

Empowering Developing Farmers:

Revolutionizing Agricultural Extension through AI-Driven Mobile Solutions

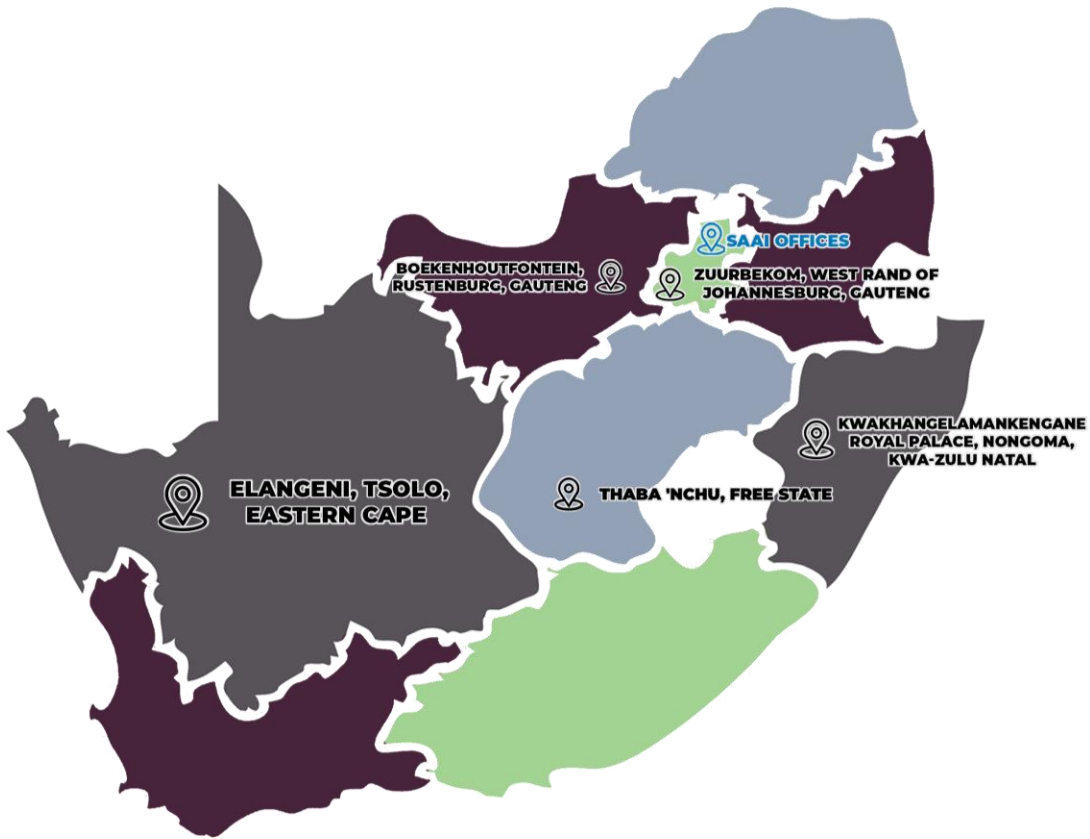


saai

The Southern African Agri Initiative (Saai) is an agricultural interest network for farmers by farmers, which is committed to protecting and promoting the rights, values, ideals and needs of family farmers in the primary produce sector.

**Family farming | Technology |
Partnership**





Agricultural Extension Services (AES)



AES is about bridging the gap between scientific discoveries and rural farmers through three key functions:

- - Knowledge Sharing
- - Training and Education
- - Problem-Solving and Assistance

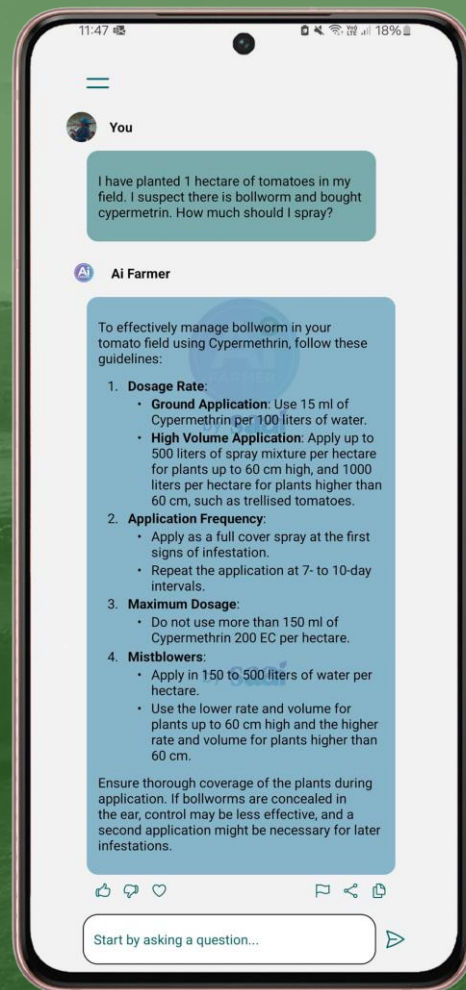
AES aims to benefit an estimated 570 million smallholders worldwide, who cultivate 24% of the world's agricultural land and produce 29% of the world's crops by kilocalories.

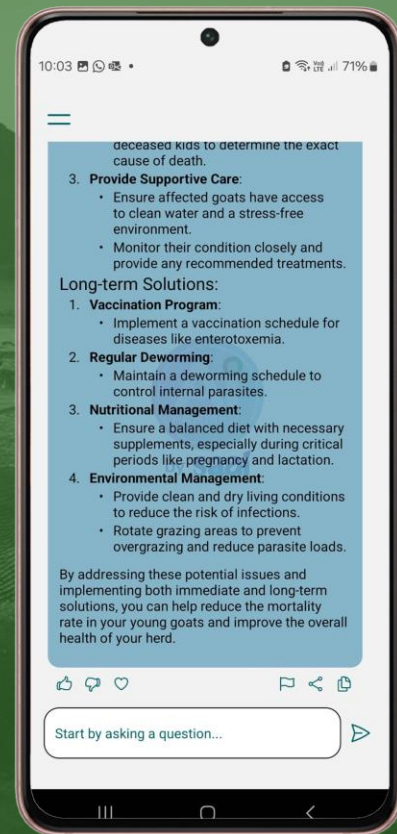
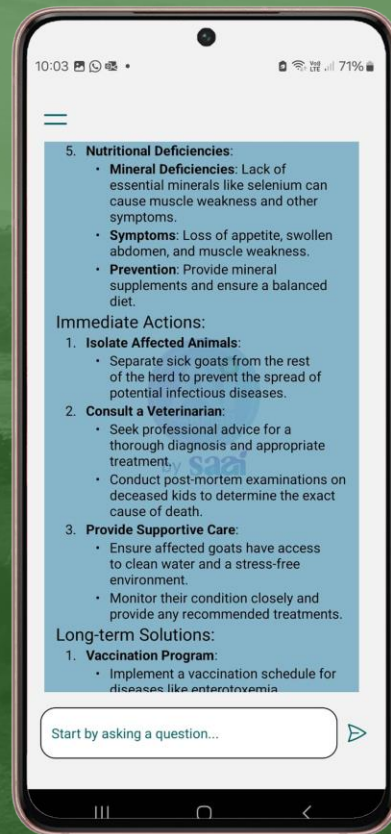
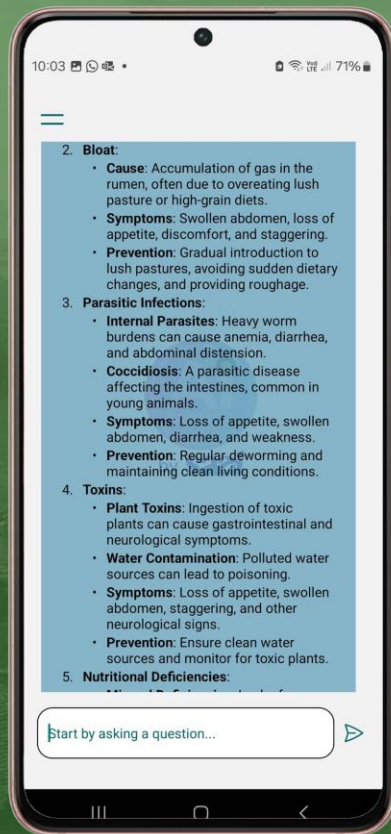
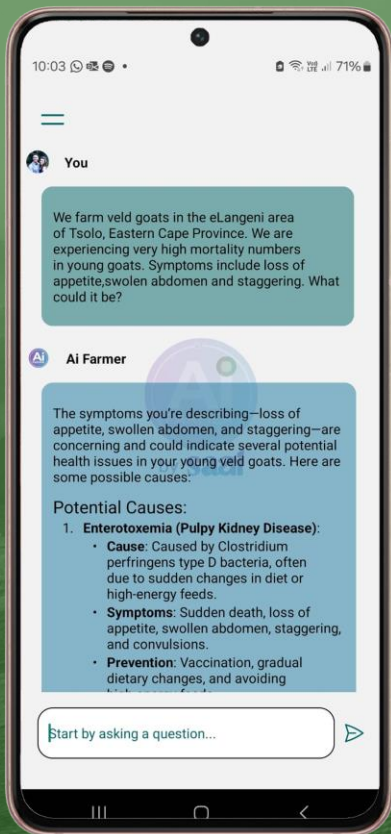
Challenges in Agricultural Extension Services

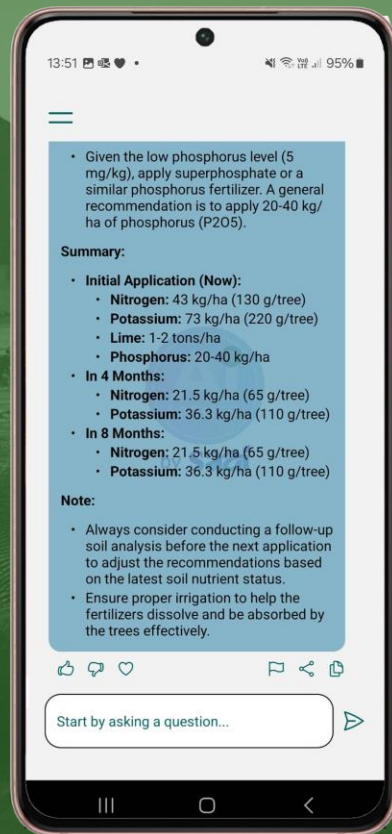
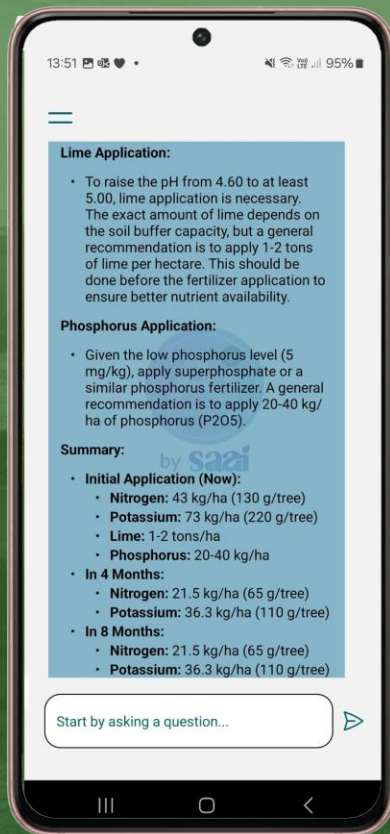
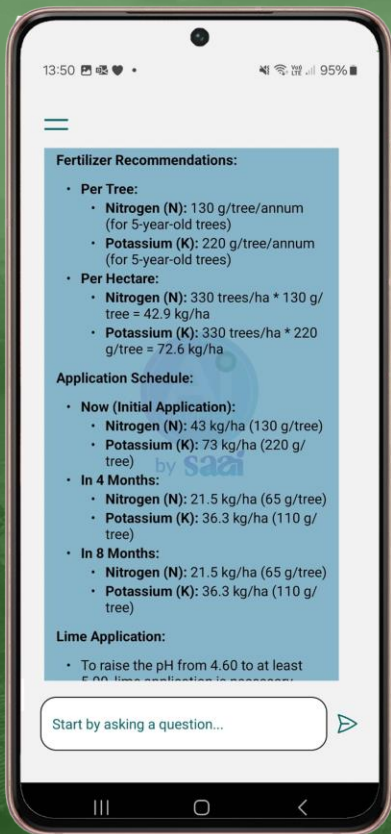
- Institutional Capacity:** Underfunded and understaffed services with inadequately trained agents struggle to impact a large number of farmers.
- Limited Access to Knowledge:** Poor infrastructure, like roads and internet connectivity, restricts farmers' access to up-to-date scientific knowledge.
- Language Barriers:** A diverse range of languages means information may not always be delivered in an accessible language.
- Resource Constraints:** Smallholders often lack the time and means to attend training sessions or visit extension centers.
- Generic Information Delivery:** Broad advice that doesn't account for specific local conditions reduces its relevance and impact.
- Supervision of Extension Agents:** Monitoring remote rural areas is challenging, leading to inconsistent information delivery.
- Accessibility Biases:** Services often favor larger farms, neglecting marginalized groups like smallholders, indigenous people, and women.

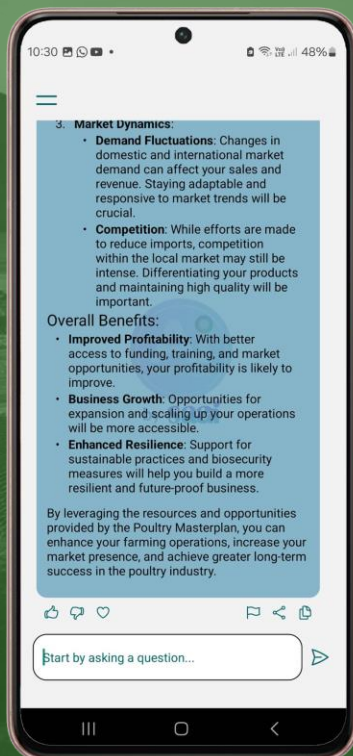
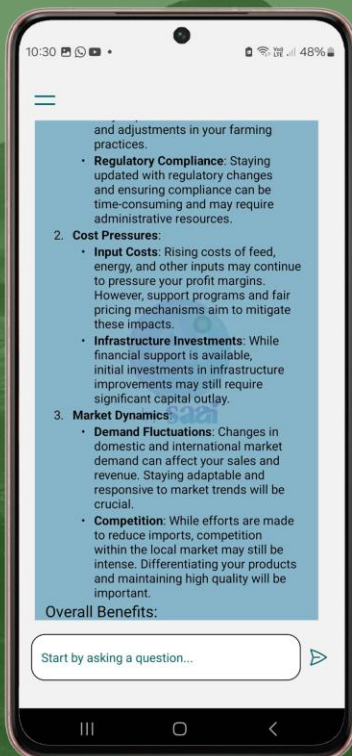
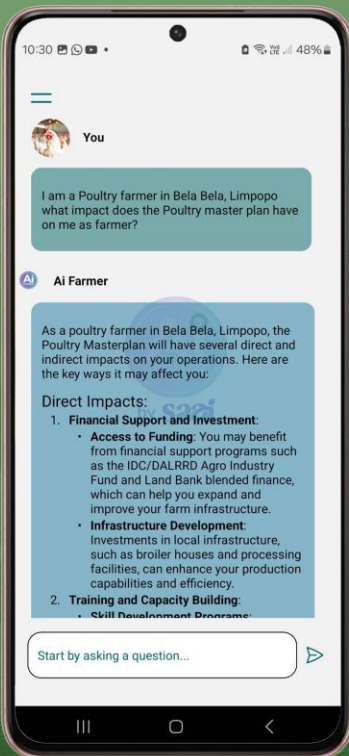
Introducing AI Farmer

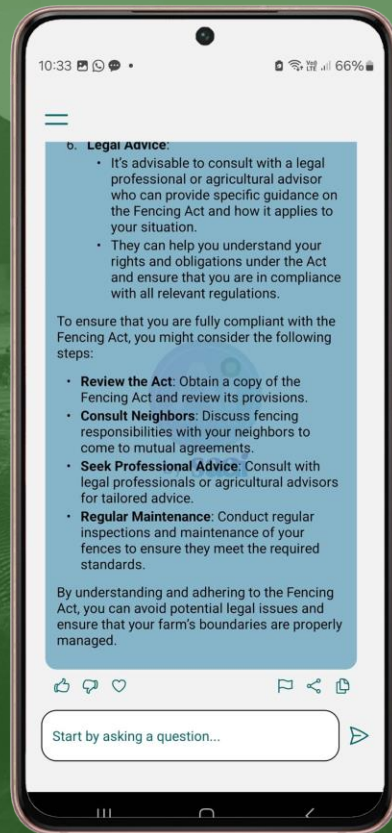
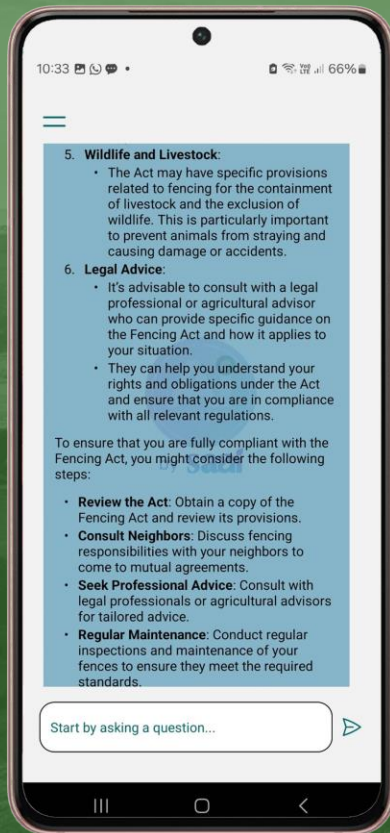
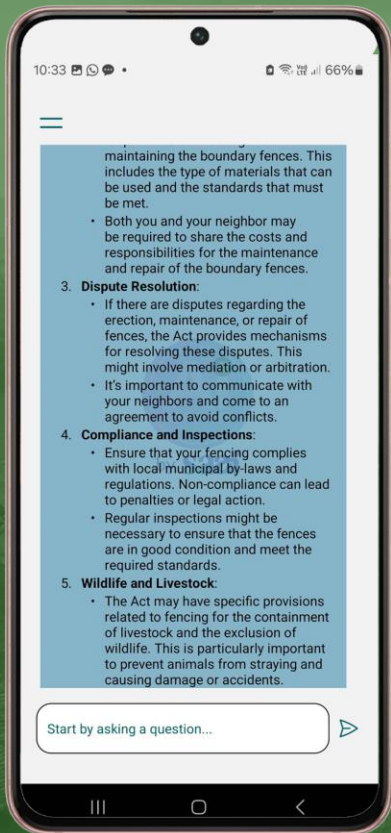
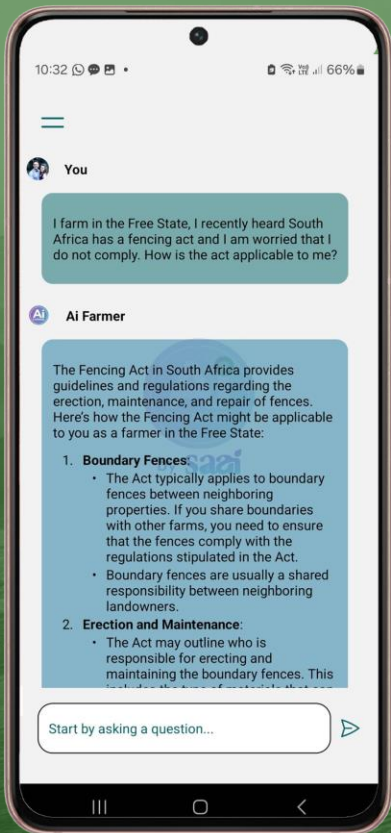
- To tackle these issues, we developed AI Farmer, a Generative AI application designed to simplify scientific knowledge and provide personalized, location-specific, data-driven recommendations for farmers.











Navigating AI Pitfalls in Data Management: Key Challenges

- 1. Hallucinations:** AI can generate fluent but inaccurate information.
- 2. Model Drift:** Prolonged user interaction may cause AI to deviate from its initial training.
- 3. Bias:** Unfiltered data can introduce unintended biases into AI models.
- 4. Privacy & Security:** Ensuring data protection during training and use is challenging.
- 5. Legal & Ethical Concerns:** Issues with intellectual property, consent, and ethical use.
- 6. Precision Limits:** Broad knowledge handling can lack the needed precision for specialized tasks.

Addressing AI Pitfalls in Data Management

- 1. Secure Platform:** Implements strict document control for information management.
- 2. Ethical Framework:** Built with guardrails, ensuring traceability and accuracy in information.
- 3. Bias Reduction:** Specialized agricultural neural network trained on 13,000 subcategories.
- 4. Privacy & Security:** Prioritizes data protection during both training and usage.
- 5. Precision & Relevancy:** Uses accurate scoring of documents for relevancy, enhancing agricultural contexts.
- 6. Multilingual Access:** Supports up to 83 languages for global accessibility.



Conclusion: Empowering Farmers with AI Farmer

- **Conversational Access:** Farmers can now engage directly with the world's largest agricultural knowledge base.
- **Tailored Problem-Solving:** From general inquiries to specific challenges, AI Farmer provides personalized, data-driven solutions.
- **Building Capacity:** Enhances institutional knowledge and cultivates intellectual property within the agricultural sector.
- **Democratization of Information:** Breaking down barriers, making vital agricultural knowledge accessible to all farmers, regardless of location or scale.



QUESTIONS?

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