

EYE IN THE SKY

Local agritech company Aerobotics is using drones and AI to help farmers farm smarter, reports ANTHONY SHARPE

Ask a farmer how each plant on their farm is doing and they'll likely give you a quizzical look. It's a bit of a ridiculous question, anyway: with thousands of crops spread out over many hectares, who can keep track of them all?

As it turns out, a whole bunch of farmers are leveraging the power of technology to do just that, courtesy of Cape Town-based Aerobotics.

"We're effectively a software company that captures imagery of orchards for tree crop farmers mainly through the use of drones and then processes that imagery to provide farmers with individual tree analytics," says COO Timothy Willis. "The farmers can then use these insights to improve their decision-making."

Founded in 2014 by Benji Meltzer and James Paterson, the company began as a general-purpose drone manufacturer and then focused in on the high-value agricultural space. As the hardware became more freely available, they found that more value sprang from good software.

LIKE YOUR BACKYARD

"Our orchard-monitoring product makes it possible to identify every single tree on your farm as if it were a tree in your backyard," says Willis. "And our yield-estimation product enables you to make better decisions about harvesting and yield predictions, and thus sales and marketing decisions." ➤

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FAST FACT

The global smart agriculture market is expected to grow to a value of R333-billion by the year 2020.



Aerobotics charges a per-hectare rate that typically includes three flights per season. After each flight, it provides analytical data with a multilayered map with information on tree health and potential yield. "If we do an estimate mid-season and farmers see their yield isn't going to be as big as they were hoping, they can potentially do a booster, spray their trees or something similar to enhance that yield. But these are very expensive chemicals, and up until now farmers haven't really had the tools to make those decisions clearly."



Timothy Willis

proving popular. Aerobotics recently processed its 40 millionth tree worldwide – 90 per cent of which was in the last 18 months. "I think the number one growth factor has been farmers beginning to realise that this product adds a lot of value to what they're doing on a day-to-day basis," says Willis.

"And then starting to scale it up across their farms – full roll-outs instead of just trials, that's been a major game-changer."

This popularity has seen Aerobotics getting a foothold in the US market. Last year, it saw trials on many farms, and expects this year's season, from March to August, to see even more positive uptake.

"A lot of farmers in the US are ex-South Africans, which has helped us engage and build relationships quickly," says Willis. "Obviously there are drawbacks, we're not

always the first choice and we have to prove ourselves in the new market."

A UNIQUE OFFERING

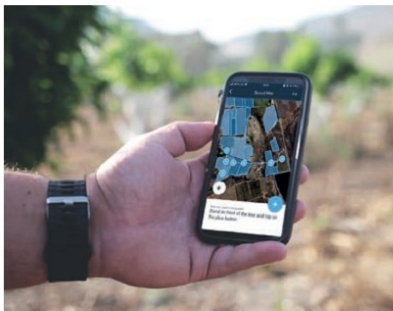
Despite this, Willis is positive about the company's position in a high-tech market. "There are lots of aerial-imagery options, but not too many drone-specific ones providing individual tree analytics."

"If a farmer wants those sorts of analytics, there are only two companies in the world that can do that: ourselves and an Israeli company."

With such a unique offering, Aerobotics has reached into Europe and South America too. "We've managed to expand into key tree-crop markets around the world, including Portugal, Peru and Chile," says Willis.

And while they're working with several vineyards in South Africa and have had discussions with others in France, they remain focused on what they do best: trees. ■

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- **Ripe.io** uses blockchain to collect data about food from farm to fork, aiming to help better understand and create transparency in the food chain.
- **Trace Genomics** uses DNA extraction and machine learning to analyse soil composition, aiming to create the most comprehensive soil database in history.