Victoria’s On-Farm Internet of Things Trial

What kind of technology will be available to farmers participating in the trial?

This is a summary of the types of technology available to support the trial. Agriculture Victoria is currently finalising the complete list of technology to support the trial. All Apps & Devices in this list are available to all farmers. The coloured icons suggest where the Apps & Devices may be most applicable.

### Informed agronomy

#### Information systems to support decision-making
Compile data into key reports, analysis, alerting and / or decision support. May bring in additional data through free or allied services.

#### Weather monitoring
Monitor weather conditions including air temperature, relative humidity, barometric pressure, wind speed, wind direction, rainfall and solar radiation or photosynthetically active radiation.

#### Soil moisture monitoring
Monitor soil moisture and other soil factors for crop / pasture management. May include soil temperature and macronutrient sensing at a range of depths.

#### Microclimate monitoring
Sensors for specific applications such as leaf wetness, frost, rain gauge, wind speed, wind direction and light sensing.

#### Plant growth monitoring
Measure plant and fruit growth status. Includes stem and fruit diameter using dendrometers. May allow for comparative assessment of block and variety progression and inform harvest timing.

#### Plant stress tracking
Track plant water use and moisture stress for informed management of productivity and fruit quality.
### Production environment data

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### Farm management

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### Managing Water

**Water flow measuring**
Meters to measure water flow through reticulation systems. Pipeline sensing from 20mm to 100mm, plus channel flow rate metering.

**Tank level monitoring**
Remotely monitor water tank levels for stock, irrigation, spraying or domestic supply.

**Water quality monitoring**
Monitor water salinity, electrical conductivity and/or pH.

**Pump monitoring and managing**
Remotely manage pumping through scheduling or level or pressure switching.

**Dam level monitoring**
Remotely monitor dam levels for stock, irrigation, spraying or domestic supply.

**Trough level monitoring**
Remotely monitor watering points and inform reticulation supply and repair scheduling.

**Water delivery monitoring**
Remotely detect wetting front in soil – especially via flood irrigation.

**Water pressure monitoring**
Pressure sensor to remotely confirm pump status in water transfer/delivery.

**Valve controlling**
Remotely control reticulation valves for efficient automation of orchard irrigation/fertigation.

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