

From tractor tweets to crop status updates: How AI is cultivating the future of farming

AI in agriculture is rapidly shifting from being a distant concept to a practical, transformative tool. But amid all the hype, the real story that has emerged doesn't focus on the technology itself but on the people using it.

By [Arno Hanekom](#) 1 Jul 2025



Source: Supplied

Farming data should be like farming land

Like any other entrepreneur, farmers operate on instinct, gut feel, knowledge, understanding and experience, innately knowing when to plant, when to irrigate and how to respond to seasonal shifts. And this is something that cannot be replaced with AI.

What AI does offer, though, is a way to back up those instincts with data. So, the farmers' judgment isn't being replaced with algorithms, but rather AI is there to support and validate it. We call this intuitive AI, not prescriptive AI.

Agricultural tools powered by AI are now capable of analysing everything from historical crop data to satellite imagery and weather trends, but as impressive as these technologies are, they do not offer one-size-fits-all solutions. Local farmers, in particular, are sceptical by nature, and rightly so. It's very rare to find a single AI solution that would be fit for all purposes. That's why trust and relevance are key to adoption.

Every farm is different, and so is every farmer's relationship with technology. Thus, Datacentrix's message is simple: 'farming data should be like farming land'. Think of AI as being similar to a mobile phone — it has a thousand features, but we probably use only five of them daily. The same logic can be applied to AI platforms.

Boxed, generic AI solutions won't be able to tick every box, and instead, the approach of 'aiming small to

miss small' should be taken. This places focus on smaller projects and proof of concepts, where a use case is taken and solved specifically based on required outcomes or benefits.

How could AI in agriculture actually work?

Data lives in many places: on servers, in the cloud and even in personal storage platforms like Google Drive or OneDrive. For farmers, data is available on livestock feed, weight and growth, silos, crops, water utilisation, pesticides, fertilisers, satellite and more. There's also information available on the use of tractor or combines (for example, use hours and fuel consumption), as well as on electricity usage.

All these various datasets can be consolidated in an AI-enabled cloud – a central unified data architecture that acts as the repository, or the 'brain', for farming practices. From there, a discovery tool is used to mine and extrapolate answers to certain questions from the data. This type of exploratory data analysis is based on pattern detection and trend analysis, allowing users to listen to their data and uncover real, beneficial use cases.

This approach can be used for any farming practice, be it for the farm worker, service schedules, manufacturing, production, or any type of discipline. It's a case of taking the data, unscrambling and adding logic to it through machine learning, and ultimately helping the farmer to do more than predict yields by understanding the past and optimising the future.

For example, a recent project embarked on by Datacentrix involves the mining of many years of estuary data for fruit varieties, looking at the pesticides and fertilisers used and mapping the information back to what should be paid per hectare, varietal and colour of grape.

A common misconception is that AI is expensive, complex and requires a large upfront investment. To counter this, Datacentrix has developed AI-as-a-Service, a cloud-based offering designed to reduce risk and make adoption easy and accessible. Clients consume AI solutions on a subscription basis, enabling them to start small and thereafter scale based on real value delivered, without the need for a hefty upfront investment.



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This model works across industries, including finance, retail, manufacturing and, of course, agriculture. Whether it's yield prediction, soil health analysis or pest and fertiliser mapping, solutions are tailored to the client's specific data and needs and provide real-world insight.

AI also shouldn't be difficult to use. It should be simple to deploy, low touch and low cost, with minimal impact on workflow or a workforce's day-to-day operations, while still having a high impact on business.

We believe the best solutions come from standing alongside our clients — literally. At Datacentrix, we call 'walking the line'. We visit farms, walk the fields, talk through operations and then co-create use cases with our customers based on what we have learned. It's a farmer-first, use-case-first approach that ensures the technology is never disconnected from the context that it serves.

The road ahead

The use of AI in agriculture will never replace human intelligence. What it can do, however, is enable farmers, traders and agribusinesses to work smarter, not harder. With the right approach, the technology is less focused on algorithms and emphasises the outcomes. It's not just the tractors that are getting smarter the decisions are too.

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