

How structured farm data is redefining compliance in global food trade

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As global agri-food supply chains face rising pressure around traceability, sustainability, and regulatory compliance, the spotlight is shifting decisively to the farm. Yet, despite rapid digitisation across procurement, logistics, and exports, farm-level data remains one of the most fragmented and under-utilised assets in the value chain.

In this interview with NUFFOODS Spectrum, Vinay Nair, Founder & CEO of KhetiBuddy, unpacks why this digital gap has persisted for decades and why structured, real-time farm data is fast becoming non-negotiable for exporters and agri-food enterprises. He shares insights on how global buyer expectations are evolving, where traditional systems fall short, and how enterprise-grade digital infrastructure can transform farm data from a compliance burden into a strategic advantage.

Despite rapid digitisation across agri-food supply chains, farm-level data often remains disconnected from enterprise systems. What are the core reasons this digital gap has persisted for so long?

The gap exists because most digitisation efforts were focused on the back office, which is ERP covering finance, procurement and sales, and farms were treated as external data sources rather than integral system components.

At the farm level, data is inherently messy: fragmented farms, multiple crops, seasonal variability, low access to tech, and inconsistent connectivity. Most tools built for farms focused on advisory or knowledge base, not on producing structured, auditable data that enterprises can actually consume.

The result is a patchwork of apps, spreadsheets, and PDFs that don't integrate upstream. The gap has persisted because bridging it requires both deep agronomy understanding and agri-first tech architecture—and very few platforms have been built with both in mind.

As India's cereal exports scale, how are global buyers' expectations around traceability, quality assurance, and sustainability changing, and where do traditional systems fall short?

Global buyers today expect evidence of the claims exporters make. Traceability is no longer about where the commodity came from, but also to make validation of the claims easy by capturing the right quality parameters, which are essential for exports.

Traditional systems rely heavily on post-harvest documentation and manual declarations. These systems break down when exporters need to answer questions around the quality of the crop, management practices, inputs used, and residue level.

Without digital farm-level data captured at the source, exporters are forced into reactive compliance. That's not scalable as volumes grow or regulations tighten.

KhetiBuddy positions itself as enterprise-grade infrastructure rather than just a farm app. How does this approach change the way agri-food companies integrate on-ground farm data into business workflows?

Most farm apps stop at data collection. KhetiBuddy's Verdnt is designed to operate as a platform, a data backbone that connects farms directly to enterprise workflows.

This means farm data is structured, standardised, and mapped to business processes such as procurement, quality, sustainability reporting, and compliance. Instead of manually reconciling farm reports with ERP or traceability systems, enterprises can integrate farm data programmatically.

The shift is from "monitoring farms" to operationalising farm data using it in decision-making, audits, certifications, and buyer reporting without additional layers of manual work.

What challenges do large agri-food enterprises face when digitising thousands of farms across regions, and how does KhetiBuddy enable visibility at scale without increasing operational complexity?

The biggest challenges are scale, consistency, and governance. Enterprises struggle to maintain uniform data standards across geographies, crops, and partner networks while keeping costs under control.

Many digitisation efforts fail because they add operational overhead—more field staff, more reporting, more tools. KhetiBuddy is designed to do the opposite.

By combining agronomy-led data models, mobile-first field capture, remote sensing, and automated validation, we enable centralised visibility without centralised micromanagement. Enterprises can see what's happening across thousands of farms in real time, while local execution remains simple and adaptable.

With increasing regulatory and compliance pressures in markets like North America and Europe, how critical is real-time, structured farm data for exporters today?

It's becoming non-negotiable. Regulations around sustainability, deforestation, carbon disclosure, and food safety increasingly require verifiable, time-stamped, and auditable data.

Real-time, structured farm data allows exporters to move from reactive compliance scrambling to assemble documents to proactive compliance, where data is already captured, validated, and ready for reporting or audits.

Exporters without this capability will face higher compliance costs, delayed shipments, and increasing scrutiny from buyers and regulators alike.

Looking ahead, how do you see the role of farm data evolving within global agri-food supply chains, and what capabilities will enterprises increasingly expect from digital infrastructure platforms like KhetiBuddy?

Farm data will shift from being a support function to a strategic asset. It will directly influence procurement decisions, pricing, access to premium markets, financing, and carbon or sustainability-linked incentives.

Enterprises will expect platforms that go beyond dashboards. They will look for infrastructure that can:

Integrate seamlessly with enterprise systems

Support multiple regulatory and sustainability frameworks

Enable measurement, reporting, and verification at scale

Adapt across geographies and crops without reimplementation

In short, farm data will no longer sit at the edge of the supply chain—it will sit at its core.