FROM VINEYARD TO DATA FARM

TAYYIBAH SULIMAN, head – Technology & Communications sector and director – Agriculture, Aquaculture & Fishing sector and **SHANLEY WEBB**, candidate attorney – Corporate & Commercial practice, at Cliffe Dekker Hofmeyr, explain how to navigate the legal landscape of agritech contracting

Tayyibah Suliman

Agricultural technology, better known as agritech, refers to the use of advanced technologies to improve agricultural production and efficiency. Tools such as artificial intelligence (AI), the internet of things (IoT), precision sensors, drones and data platforms are moving agriculture into a data-driven era, changing the way agricultural businesses worldwide operate.

South Africa is very much part of this shift. The country's agritech market was valued at approximately $1.1-billion in 2025, with significant growth projected towards 2030. While the commercial potential is considerable, the rapid adoption of agritech also introduces new legal and contractual challenges. Data ownership, technology partnerships, liability and regulatory compliance present new risks.

For agricultural businesses, a strategic legal approach that anticipates risk and provides contractual clarity is becoming just as important as the technology itself.

TECHNOLOGY DEVELOPMENTS IN SOUTH AFRICAN AGRITECH

AI has been increasingly embedded in agritech solutions. It analyses data from sensors, drones and weather stations to provide real-time insights on irrigation, fertilisation and pest management.

Machine learning models advise on planting and harvesting windows. IoT sensor networks feed soil, moisture and temperature data into platforms that respond in real-time. These capabilities are becoming accessible to a far wider range of producers.

The scale and pace of innovation were illustrated at the 57th NAMPO Harvest Day in Bothaville and at NAMPO Cape 2025 in Bredasdorp. Both events showcased AI-enabled irrigation autopilot systems, drone-based precision application and wireless solar-powered control technologies.

At the centre of much of this innovation is Stellenbosch, which is emerging as a leading hub for agricultural technology development in South Africa.

In February 2025, Telkom launched its Smart Agritech Initiative, a collaboration between Telkom, AI and IoT technology partners, Stellenbosch University and South Africa Wine. It deployed a platform enabling real-time vineyard monitoring and AI-driven yield forecasting. Telkom has positioned the initiative as a potential global model for multiparty agritech deployment.

Investor interest is growing alongside these technological developments. In March 2025, the digital agricultural platform Khula! raised R126-million in a Series A funding round led by E Squared Investments, with backing from Absa, AECI and PepsiCo's Kgodiso Fund. The transaction marked one of the largest agritech capital raises in South African history, and reflects growing investor confidence in the sector.

GENERALLY, OWNERSHIP AND USAGE RIGHTS ARE DETERMINED ENTIRELY BY STANDARD-FORM PLATFORM AGREEMENTS. IF THOSE AGREEMENTS VEST BROAD RIGHTS IN THE TECHNOLOGY PROVIDER, A FARMER'S PRODUCTION DATA MAY BE AGGREGATED, ANALYSED AND MONETISED WITHOUT THE FARMER SHARING IN THAT VALUE.

LEGAL AND CONTRACTING CONSIDERATIONS

Technology can transform agriculture. Poor contracting can undermine it just as quickly.

Data ownership is perhaps the most immediate consideration. Agritech platforms generate vast quantities of data, including soil readings, yield histories, livestock metrics and crop health indicators. That data has economic value beyond a single season. Generally, ownership and usage rights are determined entirely by standard-form platform agreements. If those agreements vest broad rights in the technology provider, a farmer's production data may be aggregated, analysed and monetised without the farmer sharing in that value.

Liability presents a second layer of risk. AI-driven platforms now generate recommendations on irrigation timing, fertiliser application, crop protection and yield forecasting. When those recommendations are wrong, the financial consequences can be material. Does responsibility rest with the farmer who acted on the advice, the software developer whose algorithm generated it or the data provider whose inputs informed it?

In the absence of dedicated AI legislation in South Africa, responsibility is determined by the contract. Standard limitation-of-liability clauses drafted for generic software environments may not be adequate for the agricultural context. A failed crop cycle is not equivalent to a minor software malfunction.

Intellectual property is another area where assumptions can be costly. Where software or analytics tools are custom-developed, ownership does not automatically transfer to the commissioning party. South African case law has confirmed that, without a clear written assignment, copyright may remain with the developer. For agribusinesses investing in bespoke systems, clarity on ownership and commercialisation rights is essential from the outset.

Regulation also operates in the background. The Protection of Personal Information Act 4 of 2013 (POPIA) applies wherever platforms process personal information relating to farmers or employees or supply chain participants. Data-sharing arrangements must meet the lawful processing requirements of POPIA. AI platforms making recommendations must comply with the Plant Health (Phytosanitary) Act 35 of 2024 where applicable.

Shanley Webb

If an AI system tells a farmer to apply a specific crop protection product and that product is unregistered or incorrectly dosed, there is a regulatory consequence.

Environmental, social and governance compliance deserves particular attention. It is becoming a contractual condition embedded in export buyer agreements and linked to public funding under the Department of Agriculture's Strategic Plan for 2025–2029/30.

Modern agritech platforms rarely perform a single function. They operate as ecosystems combining marketplaces, input supply channels, data analytics and embedded financial services that are each governed by a different regulatory framework. Agritech innovation may move quickly, but sustainable growth depends on the legal and commercial frameworks that support it.

CONCLUSION

The agritech sector presents a compelling opportunity for South Africa. As both a major agricultural exporter and an emerging technology hub, the country is well-positioned to benefit from the digital transformation of farming.

However, technology alone does not transform sectors. Governance does. The contracts, frameworks and legal certainty determine whether the agritech innovation can scale sustainably and attract long-term investment.

The legal framework enables agritech growth. And, in a data-driven agricultural economy, it is what ensures that opportunity is not only created, but also secured.

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