

SIMULATOR TEKNIK FERTIGASI PADA SISTEM HIDROPONIK.

(Fertigation Technique Simulator In Hydroponic Systems)

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ABSTRACT

The increasing of Indonesia's population makes the need of food becomes highly needed. However the farming land is limited due to a conversion. This condition encourages the writer to find a strategic problem solving. Hydroponic plantation system by using fertigation technique offers an innovative solution in plant cultivation. Some challenges such as blockages and leaks in fertigation technique need to be addressed. The use of digital twin (DT) technology through 3D simulators can improve real-time monitoring and management of hydroponic systems, detect problems earlier, and increase production efficiency. Therefore by using 3d simulator that describes the work of fertigation technique has important role of digital twin technology implementation. It can also be a medium in improving the efficiency or punctuality in watering and providing nutrition to the plants. This innovation hopefully can be a potential to support food endurance and environmental sustainability in Indonesia.

Keywords: *fertigation, hydroponic system, Digital Twin, 3D animation*