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(57) Abstract :

The invention discloses an IoT-based system for smart agricultural fertilizer management comprising soil nutrient sensors (101), weather station (102), IoT gateway (103), cloud analytics platform (104), farmer interface (105), and automated dispensing unit (106). The system enables real-time monitoring, predictive analytics, and automated fertilizer application. By integrating sensors, wireless communication, and AI-driven analytics, the invention optimizes fertilizer use, enhances crop yield, reduces environmental impact, and promotes sustainable agriculture through automation and data-driven decision making.

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