



Deciding on soil moisture monitoring technology

Tips to make those first steps and setting your expectations...

Why use soil moisture monitoring technology in short-cycle vegetable crops?

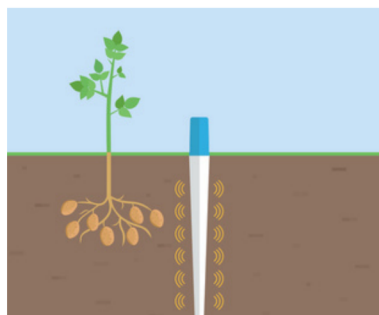
- To understand the relationship between your soil, plants & water. Soil moisture sensors at different depths illustrate where water is being utilised, providing an indication of root depth and soil architecture, any soil limitations and variability across a paddock
- To identify the cause of disease and pests - soil moisture and irrigation data can contribute to your understanding of risks and potential mitigation strategies
- To validate your system capacity - is your irrigation system behaving as you expect it to?
- Finally, with confidence developed in your system, it can inform the scheduling of your irrigation

What is your dominant soil type?

Choose a sensor that has been tried and tested in a similar environment. If it is a new product, a good indication can be where it was designed – if it was designed somewhere with predominantly sandy soils, it is likely to most effective in similarly sandy soils.

What irrigation system will you be monitoring?

Check with the manufacturer that the sensor has been tried and tested with an irrigation system similar to what you use. If you irrigate using overhead sprinklers, make sure there is no obstruction between where the water falls and the sensor. If you use flood irrigation, make sure all components are suitably resistant to surrounding water.



Additional features to consider:

- Weather station integration
- Salinity readings
- Soil temperature
- Telemetry and how the software displays your data

What crop are you growing? What is its root zone?

Short cycle crops will draw water from increasing depths as they grow. For optimal use through the crop cycle, it is advisable to have a sensor at 10cm and further down the soil profile to correspond with the usual root zone of the plants at different lifestages.

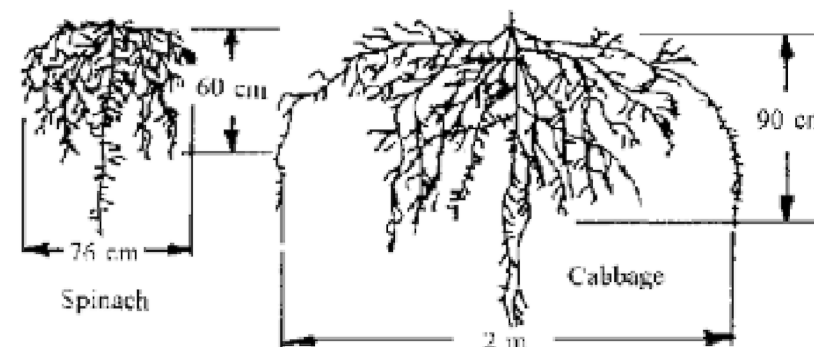


Image: example of root depth of Spinach & Cabbage plants

How often will you need to relocate the system?

Most sensors are separate from the telemetry component, often with cables between the two components. Some are fully self-contained. Consider how this may obstruct other machinery you use during the growing cycle of your crops. Ensure you account for removal and reinstallation of the technology each crop cycle.

A final tip: is there support readily available, either directly from a manufacturer or through a reseller who is familiar with the technology, during the peak of your growing season. For Victoria's vegetable growing industry, are they available over the Christmas / New Year break?

These tips are simply a place to start and do not form a complete list of considerations required when choosing soil moisture monitoring technology.

For more resources please visit:
www.foodandfibregippsland.com.au/advanced-irrigation-technology

