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Implementation of drone in agriculture

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The world population is expected to reach 9 billion by 2050, so agriculture will continue to increase. It is very important that everyone needs food. Agriculture is the sector with the greatest potential as it currently faces many challenges. One of the biggest problems is the lack of agriculture. Other issues or problems include extreme weather conditions, inadequate and inefficient fertilization, illnesses, diseases, allergies, and other health issues resulting from the use of chemicals (fungicides, insecticides, insecticides, etc.) or insect/animal bites. The use of agricultural technologies such as drones may face many challenges, both large and small. Drones can apply plant protection 50 times faster. The main applications of drones in agriculture are soil inspection and accurate spraying of liquid, crop monitoring, soil and landscape analysis, animal health, irrigation, rainfall and bird management.

Keywords: Irrigation, fertilizer, infection, drone, pesticide

Crop Monitoring

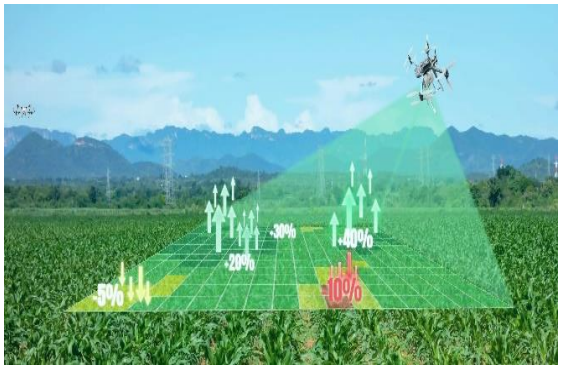
Crop management is the monitoring of crops from planting to preparation for harvest. This includes timing fertilization, monitoring for pests, and monitoring the effects of weather conditions. The only way farmers can guarantee on-time harvests is to monitor crops, especially when planting seasonal crops. A mistake at this point may cause the crop to fail. Crop monitoring allows you to understand and prepare for the upcoming farming season. Drones that use infrared cameras to monitor fields can help monitor crop quality. Farmers can act on the information they receive in real time to improve plant health.

Plantation

Drones can help plant trees and work that was previously done by farmers. These systems will help you save energy and labor costs. It is expected that large tractors will be replaced by budget-friendly drones in the future, as they reduce environmental damage and emissions.

Soil and Field Analysis

Agricultural drones can analyze soil and fields for better planning. They can be used to install sensors that measure soil moisture, topography, soil condition, soil erosion, soil nutrient concentration and soil fertility. Additionally, drones can accurately locate and target water sources in the area.

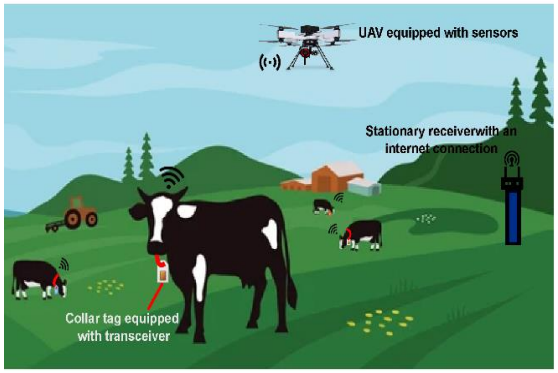


Seeding Process

Farming is described as labor-intensive and time-consuming as it requires skill to complete its tasks. Since cultivation is a passion, it specifically requires people to work. To facilitate this work, drone technology is being used to sow the seeds of various crops. Drones can plant seeds quickly and effectively because they have tanks, lasers, and other equipment built into them.

Livestock Management

Cattle can be monitored and controlled by drones because their sensors have advanced infrared cameras that can quickly identify sick animals and take appropriate measures. Therefore, the impact of drones on precision milk production will soon be the same.

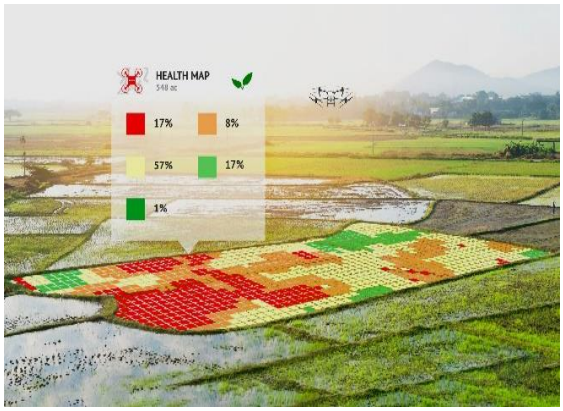


Crop Spraying

Agricultural drones can spray crops quickly compared to traditional methods because they have water tanks that can hold fertilizers and pesticides. Therefore, drone technology has the potential to usher in a new era in precision agriculture.

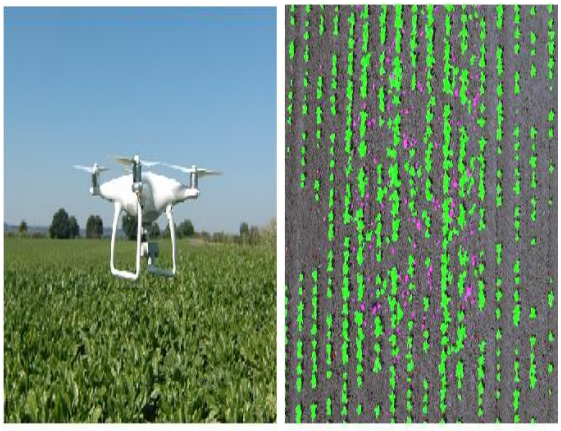
Check Crop Health

Agriculture is a major industry involving land. Regular surveys are needed to monitor the condition of the soil and plant. If done manually, this process can take several days, and even then, human error can occur. A drone can complete the same task in a few hours. Drones can use infrared grids to collect data on crops and soil.



Weed Control

Unwanted plants called weeds grow in crops and can cause many problems. They compete for available resources such as water and even space, which inhibits growth and crops. Image-recording drones can be used to create detailed vegetation maps showing where pesticides are needed and field-wide data.



Wrapping Up

In the long term, drone technology will revolutionize the agricultural industry. Many Indian companies have also shown interest in this business and are ready to invest in affordable drones that will benefit farmers and also provide employment opportunities to rural youth and improve farmers' skills. But the economy needs to be reformed, including farmers' needs, population growth, trade policies and the reduction of arable land. Qualified pilots are also needed to develop the untapped drone industry. The revolutionaries are our farmers and drone pilots. Overall, it will be interesting to see how things develop over time and what the use of drones is.

Here is the use of drone technology in agriculture. This new technology can help farmers reduce time and increase productivity. Drone use in agriculture is expected to increase as the industry grows, so it will be useful to understand how to use this technology effectively.

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