



THE FUTURE OF SUSTAINABLE FARMING



OUR GOAL

2 ZERO HUNGER



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



17 PARTNERSHIPS FOR THE GOALS



TECHNOLOGY INNOVATIONS DRIVING SUSTAINABLE AGRICULTURE

Sustainable food production is a critical global challenge. Agritech trends encompass innovations driving sustainable agricultural practices across the value chain, helping farmers and consumers save the environment while creating business opportunities.



Who are we?



Murata Manufacturing Co., Ltd. is a worldwide leader in design, manufacture, and sale of ceramic-based passive electronic components & solutions, communication modules, and power supply modules. Murata is committed to pioneering advanced electronic materials and high-density modules, operating with a global presence through our dedicated employees and manufacturing facilities.

As the leading manufacturer, Murata dominates over half the global market share of wireless connectivity modules. This expertise extends to various applications including low power sensor nodes, gateways, software development, etc. Murata's focus transcends beyond module design, to identify optimal approaches for complete end-to-end solutions.



Murata would like to contribute to solving **environmental problems** caused by **climate change around the world** and that adapts to **smart agriculture**, helping to make the world greener.

Together, Murata and ViTrox want to contribute to the advancement of society and the well-being of humankind through compassionate *smart agriculture innovation*.



ViTrox has ventured into **precision smart farming** as it aims to **revolutionize the regional agriculture industry** by designing, creating and promoting innovative, high-tech, **smart agriculture** solutions.



Established in 2020, ViTrox Agritech Sdn. Bhd. is a subsidiary of ViTrox Corporation Berhad, a renowned Malaysian semiconductor company with 20+ years of experience. Specializing in precision farming equipment, our operations in Penang leverage on this expertise to design and manufacture our own machines.

Our innovative technologies are tailored to address key agricultural challenges such as labor shortages, yield inconsistencies, and adverse weather effects. With a dedicated team of engineers and agronomists, we collaborate closely to ensure practical and effective solutions. We are equipped to serve all regions of Malaysia, offering robust after-sales support.





SMART AGRICULTURE JOINT SOLUTION EXAMPLES

Murata Soil Sensor x V-One Cloud for Data Analysis

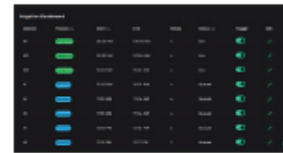
Enhance Your Agricultural Insights with Advanced Sensor Technology



VITrox V-One Cloud



Murata Soil Sensor



VITrox Intelligent Irrigation System
(V-I²)

Our Solutions

Discover the power of data-driven agriculture through the seamless integration of **Murata's soil sensor** with **ViTrox Agritech's V-One Cloud** platform. This cutting-edge combination provides farmers with real-time data analysis, enabling more accurate troubleshooting and comprehensive trend analysis.

By leveraging V-One Cloud's robust analytics, users can identify potential issues before they become problems, optimize irrigation schedules, and make informed decisions to improve crop yield and quality.

This collaboration between Murata and ViTrox Agritech is designed to bring precision agriculture to the next level, ensuring that your crops receive exactly what they need, when they need it.

The integration of **Murata's advanced soil sensors** with **ViTrox Agritech's Intelligent Irrigation System (V-I²)** enhances how farmers manage soil-based irrigation.

By providing real-time moisture data, the system allows farmers to set precise target moisture levels directly on an easy-to-use dashboard.

The **V-I²** system adjusts watering based on real-time sensor feedback, ensuring crops get the right amount of water, reducing waste, and improving growth conditions.

This collaboration between Murata's sensor technology and ViTrox's irrigation expertise results in healthier crops, higher yields, and more sustainable farming.


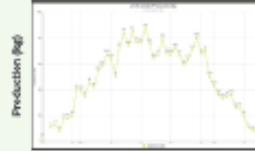
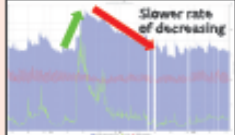

Use Case Example



Monitoring soil moisture trends using soil sensors can help identify drainage issues. The collected data provides growers with **valuable insights**, allowing them to **make informed decisions** about whether tilling and plowing will be necessary.

As a result, growers can optimize their operations, reducing costs and enhancing overall health of the soil.

Comparison Table: Yield and Soil Moisture Trends (Okra)

Plot		B2	L3
Collected Results (*with Murata Soil Sensor)	Weight (kg)	620.5	2473
	Area (m ²)	1130	1556
	Weight per Area (kg/m ²)	0.549	1.589
	Soil Moisture (VWC)	Fluctuating between 0.10 to 0.55	
	Daily Yield (kg)		
Average VWC, EC, Soil Temperature			
Observation	<ul style="list-style-type: none"> Higher water retention Lower yield - resulted from potential mono-cropping problems No filling/ plowing activity after previous round of planting Leading to poor soil drainage and root establishment (*root rot when moisture is too high) 		<ul style="list-style-type: none"> Better aeration (*concluded based on rate of moisture decreasing) Resulting in enhanced root development Improved ability in absorbing water and nutrients Higher yield in comparison to B2

Interested to know more? Contact and Connect us!



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