

In this project, we aim to develop an intelligent affordable system which leverages IoT and Machine Learning techniques for solving the current problems in farming.

Suitability prediction: The farmers in India follow traditional techniques which involves using the generalized solutions provided to them or continue to cultivate the crops which have been cultivated for years. The problem with this approach is that generalized solution may not always be useful for maximising the yield as there is no consideration of field-variability. Using IoT and Machine Learning techniques, the sensor data collected can be used to provide suitability recommendation which narrows the choice of crops to be grown based on the soil characteristics thus, increasing the yield.

Crop Monitoring: Uploading the sensor data to the Cloud can be used for monitoring. Using cloud services, an SQL query can be executed which, if matches the conditions in which the farmer must be notified, informs the farmer using the method which the farmer is comfortable with e.g. SMS, Email etc. Also, this data can be accessed by the farmer anytime, anywhere.

Disease prediction: About one-third of India's yield is destroyed because of the cases of different diseases. Using ML, this problem can be solved.

Cloud storage: As the data is collected, it gradually will increase the accuracy of the recommendation it will provide. Also, the data gets more personalized thus, eliminating the drawbacks of traditional systems.