

ACTA MALAYSIA

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CASE STUDY ONE-PAGER

620 hectares · 9 months

PLANTATION AND VEGETABLE GROWER, JOHOR

Irrigation that follows the soil, not the calendar

Soil moisture, micro-climate and pump telemetry feed a scheduling model that irrigates by block, cutting water and diesel while stabilising yield.

-22%	-15%	+5%	12
Water use	Pump diesel	Yield per hectare	Field hours saved weekly

WHAT WE DEPLOYED

- LoRaWAN soil moisture and EC probes at three depths per block
- On-farm weather stations with rainfall and evapotranspiration modelling
- Pump and valve controllers with remote and rules-based actuation
- Block-level scheduling model reviewed weekly by the agronomy team

WHAT CHANGED

- Irrigation decisions moved from supervisor habit to soil evidence
- Pump faults surfaced as alerts rather than as dry blocks days later
- Water reporting for certification produced from system data

STARTING POINT

Irrigation ran on a fixed rotation regardless of rainfall. Diesel pumps were started manually, and blocks on sandy soil were consistently over-watered while clay blocks stayed dry.

"The pumps now run when the soil asks for it, and we can prove it."

Estate Manager

Client names are withheld under commercial confidentiality; figures are drawn from post-deployment reviews agreed with each client.

Acta Malaysia Sdn. Bhd. · Kuala Lumpur info@actamalaysia.com