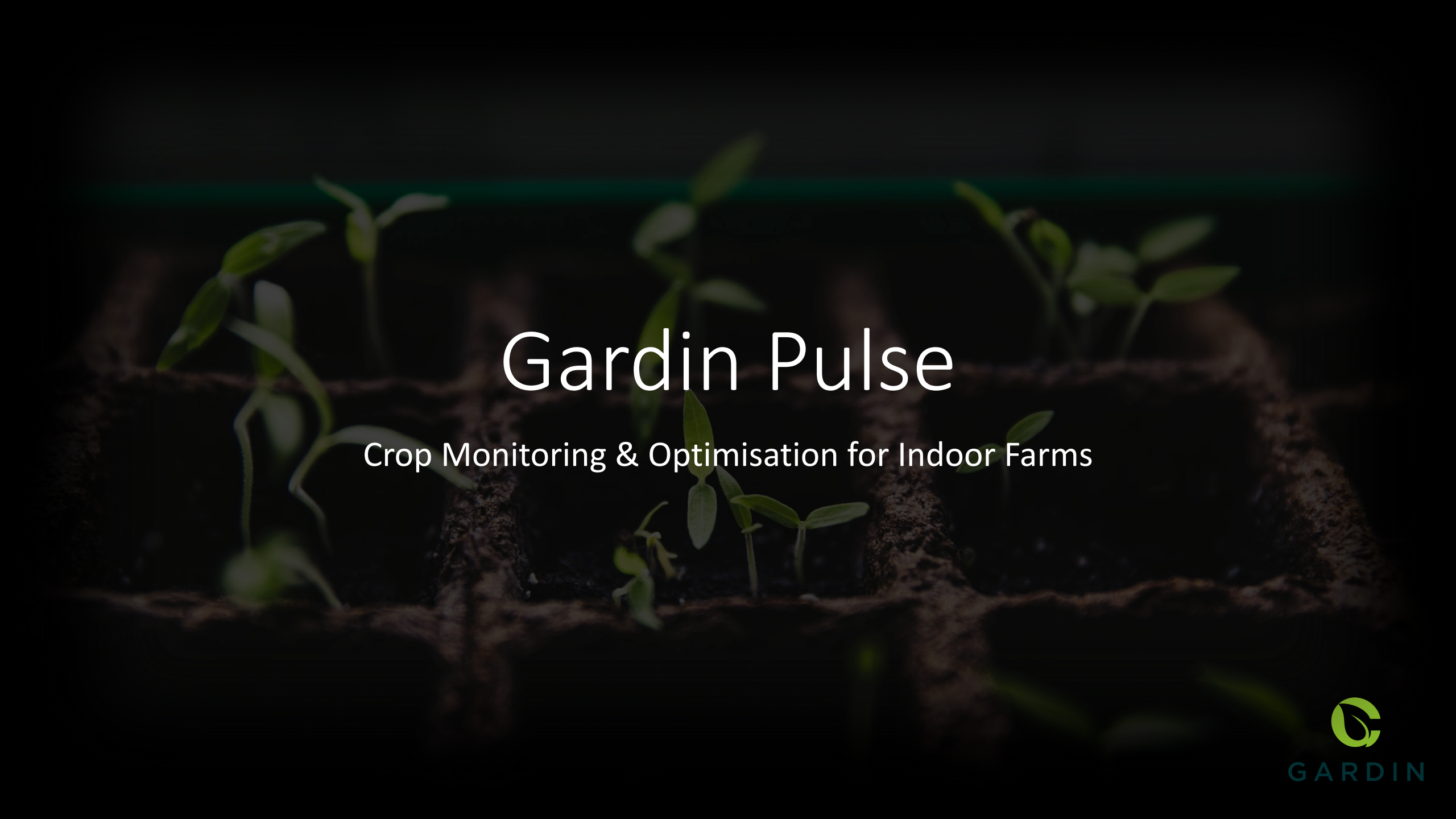


Gardin Pulse

Crop Monitoring & Optimisation for Indoor Farms

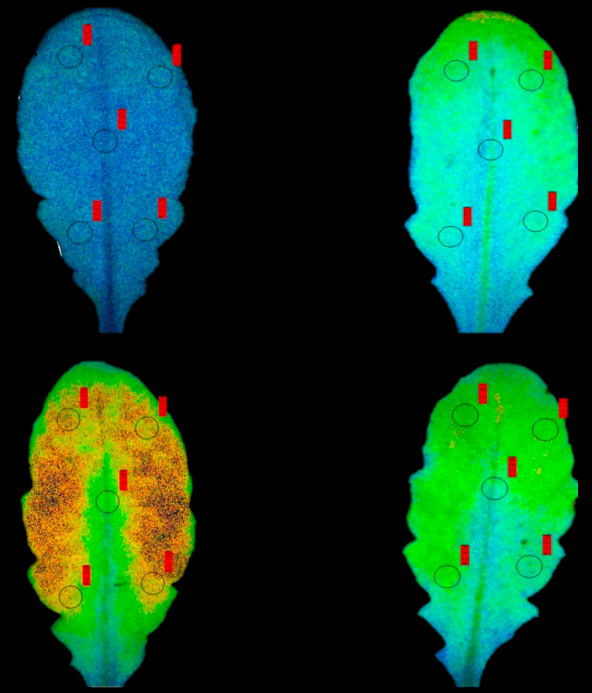
GARDIN

GENOYTPE + ENVIRONMENT = PHENOTYPE

Autonomous operation
- AI-assisted measurements

Remote scanning
- Working distance 0.2-2 meters

Robust measurements
- Real-time photosynthetic efficiency for any species in any environment

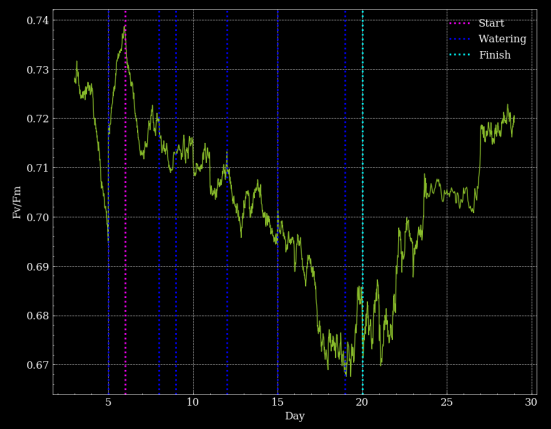


Moustakas et al, 2022

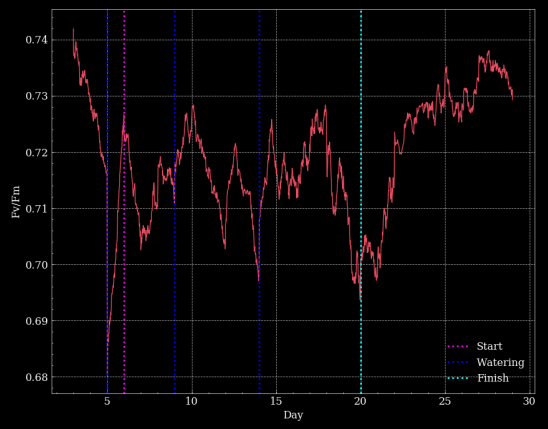
GARDIN

Instant response agriculture

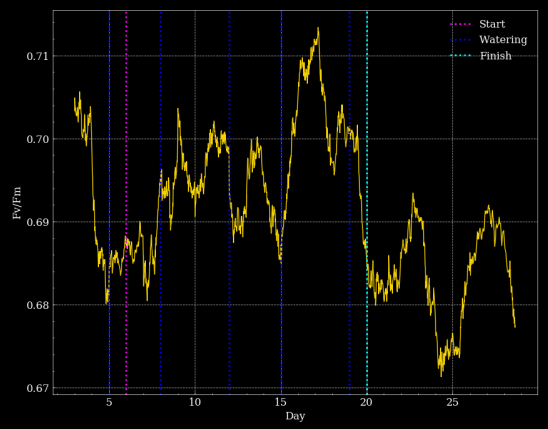
Flood



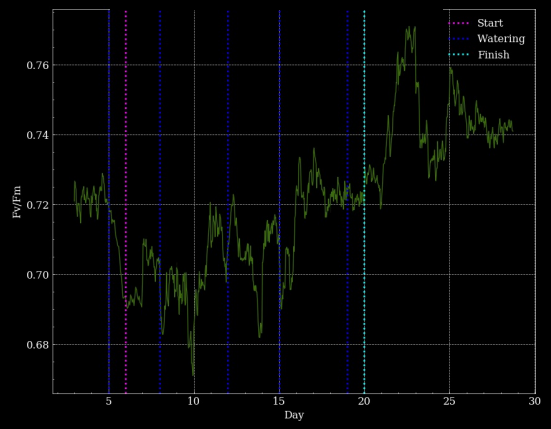
Drought



Heat



Light

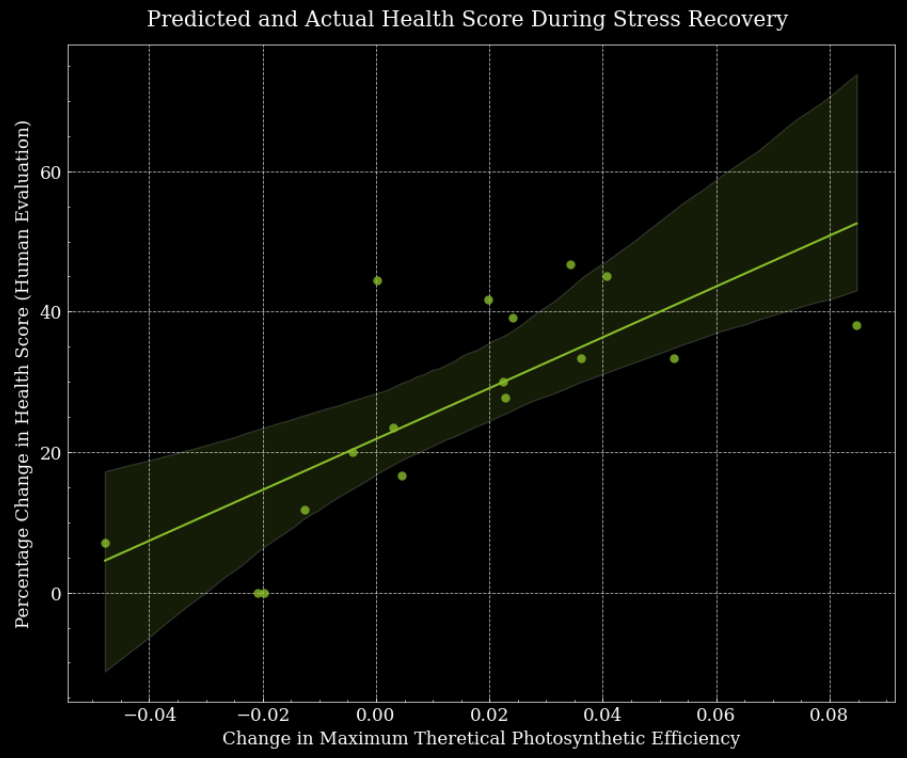


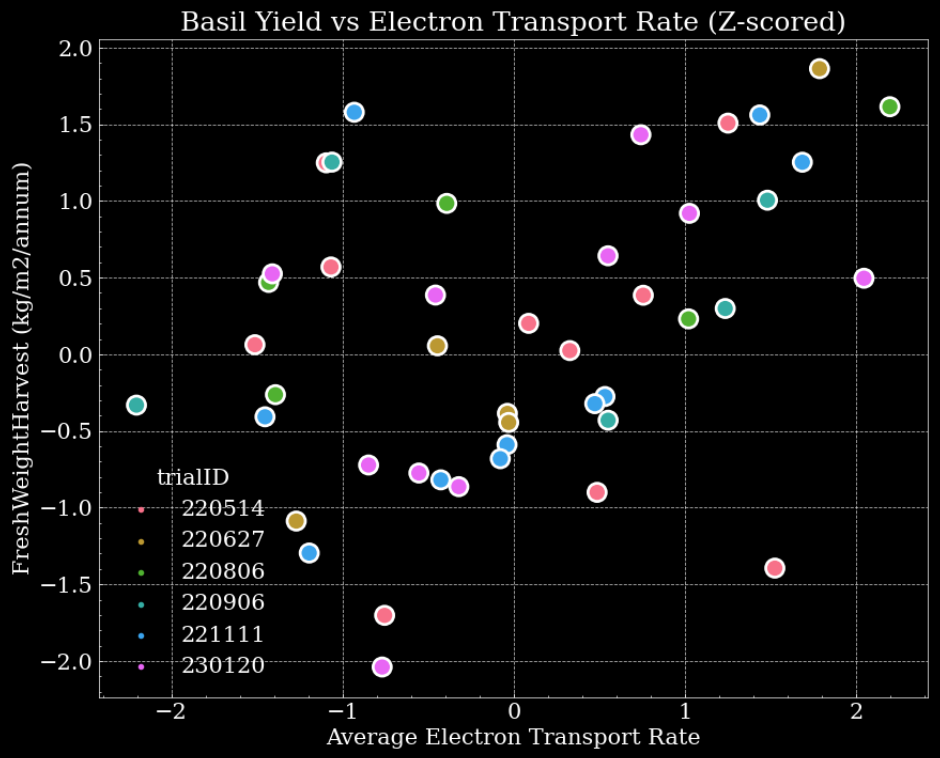
- Proprietary optics and analytics detect subtle changes in plant health.
- Continuous scouting for early detection of biotic and abiotic stress.
- Fast response enables resource control based on the needs of the plant.
- Reduce feedback on farm strategy from weeks to hours.

GARDIN

Healthier plants make better produce

Higher photosynthetic efficiency results in higher yields and higher quality.

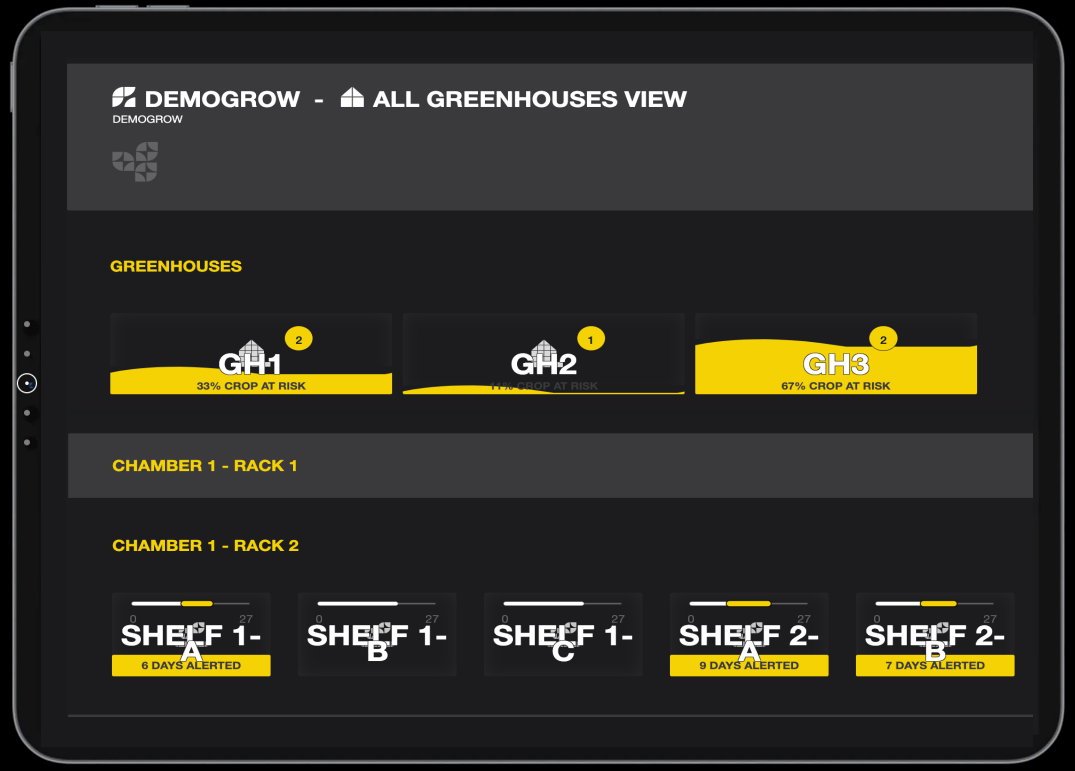


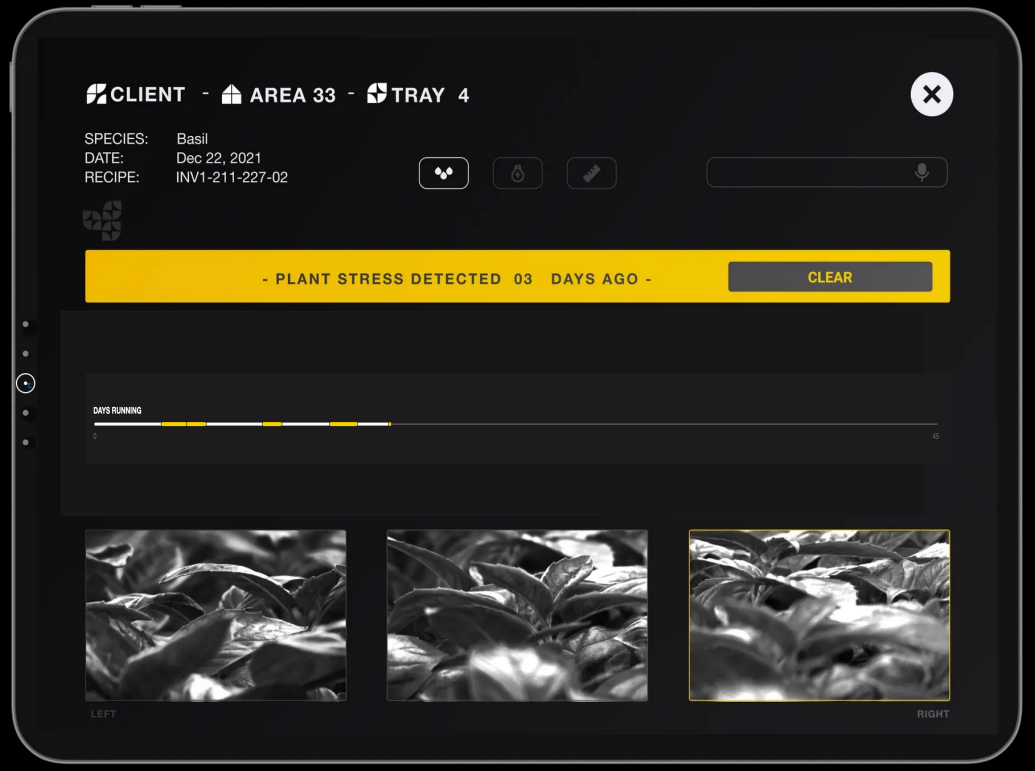


GARDIN

Gardin Pulse

Real-time view of plant performance across the farm

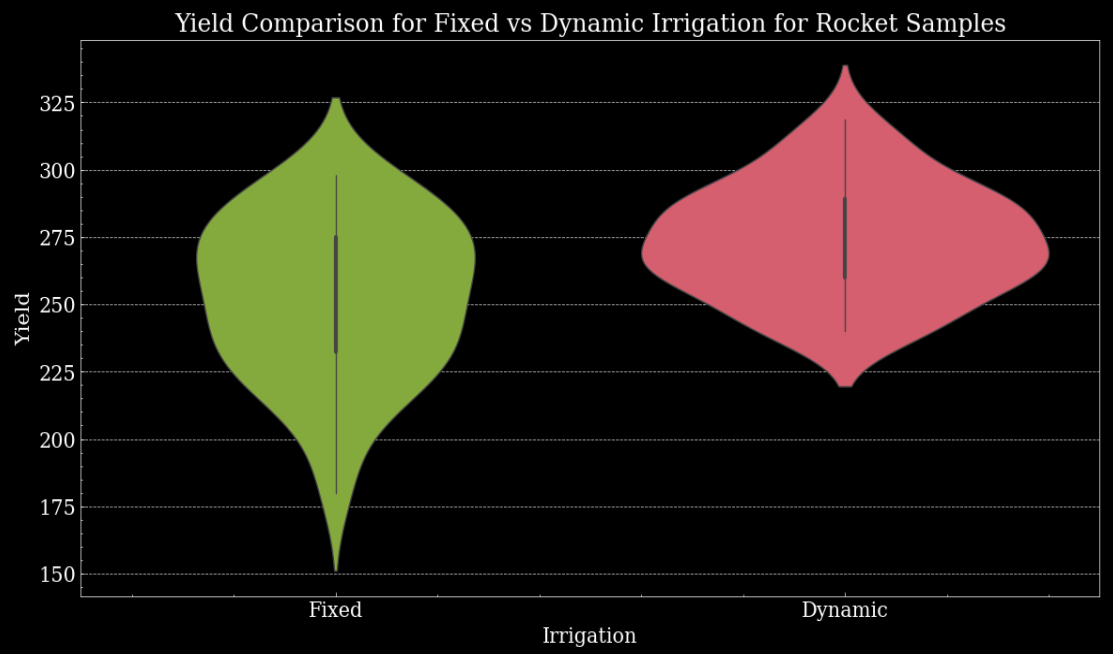




GARDIN

Growing strategy based on the plants

"The Gardin solution allows us to see decline in health in real-time and well before it becomes visible. This in turn allows us to adjust our growing strategy and farm operations." – Strawberry Farm Manager



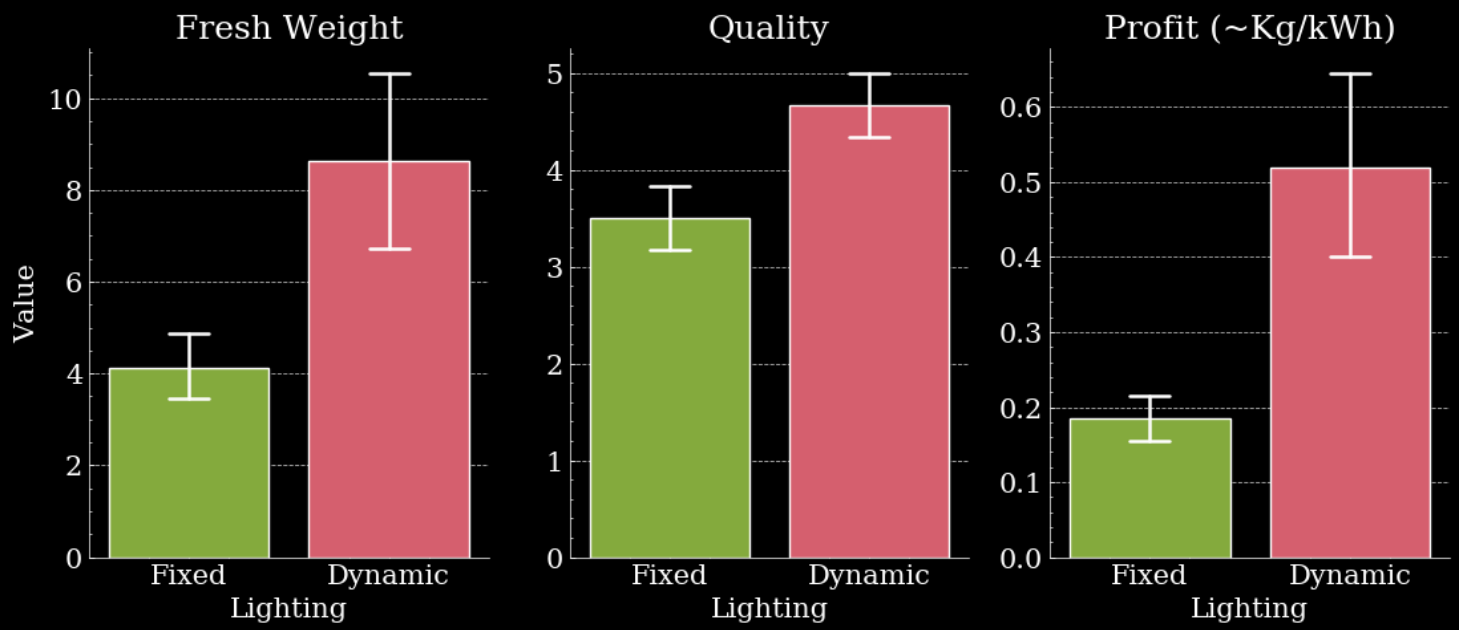
- Rocket experiment compared typical irrigation with irrigation based on photosynthetic efficiency in commercial vertical farm.
- Dynamic irrigation of rocket plants using Gardin alerts gave 10% increase in yield, 30% decrease in variance.
- Higher efficiency of photosynthesis compared to a fixed irrigation cycle generates more assimilates for productive growth.

GARDIN

Dynamic light control using photosynthesis

Gardin determines optimal light intensity to produce higher yields with lower light input

Control **Treatment**

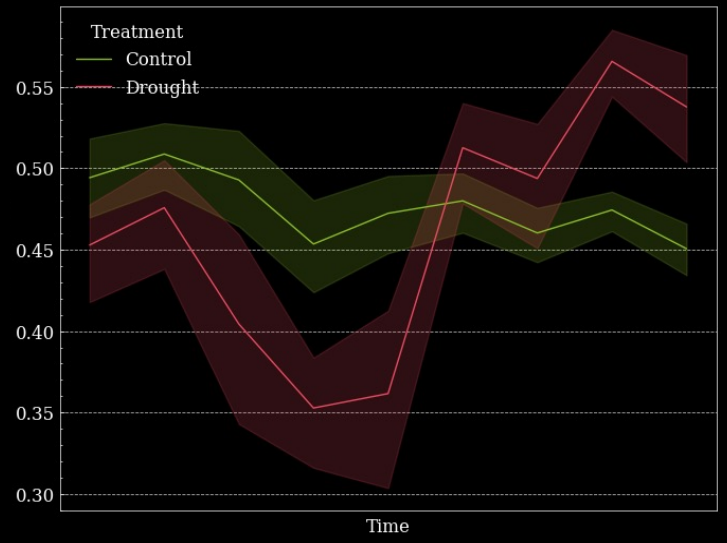


GARDIN

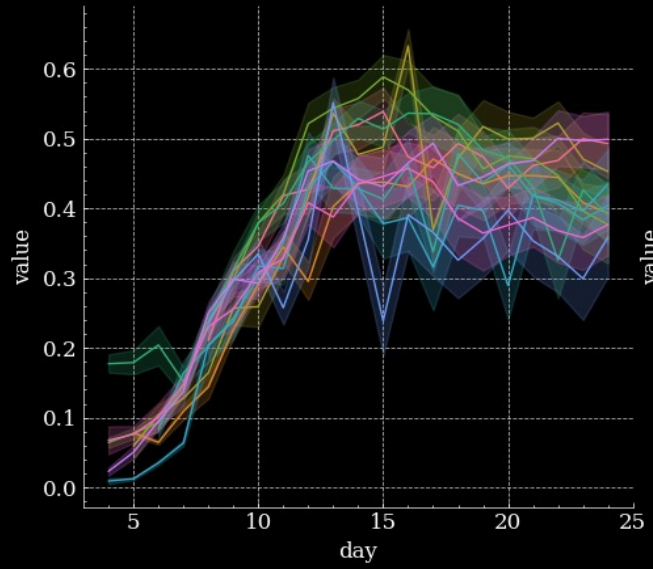
High throughput canopy phenotyping

Remotely track plant registrations to manage uniformity and yield

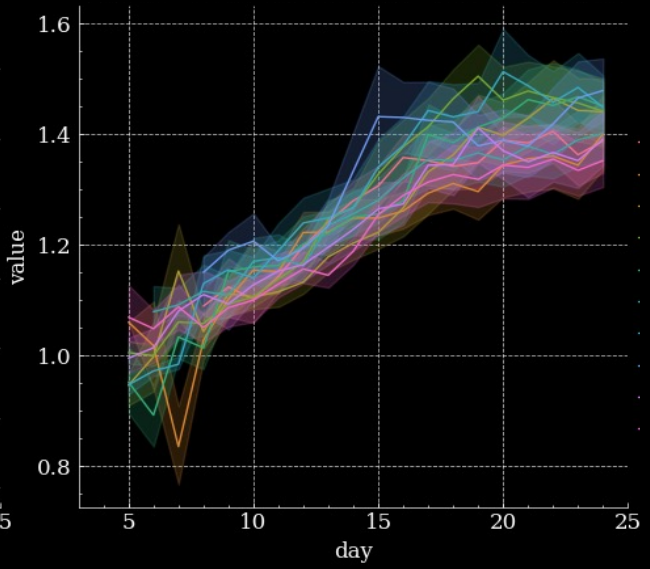
LEAF AREA



CANOPY DENSITY



CANOPY HEIGHT



- Gardin analytics perform continuous evaluation of plant phenotype to monitor plant growth.
- Growers can ensure consistency of physical crop characteristics to maintain product within specifications, plant product delivery and adjust growth conditions.

GARDIN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