

# INCYT

## Know your soil moisture levels & make more profitable decisions

Break-O-Day



📍 DONALD, VIC

Wheat, Barley, Canola, Lentils  
Dryland Cropping

**Crops**  
**Type**



**Jason Mellings**  
Break-O-Day, Donald, VIC

"Whether we're talking rainfall data, soil moisture data or weather information - I use all of it to make better and more accurate decisions across my farming operation. INCYT offers me this data in a format that's easy to understand and digest from equipment that's reliable."

### CHALLENGE

Jason used to grow his crops without knowing exactly how much soil moisture he had available, which made it difficult to make the most profitable decisions throughout the cropping season.

### SOLUTION

When the Victorian government started their IoT grant scheme for agriculture, Jason found out about INCYT and decided to get both weather stations with spray advisory and soil moisture probes so he knows how much rainfall he gets as well as the exact soil moisture level in his fields.

### OUTCOME

With INCYT soil moisture probes and weather stations active in different locations, Jason knows exactly how much soil moisture he has available and how much rain he's received at the different parts of his farm, resulting in more accurate decision making processes. Jason now also has accurate on farm spray advisory based on local weather conditions.



## FARMING IN THE DESERT

When Jason Mellings' father moved to the Donald, VIC area in 1960, the farm resembled a desert more than a fertile farm, with relentless westerly winds creating dust storms nearly every day. The first thing he did, together with his brothers, was plant a long row of pine trees to create a wind break for the homestead. Fast forward 80 years to 2025 and Jason is now operating the family farm and with the help of new technologies and techniques, especially no-till, a lot has changed; the westerly winds are just as strong but dust storms have become a lot less frequent. What's also changed according to Jason is the rainfall patterns across his farm: "Maybe it's just because I take more notice of the weather, but it feels like we don't have a predominant rainfall period at all anymore. It can pretty much rain anytime of year depending on the seasonal conditions."

Jason continues: "So the big challenge for us is to make the most out of the soil moisture we have. That starts with building the soil moisture profile as much as possible when the fields are laying fallow between crops, and extends to our crop management practices. From choosing the right crop to plant to being as exact as possible with the amount of fertiliser we apply during planting or in-crop, everything hinges on what our soil moisture profile looks like and how that corresponds to the current conditions. From crop management the soil moisture levels then feed into our marketing decisions with how much of the crop we sell at any given time, which has a close correlation to the amount of soil moisture we have available and thus our confidence level in the yield we can achieve. Even our investment decisions as a business rely on our soil moisture levels and the confidence we have in getting a crop."

"If we're looking at buying a new header for example, I need to have an idea of how the harvest is going to be. Same with buying a truck: is the harvest going to warrant buying a new truck? By knowing 'how much we have in the bucket' – meaning our soil moisture level – and therefore knowing the chance we have of getting a decent harvest with the probabilities of getting some in-crop rain, or maybe none at all, allow us to run scenarios that help with this decision making process. Nothing is an exact science when you're forward-looking in farming, but it's a lot better than making blind guesses."







## CREATING METRICS AROUND SOIL MOISTURE

While Jason used to have a rough idea of how much soil moisture he had available by correlating it with rainfall data this was not accurate at all and often more of a guessing game, which is why Jason decided to change his approach in order to create more accurate metrics. Jason explains: "Knowing how much rain you've had is one thing, but knowing exactly how that translates into soil moisture is something completely different. With this in mind I started to think about what we can do to close this knowledge gap and got interested in soil moisture probes. Traditionally many dryland growers such as myself don't have soil moisture probes 'because you can't change it anyway', unlike in irrigated fields, but I could just see how knowing exactly what we've got in the bucket can help us with so many decisions throughout the year."

After Jason spoke to his agronomist about adopting soil moisture probes, he found out about INCYT through the Victorian Department of Agriculture's IoT trial program for which Jason was eligible: "As soon as we made the decision to go ahead with INCYT, I decided to get both weather stations with spray advisory and soil moisture probes so we could put one of each in the same location. That way we now have accurate rainfall data, and other weather information of course, as well as soil moisture profile data from the exact same location and we can start to learn how a specific amount of rainfall translates into soil moisture at different times of the year. This has been really helpful year-round already as it gives us a benchmark to work off of for the range of decisions we have to make in the different parts of the season."

Almost all of his most important decisions are now influenced by soil moisture information, says Jason: "Instead of blindly following a set crop rotation, I can now have a look at our soil moisture level on the INCYT dashboard and, based on that, decide whether I'm full of confidence and want to plant some more canola, or rather go back to barley if the soil moisture level is looking a bit disappointing for example. With our nitrogen applications it works the same: instead of hoping for good soil moisture and fertilising based just on that hope, with INCYT's soil moisture probes we are now able to fertilise based on the most-likely scenario which allows us to maximise our yield potential while minimising our risk at the same time."



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## SPRAY ADVISORY

Jason's weather stations obviously provide much more information than just rainfall, and Jason is also able to use this other information to his advantage as well he says: "The last thing I want to do is damage the crop in the field next to where I'm spraying with spraydrift, which is why I activated INCYT's Maverick spray advisory for my weather stations. I now know exactly when I should or should not be spraying and I can also copy and paste that information into my spray records in Agworld, which covers me from a legal perspective should I ever get audited. Whether it's the APVMA or the ICC accreditation organisation, you need to have good spray records with accurate weather data attached - for me this is easy to achieve with INCYT's weather data on the dashboard."

Jason concludes with: "Whether we're talking rainfall data, soil moisture data or weather information - I use all of it to make better and more accurate decisions across my farming operation. INCYT offers me this data in a format that's easy to understand and digest from equipment that's reliable. For farmers like myself, that's exactly what you need."



## WHAT INCYT OFFERS YOU

- Remotely monitor and control your assets
- A centralised dashboard with all your data
- Industry-leading trackers, sensors & network equipment
- Operational excellence through innovation

**NEXT STARTS NOW**

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