

IDEATION

IOT BASED SMART CROP PROTECTION FOR AGRICULTURE

Soil condition monitoring:

Soil condition is an essential indicator allowing growers to decide on the accurate planting and crop collection time. With IoT-based sensors performing soil condition monitoring, growers get instant warnings of soil salinity and moisture. Other metrics have an air temperature and soil temperature system that allows farmers to schedule watering times and predict the chances of pests. Soil condition monitoring needs a combination of software and hardware systems to work in real-time and pass the warning to users on any changes.

Weather monitoring:

Weather monitoring in farming is the most used application domain for IoT. In crop farming, yields are dependent on environmental conditions, which are naturally volatile. Weather monitoring systems installed directly in the farming field warn farmers of varying weather conditions such as precipitation, temperature, solar radiation, wind speed, and humidity.

Smart Irrigation on Agriculture Land

In smart irrigation, automated sprinkler systems or intelligent pumps are used. Soil moisture sensors are used in different areas to get the moisture of the soil in agricultural land. Based on the results from the soil moisture sensors, the intelligent pumps or intelligent sprinklers are turned On/Off.

Livestock Monitoring

Internet of Things devices can be used to collect data regarding the location, well-being, and the health of the cattle. This data can be further used for identification of the sick animals so that they can be separated from the others, thereby preventing the spread of diseases. This Live Stock Monitoring also lowers the labour costs with the help of Internet of Things based sensors.

Drone Monitoring

Drone monitoring is helping large farms to reduce the cost of monitoring, or the use of Geo-positioning sensors can set a stable path. Moreover, the data collected from these drones are sent back to the server where it can be used for analyzing and decision-making.