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Development of IoT enabled polyhouse monitoring system

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Abstract:

Agriculture using the traditional farming techniques is lacking the proper quality and quantity of the crops. It is resulting in the lowering of farmers' income. It is necessary to overcome the problem and find the immediate solution. Polyhouse farming is one technique that can increase the crop quality. It operates under the controlled environment that involves continuous monitoring and analysis of factors such as temperature, humidity, light and CO₂. The house is completely polythene covered which reduces the investment and maintenance cost. The proposed system is completely IOT based polyhouse system which can bring precision in the farming. This system has different sensors to analyse various parameters. The system helps in monitoring the soil quality and maintaining the minerals required for the crops. Fertilisation is provided to the plants through drip irrigation. The house is ventilated without gripes of pests which could eliminate the usage of pesticides. It can assist the farmers in the decision making and proper crop cultivation. The system brings out the quality in the crop to the maximum extent and helps in increasing the production. It also helps in conserving the soil and water resources.

Keywords:

Polyhouse, Internet of Things, Monitoring System, Agriculture