

- Expansion to additional countries and commodities to enable cross-regional learning and harmonised data ecosystems.
- Profiling and onboarding extension and veterinary personnel, enabling them to deliver timely advisory support, disease surveillance, and real-time communication directly with farmers through the platform.
- Integrating agro-dealers and farmers through a unified service and digital market-linkage ecosystem, connecting farmers to inputs, buyers, and value chain opportunities.

Therefore, scaling AMDS to (Botswana, Eswatini, South Africa) countries targeting a million farmers is not just about empowering those farmers; it also strengthens food systems and builds climate-resilient agricultural economies.



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**Leveraging technology to bridge the gap between scientific research and on-the-ground application to enhance climate resilience.**

## What is AMDS?

The Agricultural Management Database System (AMDS) is a mobile digital platform designed to support smallholder farmers, extension officers, and agricultural stakeholders with simple, real-time farm data recording and decision support. It enables farmers to keep production records, monitor livestock and crop performance, access advisory information, and link to markets through a single, user-friendly application. AMDS originated from research and innovation initiatives at Stellenbosch University <https://www.su.ac.za/en>, and has been successfully prototyped and field-validated with farmers and other stakeholder groups in South Africa, with collaborative support from CCARDESA.



## The AMDS directly strengthens the pillars of CSA:

### 1. Increased productivity

- Supports evidence-based farm planning through digital record-keeping.
- Improves real-time monitoring of animal and crop health, yields, and farm income.

### 2. Adaptation and resilience

- Enables farmers to anticipate and track risks such as droughts, disease outbreaks, and input shortages.
- Encourages proactive and informed responses based on farm data.

### 3. Sustainability and mitigation

- Promotes efficient use of land, feed, and water resources.
- Reduces waste and production losses through timely management decisions.



## Demonstrated impact through infield testing

- Increased farmer awareness and adoption of digital record-keeping.
- Strengthened two-way communication between farmers and extension services.
- Enhanced transparency and traceability of farm performance.
- Improved access to high-value markets and improved market participation
- Established a foundation for integration with national and regional agricultural information systems.
- Proven usability and stakeholder acceptance across multiple pilot contexts

## Digital agriculture is a strategic investment

Tools such as AMDS provide governments and regional institutions with reliable, ground-level agricultural data essential for planning, monitoring, and evidence-based policy formulation. Supporting digital extension services, farmer connectivity, capacity building, and robust data-governance frameworks will accelerate inclusive agricultural transformation and strengthen national CSA strategies.

## The need to scale and expand

To unlock its full local and regional potential, AMDS requires:

- Strategic donor and government partnerships to support further development, deployment, and long-term maintenance.
- Integration with national and regional agricultural databases and climate information systems.