



Hydrogen Mallee Technology Cluster Program

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SuniTAFE SMART Farm

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Excellence in Agricultural Education



1970 - CSIRO demonstrate new mechanical harvester

- Working farm
- Educational facilities
- Providing local youth with agricultural education for more than 50 years
- Tradition of promoting innovation in horticulture
- SuniTAFE 2019 Victorian and National Training Provider of the Year Awards

SuniTAFE SMART Farm - Cardross

24 Hectares divided into different sections growing:

Best practice methods

- Citrus – Mandarines, Oranges, Tangelos
- Grapes (Dried and Wine)
- Avocados
- Vegetables

Innovation at large

- Almonds
- Olives

Emerging industries

- Dates
- Industrial Hemp



Goals for the SuniTAFE SMART farm

- Excite our youth to undertake a career in Agriculture/Horticulture
- To provide training in the skills necessary for our future workforce to be successful in Horticulture
- To educate the Horticulture sector (community and industry collaboration) to improve productivity



Schools and Industry Engagement



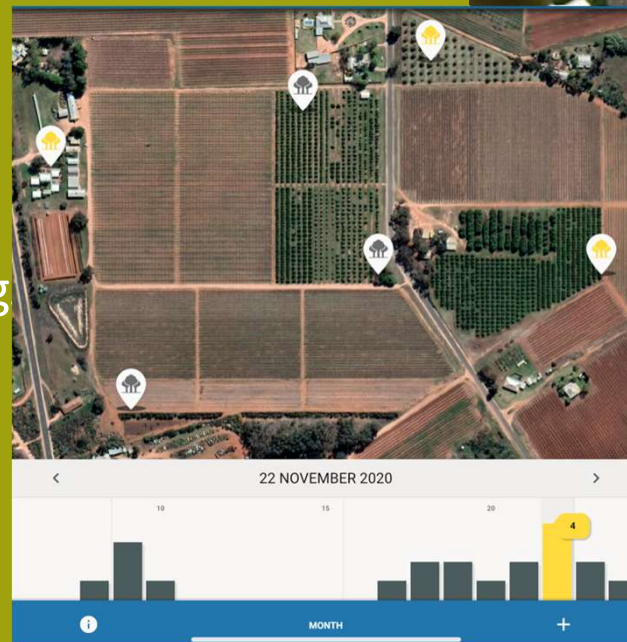
- 46% secondary schools in district offer agricultural/horticultural subjects
- Currently 250 enrolments with additional 250 students
- Numerous peak industry bodies locally
- Pathways and associations with universities via MRIC

Case study - RapidAim Fruit Fly Traps

RapidAim have developed world-first IoT sensor technology that detects unique behaviours of insects.

The location of the insect is logged in real-time.

- Industry collaboration
- Up-to-date student learning modules Pest and Disease & biosecurity

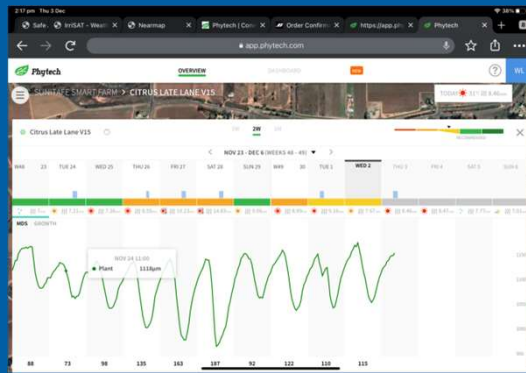


Drone Technology



- 45 minute flight time
- 8km range
- Mapping program – prescribed map on computer and controls flight path
- Multi-spectrum camera –
 - NDVI (Normalised Difference Vegetation Index)
 - Infra red, pick up growth irregularities

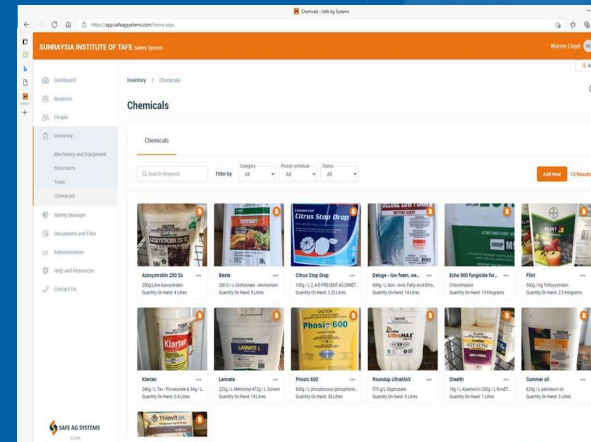
Sensors and IoT



Dendrometers

Weather stations

Weed sensor technology



Farmbot

GPS

Apps inc farm safety

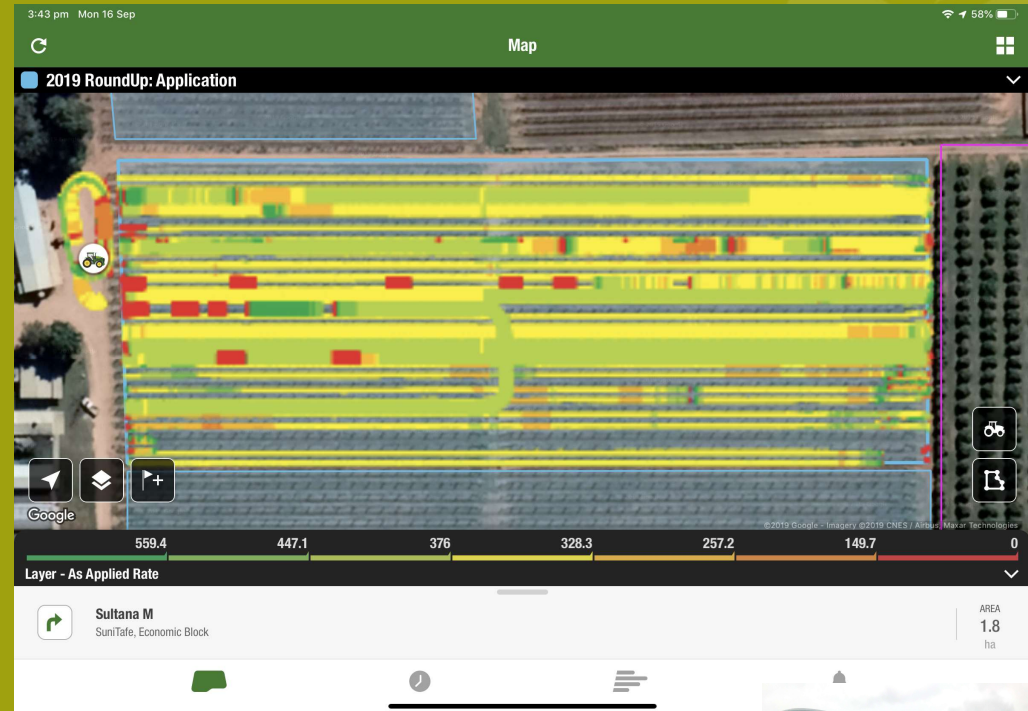
Soil moisture probes

Digital Farmhand

- Partnership with Agerris who have developed the Mechanical Farmhand
- Modular
- Collects data and can perform menial tasks
- Arrived on farm Feb 2021
- Aspirational goal - school STEM programs focussed on how to operate and maintain robots offered from 2022



Farm management from afar...



- Auto Steer
- Maps where the tractor goes
- Collects data
- Multiple Platforms

