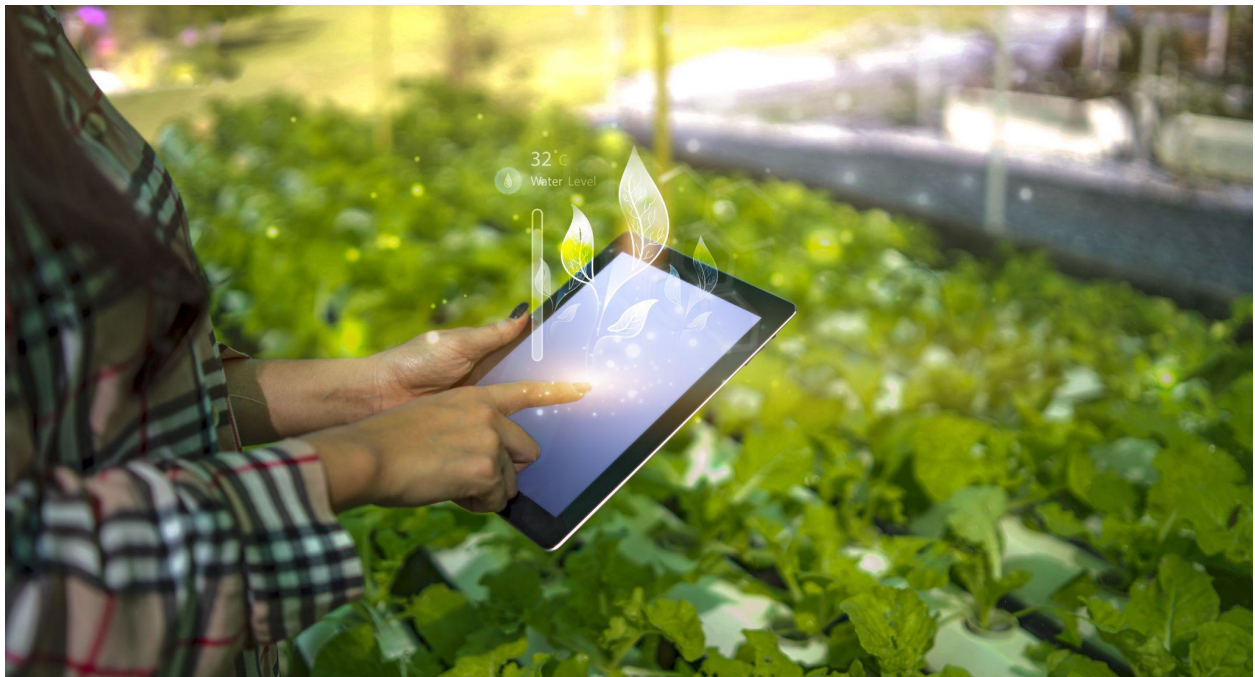


# Adopting LoRaWAN for Wireless AgTech Solutions



By **Neda Vaseghi**, CEO | October 25th, 2023

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In today's world, wireless technology allows for flexible and convenient connection between devices. Some of the advantages of wireless systems include:

- **Ease of installation:** Easier set up compared to wired solutions. No cables or wires involved.
- **Mobility:** Ability to move sensors around in an operation
- **Scalability:** Easily expand by adding more devices as needed
- **Cost Efficient:** Typically cost less compared to wired devices as they typically require less material

- Safety: Wireless technology enhances safety by eliminating trip hazards and reduce risk of damage to cables

IoT (Internet of Things) in smart agriculture involves the use of connected devices, sensors and data analysis to improve efficiency, and productivity. It allows for connection of various sensors, devices, and equipment to collect data, monitor and control and ultimately make insightful decisions from data.

There are various wireless technologies, including but not limited to, Wi-Fi, bluetooth, cellular 3G, 4G, 5G, Zigbee, LorRaWAN and much more. LoRaWAN (Long Range Wide Area Network) is one of the wireless technologies used for IoT.

### **Why is LoRaWAN advantageous for AgTech?**

LoRaWAN provides long-range, low-power communication and a great choice for farms, indoor farms and cannabis cultivation for a number of reasons:

- Low Power Consumption: LorRaWAN units can typically operate for extended periods without frequent battery replacements, reducing cost & maintenance.
- Long Range Communication: LoRaWAN technology offers extended communication range, which is particularly useful in both indoor and outdoor agriculture.
- Penetrate of Obstacles: Signals are known to penetrate through obstacles such as walls, ceilings, and vegetation.
- Cost Effective: LoRaWAN sensors are flooding the market and priced significantly less compared to wired solutions.
- Data Security: The built in security of LoRaWAN helps protect the integrity and privacy of data transmitted, ensuring sensitive data is secure.

## Microclimates Wireless Solution

[Microclimates](#) consciously opted for LoRaWAN as the wireless solution for a variety of compelling reasons. Our strategic partnership with [Veeva](#) is instrumental in realizing this choice, as their innovative edge computing platform also serves as the gateway for LoRaWAN communication. This collaboration empowers us to deploy LoRaWAN wireless sensors and control mechanisms seamlessly across diverse operational settings.

In 2022, we marked a significant achievement with the successful launch of a state-of-the-art system at [Hurst Greenery](#) in Missouri. Microclimates' environmental automation system now oversees the climate monitoring and HVAC controls in all 21 greenhouses at Hurst Greenery, making use of the robust LoRaWAN wireless communication technology.

According to [Blake Hurst](#), the owner of Hurst Greenery, the Microclimates system has not only simplified the initial setup but also make ongoing monitoring and management a breeze, He notes, "We quickly recognized savings and are now scaling up given the benefits - healthier plants, increased revenue, energy and water cost savings, and productivity gains given the automation and ability to remotely monitor and control all our greenhouses."

Contact us to [schedule a demo](#) for a total wireless environmental automation solution.