

# Necessity of Internet of Things (IoT) Devices in Hydro Culture Farming

**Type:** Short Communication

**Received:** November 21, 2023

**Published:** November 23, 2023

**Citation:**

Sunil Khilari. "Necessity of Internet of Things (IoT) Devices in Hydro Culture Farming". PriMera Scientific Engineering 3.6 (2023): 24-25.

**Copyright:**

© 2023 Sunil Khilari. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Sunil Khilari<sup>1\*</sup> and Chandrani Singh<sup>2</sup>**



<sup>1</sup>Associate Professor, Sinhgad Institute of Management, Pune, India

<sup>2</sup>Director-MCA, Sinhgad Institute of Management, Pune, India

**\*Corresponding Author:** Sunil Khilari, Associate Professor, Sinhgad Institute of Management, Pune, India.

To attract every farmer to do agriculture business digitally and smart agriculture to get more productivity without soil or land. There is dire need of Internet of Things (IoT) devices in Hydro- culture Farming sector in India., where as agriculture is backbone of the country. Indian Agriculture is facing several problems such as small and fragmented land holdings, fertilizers, pesticides, chemicals used for agriculture. The solution is hydroponic system. Hydroponics is a method in which plant grow without using soil and gives you more production than soil farming within less time. However, purity of water control by this system which can result to growing of plant. Microcontroller automatically maintains purity level in water solution using turbidity sensor. We have to develop and implement Internet of Things (IoT) devices to solve above difficulties. Hydroponic system does not required land so its land free farming ,Human being demanding quality food which is free from chemicals and pesticides Here we can go organic ,it should done in controlling environment .you also can do it at garden, balcony or in some controlling area. Such research paper is basic study of Internet of Things (IoT) devices used in Hydroponic System and its Impact on Productivity of Agricultural Sector upcoming as a Hydro culture Farming.

Below depicted status between Soil depend Agriculture Vs. Hydroponic Agriculture:

<b>Soil depend Agriculture</b>	<b>Hydroponic Agriculture</b>
	
Good top soil is required	No soil is required
Plant necessity to be irrigated to control water stress.	Automatic irrigation system no water stresses.
Crop productivity unpredictable	Crop productivity is reliable

More production cost	Less production cost as compared to soil based farming
Due to organic fertilizers such as manure it is possible to produce organic vegetables	Due to artificial nutrients are always used hydroponics production is not organic

With the help of various IoT devices, we can controls temperature and humidity, checks pH level of water, photo-resistor, controls emit of light, pesticide, insecticides, water consumption etc.

Real Significance of such hydroponics technology is enhancing farming productivity. Basic advantages of this system you can do farming at very small place and without soil. This system is profitable with great benefit to humanity. People in cities can grow gardens in their small place. The soilless agriculture, a system to control and monitoring hydroponic culture and brought significant innovation for agriculture applications. As one of typical applications, more and more people realize the application of the IoT (Internet of Things) will bring extensive development to the digital life. An idea of IoT device of hydroponic can be connected with social communication platform, which can realize amazing dream that farmers can interact with their hydroponic plants on line through a mobile. It is unique system which can improve the agriculture productivity and save the many more lives of human being from starvation.