dead\_heart : 4.1877476e-07

normal : 7.050745e-09

bacterial\_leaf\_blight : 8.471467e-10

All Predictions

[Predict](#) [All Predictions](#)

All Predictions in Percentages

FileName

Filter

FILENAME	DEAD HEART	BACTERIAL PINACLE BLIGHT	BLAST	TUNGRO	DOWNY MILDEW	NORMAL	BACTERIAL LEAF BLIGHT	BACTERIAL LEAF STREAK	HISPA	BROWN SPOT
104762.jpg	0.0	0.254	90.395	0.0	9.305	0.0	0.015	0.023	0.001	0.007
107010.jpg	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104184.jpg	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102064.jpg	0.0	0.001	98.34	0.324	0.049	0.0	0.0	0.0	0.0	1.287
102782.jpg	0.0	0.0	0.555	0.001	0.001	0.0	0.028	0.0	99.266	0.149
109515.jpg	0.0	0.001	51.867	48.117	0.01	0.0	0.001	0.001	0.0	0.002
104113.jpg	98.021	1.979	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108829.jpg	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
train-cmd-794.jpg	0.0	0.032	20.311	29.325	24.636	0.0	0.084	0.014	25.582	0.013
train-cgm-8.jpg	0.002	5.337	94.587	0.001	0.034	0.0	0.001	0.003	0.034	0.002
110346.jpg	0.0	0.0	0.002	0.0	0.0	0.001	0.0	0.0	0.0	99.997
104564.jpg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
106846.jpg	0.0	0.0	0.129	90.985	0.0	0.0	0.0	0.0	0.0	8.885
108573.jpg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
100078.jpg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
102303.jpg	0.0	0.0	1.168	0.001	98.83	0.0	0.001	0.0	0.0	0.0
110305.jpg	0.0	0.002	0.004	0.0	99.820	0.0	0.152	0.004	0.002	0.0

### Predictions

[Predict](#) [All Predictions](#)

Prediction for 030\_471.png



antproblems : 0.99791735

varo hive beetles : 0.0016731352

healthy : 0.00040949308

## Predictions

[Predict](#)[All Predictions](#)

Prediction for train-cmd-2081.jpg



cmd : 0.9999956

cbsd : 2.8873555e-06

cbb : 1.1197175e-06

healthy : 2.5112527e-07



# Architecture

