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PROJECT SNAPSHOT

AVIAN INFLUENZA PREPAREDNESS · EMERGENCY DISPOSAL

Compost temperature monitoring for emergency disposal

How an Australian biosecurity team put compost monitoring in reserve, ready to deploy the moment it's needed.

CUSTOMER	SECTOR	APPLICATION	SOLUTION
A biosecurity team	Emergency animal disease preparedness	Verifying compost temperatures during on-farm emergency disposal in an avian influenza response	12 wireless temperature sensors with two-metre T-bar probes, 2 solar-powered receiving stations and cloud access

SUMMARY

An Australian biosecurity team building its avian influenza response capability needed compost monitoring it could hold in reserve, deploy quickly and rely on to prove virus inactivation. OneTemp worked with the team to put together a solution around its exact response scenario. The team now holds the system in reserve, ready to deploy the moment it's needed, without waiting on lead times for sensors.

THE CHALLENGE

Proof that every pile did its job

In an avian influenza response, on-farm composting is one of the disposal methods AUSVETPLAN sets out. It only works if each pile reaches and holds specific internal temperatures for long enough to inactivate the virus, and the response team needs evidence that it did.

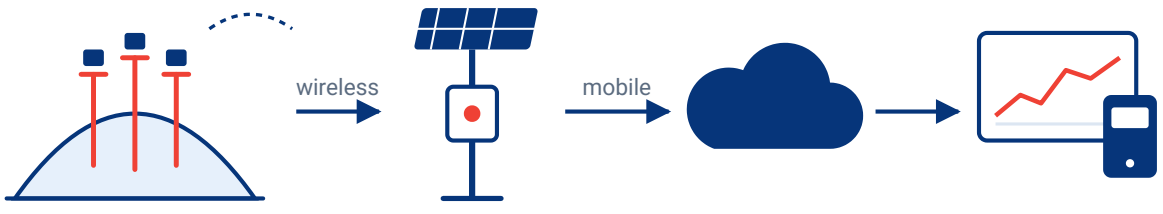
The team was building that capability before it was needed. The equipment would sit in storage until an incident, then had to work straight away.

THE SCENARIO

What the system had to do

- Hourly readings from every probe
- Monitoring around the clock, for up to a week per pile
- Data accessed remotely, without travelling to site
- Farm sites where mobile coverage can't be assumed
- Held in storage until an incident, then working straight away

HOW THE SYSTEM WORKS



Compost pile
Sensors + 2 m probes

Receiving station
Solar, no mains power

Cloud platform
Time-stamped data

Dashboard + alerts
Every pile, one view

If mobile coverage drops out, the sensors keep logging and the station holds the data, then sends it to the cloud once coverage returns.

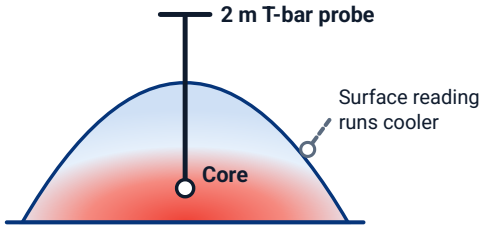
THE SOLUTION

A system built around the response scenario

Our team worked through the biosecurity team's requirements with them (how many piles, how many probes per pile, how often to log, and how the data would reach the team) and put together a solution from our Advanced Compost Monitoring range:

- **12 wireless temperature sensors,** each paired with a two-metre T-bar compost probe
- **2 solar-powered receiving stations** that collect readings from the sensors wirelessly, so no mains power is needed on site
- **A cloud monitoring plan** with remote access and logging as often as every 5 minutes, well beyond the hourly readings the scenario called for
- **System programming and support:** logger and sensor integration and a dashboard, set up to suit their scenario

WHY PROBE LENGTH MATTERS



Cross-section of a compost pile

Two-metre probes reach the core of a large compost pile, where temperature matters most. The outer layers lose heat to the air and can run much cooler than the core, so a reading near the surface won't show whether the material inside has reached the right temperature.

REMOTE FROM DAY ONE

One dashboard for every pile

Remote monitoring was part of the brief from the start. All the data from every pile comes into one cloud dashboard, so the team can check temperatures without travelling to the property. If they add more sites later, those appear in the same dashboard too.

THE RESULT

Ready before it's needed

The team now holds the system in reserve, ready to deploy the moment it's needed, without waiting on lead times for sensors.

> The same system is already used by other Australian organisations, including state agencies and major resource and organics waste companies.

COMMON QUESTIONS

How hot does carcass compost need to get to inactivate avian influenza?

AUSVETPLAN's Disposal manual sets the composting times and temperatures for emergency animal disease agents. Continuous monitoring is how a response team confirms every pile reached and held them.

How long should compost probes be for carcass composting?

Long enough to reach the core of the pile, where temperature matters most. This project used two-metre T-bar probes.

How quickly can compost monitoring equipment be supplied?

Lead times vary, which is why organisations preparing ahead of an incident hold equipment ready to deploy. We work through each organisation's requirements first, so the system matches how it will actually be used.

Planning compost monitoring for your response?

Talk to our team about your sites, your scenario and what your agency requires.
ISO 9001 certified · Australian distributor with national coverage and local support.

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