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(57) Abstract :

The present invention discloses an intelligent crop monitoring device (ICMD), is a solution for modern agriculture, designed to address the challenges faced by farmers in monitoring and managing their crops efficiently. Leveraging the latest advancements in Internet of Things (IoT) and machine learning technologies, the ICMD integrates sensors for temperature, humidity, and soil moisture levels to gather real-time data from agricultural fields. This data is transmitted to a centralized server, where it undergoes analysis using the Modified Learning based Field Analysis Strategy (MLFAS), a novel machine learning approach developed specifically for agricultural applications. The ICMD empowers farmers with actionable insights for optimizing crop management decisions, reducing manual labor, and enhancing productivity. With features such as emergency alert notifications and precise location tracking, the ICMD offers a comprehensive solution for sustainable and effective crop monitoring, ultimately revolutionizing the agricultural industry. The figure associated with abstract is Fig. 1.

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