Silo monitoring – Granular data

# Scoring

Complexity (1 out of 3)

Price (1 out of 3)

Scale (1 out of 3)

Silos store the product of many months of hard work, and hold the livelihood of croppers and growers across Australia.

Having an accurate measure of how much of any particular product is contained within a silo is of the utmost importance to a farmer when they are managing inventory.

New developments in silo monitoring now ensure that up-to-date information is available for farmers 24/7.

# How

While regular silo monitoring would require manual observation and calculation, wireless electronic monitoring can be conducted automatically.

Once installed at the top of the silo, the sensor shoots an invisible beam of electromagnetic radiation towards the silo contents. Once it makes contact with the surface of the product, it bounces back up and hits the sensor receiver. This style of monitoring is called Time of Flight (ToF) and is accurate and cost effective.

The data is then sent to a digital dashboard for ease of access from a remote terminal.

Alerts can then be set up so that when product reaches a certain level, key staff are notified. This makes inventory management an automated process, rather than a labour-intensive burden.

These digital readouts can be synced to inventory management systems without a need to manually change values in a spreadsheet.

# Why

* An effective inventory management system requires fast and reliable access to the amount of product available. Manual measurements are time-consuming, increasing operation costs and risks associated with working at heights and exposure to toxic and explosive areas.
* For many applications, including level measurements in silos, there are many advantages to have sensors interfaced with wireless monitoring. This is part of why there is a growing global demand for remote level data monitoring over the internet. Remote monitoring is cost-effective in comparison to regular manual inspections and can also improve workplace safety, as it eliminates potential risks and injuries associated with performing manual inspections.
* Remote measurements can be used in waste bins, animal feed silos, construction materials, and on water surfaces. Wireless data monitoring means that companies can not just monitor stock levels, but make advanced plans for stock replenishment or material collection, optimising their budget and logistics operations.
* Remote and real-time data monitoring means that, if quick decisions need to be made, decisions can be underpinned by suitable data, such as on water levels during flooding events.

# Benefits

## Efficiency

* Less time spent manually looking at grain means more time on other tasks.

## Up-to-date data

* Real-time data means your inventory is always accurate.

## Cost effective

* Silo level sensors are inexpensive and easy to set up.

# Getting started

1. Obtain silo level monitoring sensors (ToF or otherwise) from reputable suppliers.
2. Install a sensor in each silo, taking care to remove obstructions.
3. Set up SMS alerts and automated inventory updates.

# More Info

For more information on how you can deploy this technology on farm, give us a call on 136 186 or visit agriculture.vic.gov.au.

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