

## This 'predator' drone spots farm pests

Bharat Yagnik | TNN | Feb: 18, 2019

**AHMEDABAD:** What can a drone do in farming with its flying capacity and camera? In the hands of 22-year old Devansh Acharya and Shrey Dalwadi, students of BE (IT) at Charotar University of Science and Technology (CHARUSAT), it can pick up pest spread, measure water precipitation, assess growth and above all, it can fly on a pre-decided path without a pilot!

The two students from Patan and Vadodara respectively, under the banner of Peregrines Innovations — inspired by one of the most feared birds of prey — has equipped the drone with NIR(Near Infrared) sensors and multi-spectral cameras that can capture high-quality data from farms in real-time that can help in decision-making. “The idea started taking shape when during our games near farms, we saw farmers at close quarters and also interacted with them to understand their issues. We decided to harness technology such as machine learning and imaging and developed the camera. We also developed the software from scratch,” said Devansh.



Explaining the process, the team members said that once a farm is selected, the drone is programmed for seven scans - contour map, orthomosaic, elevation, digital terrain, 3D model, vegetation and geometric map. The camera's imaging captures multiple data at one go that can provide crop health report, pinpointing location of pest infestation and water retention in different parts of the farm.



“We have developed an algorithm which is capable of identifying anomalies from imaging - pinpointing location of disease from roots to leaf with accuracy of 97%, which is higher than a number of similar technologies employed in developed countries,” said Shrey.

The drone has been tested in India and the US in crops such as wheat and tobacco. The data collected can be used to assess the best crop for specific soil, water availability and other factors, team members added.

**Source:** <https://timesofindia.indiatimes.com/city/ahmedabad/this-predator-drone-spots-farm-pests/articleshow/68039590.cms>