



LEDO INDIA BUSINESS SOLUTION LLP AGRICULTURE DRONE SERVICES





Why Drone For Agriculture ??

Drones are increasingly used in agriculture due to their ability to improve efficiency, reduce costs, and provide more accurate data. Here are some of the key reasons drones are valuable in agriculture.

- Increase crop yields
- Costs saving inputs.
- Time Efficiency
- Water usage resources
- Labour Reduction
-

Sensor Used In Agriculture Drones



Multispectral Sensor

- Crop monitoring
- Precision irrigation
- Soil Health



Hyperspectral Sensor

- Plant health measurement
- Water quality assessment
- Full spectral sensing



LIDAR Sensor

- Useful in 3d digital surface modeling
- Surface Variation Detection
- Flood mapping



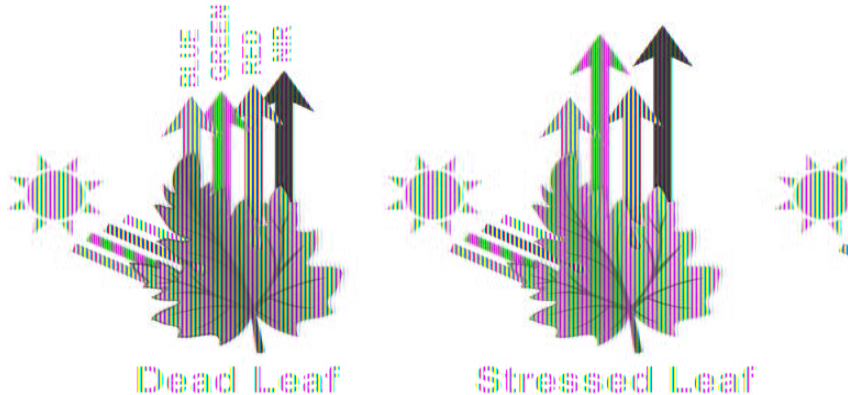
Thermal Sensor

- Heat Signature Detection
- Livestock Detection
- Surveillance
- Water source Detection
- Emergency Response

HOW ARE DRONE BEING USED IN AGRICULTURE.?

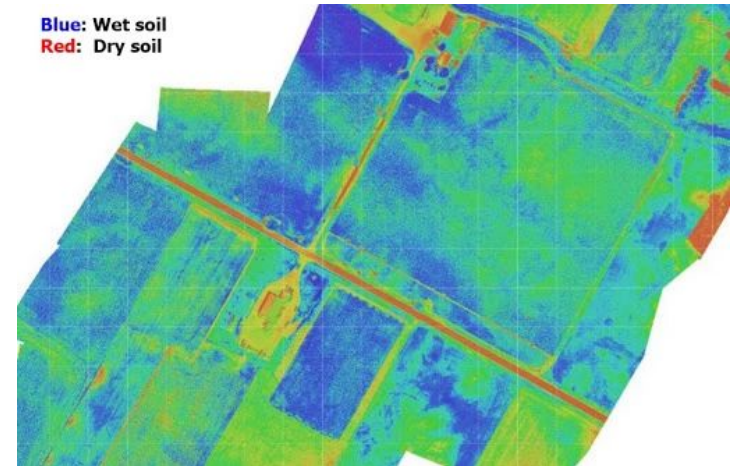
Monitoring Plant Health

- Drone equipped with special imaging equipment called Normalized Difference Vegetation Index.
- Software analysis can be used to change value in order to reflect the specific crop type and even in which stage of life a specific crop is in.



Monitoring Field condition

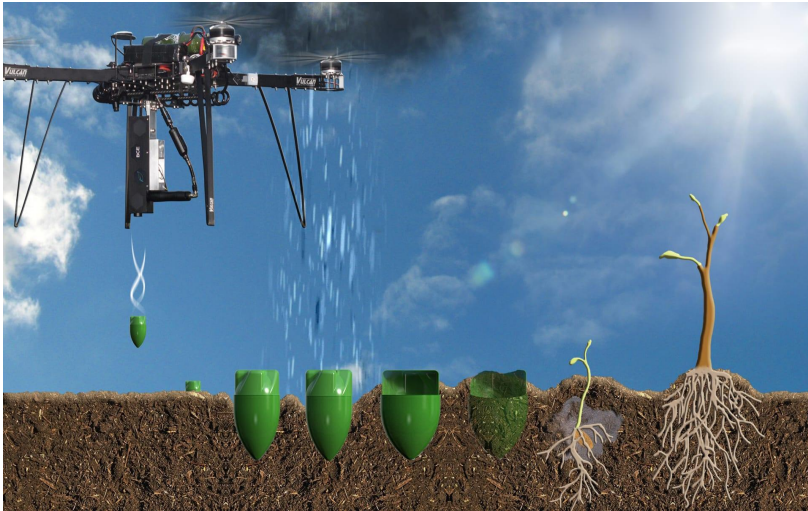
- Drone accurate field mapping.
- Having information on field elevation is useful in determining drainage patterns and wet/dry spots which allows for more efficient watering techniques.



HOW ARE DRONE BEING USED IN AGRICULTURE.?

Planting and seeding

- **Efficient Aerial Seeding** : Drones can quickly plant seeds over large, hard-to-reach areas, saving time and labor.
- **Precision and Cost** -Effectiveness: Drones ensure precise seed placement, reducing wastage and optimizing crop yields.



Spray Application

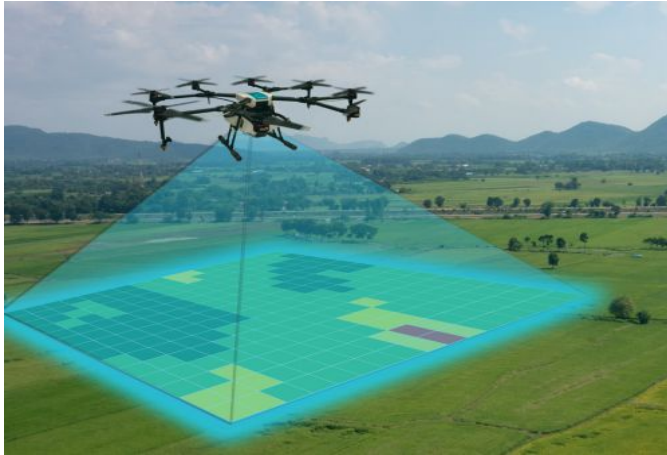
- **Precise Targeting**: Drones use GPS and sensors to spray pesticides, fertilizers, or herbicides precisely on specific areas, reducing chemical usage and minimizing environmental impact.
- **Cost and Time Efficiency**: Drones can cover large areas quickly, reducing labor costs and the time needed for manual spraying, while also reaching difficult terrain with ease.



HOW ARE DRONE BEING USED IN AGRICULTURE.?

Soil Health Monitoring

- **Multispectral Imaging:** Drones equipped with multispectral sensors capture data on soil moisture, temperature, and nutrient levels, helping assess soil health.
- **Mapping Soil Variability:** Drones create detailed maps that highlight soil differences across a field, guiding targeted interventions for optimal soil management.



Security

- **Farm Surveillance:** Drones provide real-time aerial monitoring of farms, helping detect and prevent theft, vandalism, or unauthorized activity by surveying large areas quickly.
- **Wildlife and Intruder Detection:** Drones can identify and track wildlife or potential intruders (e.g., poachers) on farmland, enhancing security without requiring physical presence.



HOW ARE DRONE BEING USED IN AGRICULTURE.?

Irrigation Management:- In irrigation management, drones work through the following process:

- **Data Collection:** Drones equipped with thermal or multispectral cameras fly over the field, capturing real-time data on soil moisture levels, temperature, and crop health.
- **Analysis:** The collected data is processed using specialized software to create detailed moisture maps, highlighting areas with water stress or over-irrigation.
- **Actionable Insights:** The farmer uses these insights to adjust irrigation systems, ensuring precise watering for different zones of the field, optimizing water usage and reducing waste.
- **Ongoing Monitoring:** Drones can perform regular aerial surveys to track changes in soil moisture and ensure the irrigation system remains efficient over time.



Benefits of Drones in Farmers' Lives



1. Increased Efficiency and Time Savings

- Drones cover large areas quickly, reducing time spent on tasks like crop monitoring and field inspections, allowing farmers to focus on other critical tasks.

2. Real-Time Data for Smarter Decisions

- Drones provide immediate, high-resolution images and data on soil health, crop conditions, and irrigation needs, helping farmers make quick, informed decisions.

3. Cost Reduction

- By reducing the need for manual labor and optimizing the use of resources like water, fertilizers, and pesticides, drones help farmers cut down on operational costs.



Benefits of Drones in Farmers' Lives



4.Improved Crop Health and Yields

- Early detection of pests, diseases, and nutrient deficiencies leads to timely intervention, improving crop health and increasing overall yields.

5.Sustainability and Eco-Friendly Practices

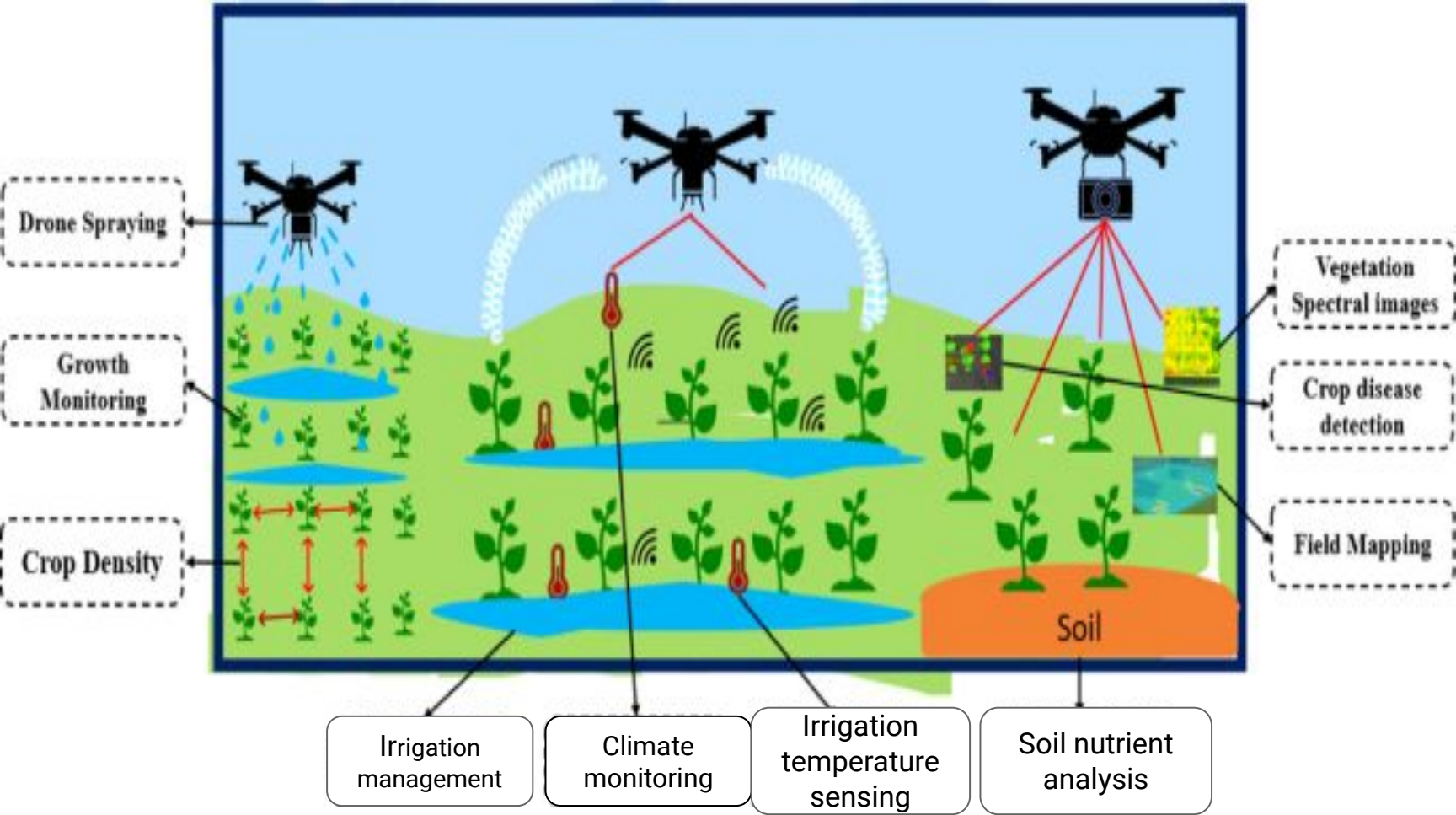
- Drones enable precise application of fertilizers and water, reducing waste and minimizing environmental impact, leading to greener, more sustainable farming.

6.Precision Farming for Maximum Productivity

- Drones help farmers apply resources exactly where needed, optimizing input use and improving the overall efficiency of farming operations.

7.Access to Remote Areas

- Drones can easily monitor hard-to-reach areas of a farm, eliminating the need for costly or dangerous manual labor in difficult terrain.



Precision And Smart Farming By Drone



BENEFITS OF AGRICULTURE DRONES

Increases Farming Yield



Quick decision-making by farmers



Drones are easy to maintain



Helps save water and other agri-resources



Allocation of effective and efficient farming resources



99% accurate crop & field data gathering



Helps collect evidence for insurance claims during crop failures



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Thank you