

EARTRUMPET

Bootcamp 2021-21

Sensor system to manage vineyards

Dan Fischl is a grape grower and viticultural consultant based in Victoria. His company EarTrumpet Consulting is commercialising the PADARDIS sensor system, a system developed by Dan to remotely support his grower clients to implement a regulated deficit irrigation strategy. The system consists of a range of sensors including soil moisture, canopy temperature and soil conductivity.

The idea for PADARDIS began from Dan's consulting in 2005 exploring alternatives to the status quo for irrigation. They had found that the way people were irrigating was inefficient, with excessive use of water, and led to poor quality of wine grapes.

The group began running trials with different strategies, first trying larger volumes of water more infrequently, and later reducing both the total volume and number of applications. Early applications of the strategy reduced vineyard irrigation by 15-90%.

"We found that some vineyards that were irrigated actually did not need to be irrigated at all - they could be completely dry farmed - which was a surprise to the owners, and a delight to the budget."

Over the following decade, Dan consulted with clients all around the world refining the crop model and implementing it with clients around the world. Results were astounding. With one client in Mexico, they elevated the quality of all grapes by 1 or more quality tiers, and reduced water use by 73% - without sacrificing yield. Every client that trialled the strategy on one part of the vineyard eventually converted the whole farm to the irrigation strategy.

"The Bootcamp was instrumental to helping me understand how to make the business scalable - reducing my time spent servicing each customer so that we can grow to serve more and more growers."



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EarTrumpets Bootcamp Journey

The time required to travel to grower's vineyards and collect measurements were becoming difficult for Dan to manage, and in 2017 he began to explore using sensors to collect the data, allowing him to manage the strategy remotely for his growers.

Over the next 4 years Dan developed the PADARDIS sensor system, deploying 18 units to clients managing 12 vineyards across Mexico, Israel and Australia.

Dan applied to the Bootcamp seeking support to develop the business plan to commercialise the sensor system and move from a consulting business to a technology business. Dan had also entered into discussions with a global drip irrigation company to roll out the crop model algorithm into the irrigation company's smart farming IoT platform.

Dan's key insight from the Bootcamp journey was understanding the need to educate growers to take on not just a new piece of technology, but a new farming strategy. The original goal in joining the program had been to develop the technology to be a standalone product, but through conversations with customers and industry experts, Dan realised that the consulting and education component were actually crucial to the technology's appeal.

"Growers really want access to expertise and support to understand what is happening on the vineyard and why actions should or should not be taken. I realised that selling the product by itself would not work without them understanding the science behind the irrigation strategy".

Dan decided to position the PADARDIS offering as a 'virtual' crop advisor, with growers buying the consulting expertise supported by the technology platform. ROI to customers on this offering would be more than 200% from the savings on water and increased yield and quality.

With this refined positioning, at the end of the program PADARDIS signed two new customers, with their crop advisor subscription and hardware purchases representing \$35,000 revenue.



"I'm a great scientist, but I'm no businessman. I wanted to learn how to take the scientist hat off and put the founder hat on."



We've become a professional operation - thinking and talking like a business and understanding how to approach customers.

What's Next?

With new confidence and language to describe the offering, Dan is now launching a sales and marketing strategy to get new growers onto the subscription service.

His goal is to reach 15 new customers in the next year, focusing on small to medium temperate vineyards in Victoria. From there, he aims to expand into NSW with the goal to be serving 40 customers in the next 2 years.

“We’ve become a professional operation - thinking and talking like a business and understanding how to approach customers.”

“My big reflection from the program is that you really have to commit - there’s no shortcuts to building a business.”



Giving an ear to plant matters



Key Bootcamp Results



Refined positioning and secured two new customers



Launched a sales & marketing strategy to increase subscribers

About Farmers2Founders

Farmers2Founders is a private national organisation that exists to help producers to fast-track the development, implementation and commercialisation of agtech and innovative value-adding solutions that deliver benefit at both the individual business level and broader industry.



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