

Harvest the Future

AI driven Agri Extension Service

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 **AELA**
AI driven Agri Extension Service


global forum for rural advisory services
forum mondial pour le conseil rural
foro global para los servicios de asesoría rural

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.

www.saai.org



AI driven Agri Extension Service

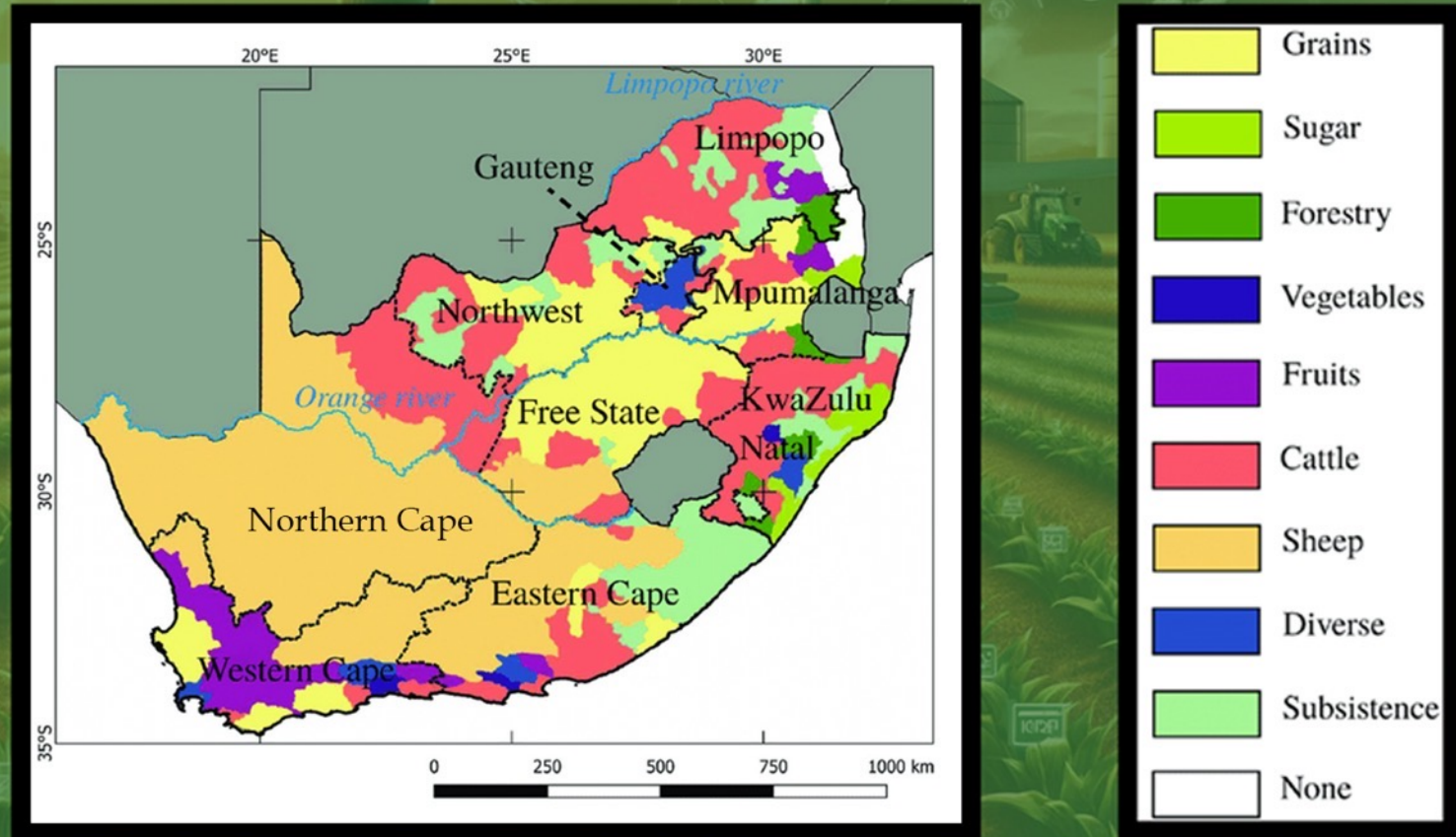


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IMPEDIMENTS THAT PREVENT FARMERS FROM ACCESSING OR BENEFITING FROM AGRICULTURAL EXTENSION.

- Limited Access
- Language Barriers
- Limited Time and Resources
- Institutional Capacity
- Generic Information
- Supervision of Extension Agents
- Privacy Concerns
- Accessibility Biases

MAP OF AGRICULTURAL PRODUCTION AREAS BY SUBSECTOR IN SOUTH AFRICA



CASE STUDIES

This beetle is eating my cabbage seedlings. What can we use to control that won't be strong to kill the seedlings?

1. Manual removal: Inspect the cabbage seedlings regularly and manually remove the beetles by hand. This can be effective for small infestations.
2. Neem oil: Neem oil is a natural insecticide derived from the neem tree. It can be mixed with water and sprayed on the seedlings to deter and control beetles. Follow the instructions on the neem oil product for proper dilution and application.
3. Insecticidal soap: Insecticidal soaps are made from natural fatty acids and are effective against soft-bodied insects like beetles. Dilute the insecticidal soap according to the instructions on the product label and apply it to the seedlings, targeting the beetles.
4. Beneficial insects: Introduce beneficial insects like ladybugs or lacewings to the garden. These insects feed on pests like beetles and can help control their population naturally.
5. Row covers: Use row covers or insect netting to physically exclude the beetles from reaching the cabbage seedlings. This can be an effective preventive measure.

It's important to note that the specific type of beetle and the severity of the infestation may require different control measures. If the infestation persists or worsens, it is advisable to consult with local agricultural extension services or a professional agronomist for more targeted and specific recommendations based on the region and the specific beetle species involved.



AELA

AI driven Agri Extension Service



What is Cypermethrin?

Cypermethrin is a synthetic pyrethroid insecticide widely used in agriculture to control a variety of pests. It belongs to the group of chemicals known as pyrethroids, which are modeled after natural compounds found in chrysanthemum flowers. Cypermethrin is known for its effectiveness against a wide range of insects, including beetles, ants, mosquitoes, and ticks.

Here are some key points about Cypermethrin:

1. **Mode of action:** Cypermethrin acts by disrupting the nervous system of insects, leading to paralysis and ultimately death.
2. **Persistence:** Cypermethrin has a relatively long residual activity, meaning it can remain effective for an extended period after application.
3. **Formulations:** Cypermethrin is available in various formulations, including emulsifiable concentrates, wettable powders, and aerosols, allowing for different application methods.
4. **Application:** Cypermethrin can be applied using different methods such as spraying, dusting, or seed treatment, depending on the target pest and the crop being treated.
5. **Precautions:** Cypermethrin is toxic to aquatic organisms and can be harmful to bees and other beneficial insects. It is important to follow the instructions on the product label regarding application rates, safety precautions, and any specific restrictions or withholding periods.
6. **Resistance management:** Like other insecticides, the repeated and exclusive use of Cypermethrin can lead to the development of resistance in target pests. To mitigate resistance, it is advisable to rotate or alternate the use of different insecticides with different modes of action.

It is always recommended to consult the product label, local agricultural authorities, or a qualified agronomist for detailed and up-to-date information on the use of Cypermethrin in your specific situation.



 agriculture, forestry & fisheries <small>Department of Agriculture, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA</small>	DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES DIRECTORATE ANIMAL HEALTH
	VETERINARY PROCEDURAL NOTICE FOR BUFFALO DISEASE RISK MANAGEMENT IN SOUTH AFRICA (also referred to as the Buffalo Veterinary Procedural Notice)
APPROVED BY:	Director: Animal Health
EFFECTIVE DATE:	2017-03-01


<small>STAATSKOERANT, 12 OKTOBER 2023 No. 49470 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	12 October 2023
NO. 3962	NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)
REPUBLICATION OF THE DRAFT REGULATIONS PERTAINING TO LISTED THREATENED OR PROTECTED TERRESTRIAL SPECIES AND FRESHWATER SPECIES FOR PUBLIC COMMENT	


<small>STAATSKOERANT, 14 JUNIE 2023 No. 48785 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	14 June 2023
NO. 3537	PUBLICATION OF THE WHITE PAPER ON CONSERVATION AND SUSTAINABLE USE OF SOUTH AFRICA'S BIODIVERSITY
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby, publish for implementation, the White Paper on Conservation and Sustainable use of South Africa's Biodiversity, 2023, as set out in the Schedule hereto.</p> <p> BARBARA DALLAS CREECY MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT</p>	

<small>STAATSKOERANT, 12 OKTOBER 2023 No. 49470 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	12 October 2023
NO. 3963	NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)
REPUBLICATION OF THE DRAFT LIST OF THREATENED OR PROTECTED TERRESTRIAL SPECIES AND FRESHWATER SPECIES, RESTRICTED ACTIVITIES THAT ARE PROPOSED TO BE PROHIBITED, AND RESTRICTED ACTIVITIES THAT ARE PROPOSED TO BE EXEMPTED FOR PUBLIC COMMENT	
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby, in terms of sections 56(1), 57(2), 57(4), read with sections 99 and 100 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (the Biodiversity Act), republish, for public comment the—</p> <p>(a) draft list of threatened or protected terrestrial species and freshwater species;</p> <p>(b) restricted activities that are proposed to be prohibited; and</p> <p>(c) restricted activities that are proposed to be exempted, respectively, as set out in the Schedule hereto.</p>	


<small>STAATSKOERANT, 17 NOVEMBER 2023 No. 49736 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	17 November 2023
NO. 4058	PUBLICATION OF THE DRAFT AQUACULTURE DEVELOPMENT BILL FOR PUBLIC COMMENT
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby publish the Draft Aquaculture Development Bill for public comment.</p> <p>The Department is the lead department responsible for the development and management of the aquaculture sector. The Aquaculture Development Bill will provide for a detailed legal framework for management and sustainable development of the aquaculture sector in an integrated manner. The Bill will provide a legislative framework that covers both marine and freshwater aquaculture sectors. The Bill aims to promote the development of the sector to ensure meaningful contribution to the country's priorities such as food and nutrition security, economic growth and job creation while addressing the historical imbalances in accessing aquaculture opportunities. The new legislation will streamline the current fragmented regulatory framework, authorities' regime, and provide an enabling environment that contributes to management of the sector in a coordinated manner.</p> <p>As part of its textual development, the Department undertook an extensive consultation process with the industry's stakeholders and its governmental partners. After sharing the draft Bill during this process, and obtaining inputs from the stakeholders, the Department incorporated those inputs and presented the draft Bill to Cabinet for approval. Cabinet approved the draft Bill for publication for public comment on 13 September 2023.</p> <p>The primary purposes of the draft Bill are to:</p> <ul style="list-style-type: none"> □ promote responsible aquaculture development and the responsible development and management of an aquaculture sector; □ promote coordination of aquaculture research and development activities; □ ensure efficient and effective regulation of the aquaculture sector; □ promote transformation of the aquaculture sector; □ promote investment into the aquaculture sector; □ promote aquaculture as a farming activity; and □ make provision for appropriate support services. <p>Broadly, the Bill seeks to create a more enabling business environment for the industry in order to stimulate sector growth and development, boost investor confidence, and ultimately job creation. The Bill contains various mechanisms that will enable government to facilitate growth in the sector and regulatory efficiency, such as the creation of the intergovernmental</p>	

<small>STAATSKOERANT, 29 SEPTEMBER 2023 No. 49380 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	29 September 2023
NO. 3926	NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)
PUBLICATION OF THE DRAFT NOTICE PROHIBITING CERTAIN ACTIVITIES INVOLVING AFRICAN LION (Panthera leo) FOR PUBLIC COMMENT	
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby in terms of section 5A read with sections 39 and 100 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), consult on my intention to prohibit the establishment or registration of new captive breeding facilities, commercial exhibition facilities, rehabilitation facilities or sanctuaries in respect of live specimens of African lion (Panthera leo) and the keeping of live specimens of African lion (Panthera leo) in any other new controlled environment, as set out in the Schedule hereto.</p> <p>Members of the public are invited to submit, within 30 days from the date of publication of this notice in the Government Gazette or in the newspaper, whichever date is the later date of publication, written comments to any of the following addresses:</p> <p>By post to: The Director-General, Department of Forestry, Fisheries and the Environment Attention: Mr Khuthulani Mahamba Private Bag 3447 PRETORIA 0001</p> <p>By hand at: Reception, Environment House, 472 Olive Biko Road, Anasida, Pretoria, 0083</p> <p>By e-mail: lcroph3k@efsa.gov.za</p> <p>Any inquiries in connection with this notice or to obtain a copy of the draft Socio-Economic Impact Assessment (SEISA) Report, can be directed to Mr Khuthulani Mahamba on +27 84 861 5728 or lcroph3k@efsa.gov.za.</p> <p>Comments received after the closing date may be disregarded.</p> <p> BARBARA DALLAS CREECY MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT</p>	

<small>STAATSKOERANT, 19 SEPTEMBER 2023 No. 49302 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	19 September 2023
NO. 3889	COMMENTS INVITED ON THE DRAFT POLICY POSITION ON THE CONSERVATION AND SUSTAINABLE USE OF ELEPHANT, LION, LEOPARD AND RHINOCEROS
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby, publish the draft Policy Position on the Conservation and Sustainable Use of Elephant, Lion, Leopard and Rhinoceros (draft Policy Position), for public comment, as set out in the Schedule hereto.</p> <p>The draft Policy Position is informed by the White Paper on Conservation and Sustainable Use of South Africa's Biodiversity which was published for implementation on 14 June 2023, under Government Notice No. 3537, Government Gazette, No. 48785; the High Level Panel (HLP) report, the recommendations of the Committee of Inquiry (CoI) that was appointed to advise on the possibility of proposing legal interventions as international trade in rhino horn to the 17th Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Colloquium report on captive lion breeding for hunting.</p>	
<small>STAATSKOERANT, 6 NOVEMBER 2023 No. 49620 3</small>	
GOVERNMENT NOTICES • GOEWERMENSKENNISGEWINGS	
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT	8 November 2023
NO. 4042	PUBLICATION OF THE GAME MEAT STRATEGY FOR SOUTH AFRICA
<p>I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby, publish the Game Meat Strategy for South Africa, 2023, as set out in the Schedule hereto.</p> <p> BARBARA DALLAS CREECY MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT</p>	



Western Cape Government

Department of Environmental Affairs and Development Planning



DRAFT PROVINCIAL BIODIVERSITY STRATEGY AND ACTION PLAN 2020 - 2030

September 2023





Technology Overview



AI driven Agri Extension Service



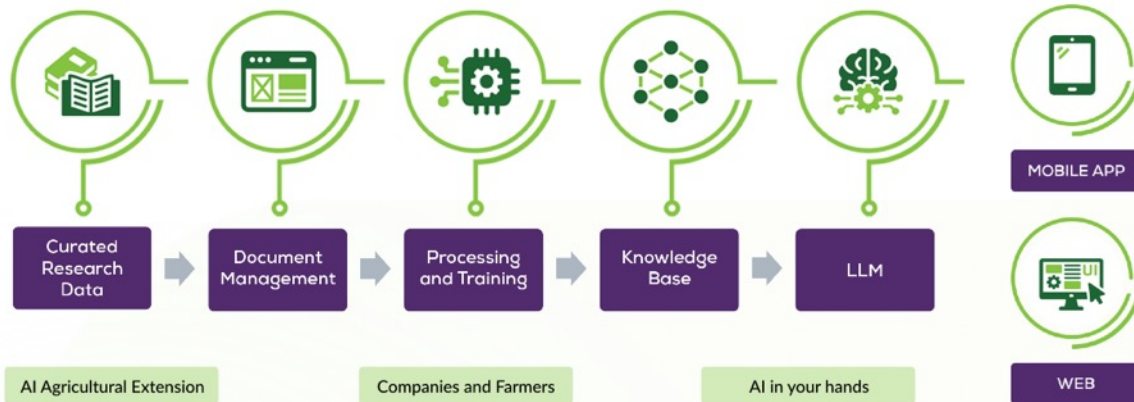


Application:



AELA creates a more productive, sustainable, and inclusive future in agriculture. It leverages AI technology to enhance the capabilities of farmers and companies, aligning with global goals of food security, sustainable agriculture, and policy implementation. We aim to empower farmers and improve agricultural practices worldwide.

Release Date: Jan 24'



AI Agricultural Extension

Addressing challenges faced in agricultural extension: Limited reach, knowledge gaps, communication barriers and resource constraints.

AELA offers personalised guidance, accessible knowledge translation, AI-powered insights, expert collaboration, and a user-centric design, improving decision-making and productivity for farmers.

Companies and Farmers

Enhancing farmer-company communication, we streamline complex information, enable real-time interactions, and facilitate direct engagement through company channels.

By expanding market reach and utilizing data analytics, we help companies forge stronger, more insightful connections with farmers.

AI in your hands

Transcending traditional advice, our app offers personalised guidance, climate strategies, economic insights, community networking, innovative research, and multilingual support.

AI Farmer delivers a comprehensive digital solution, providing real-time, custom recommendations to enhance farmer productivity and sustainability.

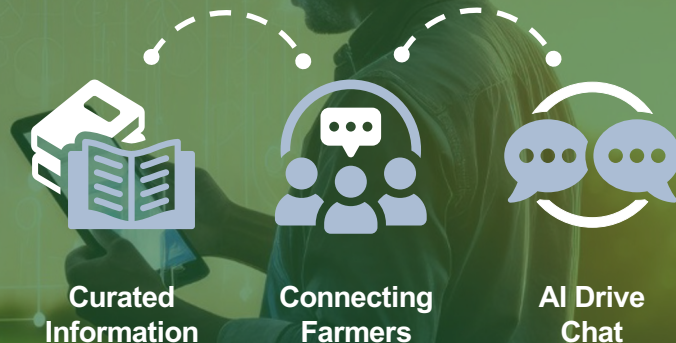


AELA AI Platform for Agri

AELA is a generative AI platform revolutionizing agriculture through personalized, practical advice tailored to each farmer's unique challenges. Unlike conventional tools relying on scraped public data, AELA uses carefully curated data, benefiting everyone from smallholder farmers to large agribusinesses.

It overcomes language and literacy barriers, providing accessible, actionable insights for sustainable farming.

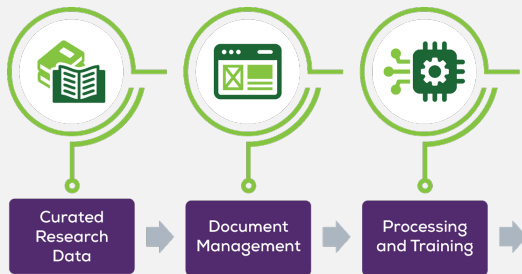
AELA's user-friendly and adaptive approach makes it a vital companion for farmers in the digital age, guiding the agricultural sector towards a sustainable, efficient, and equitable future.



GenAI Technology Overview

AELA proprietary Data Management Suite of Tools

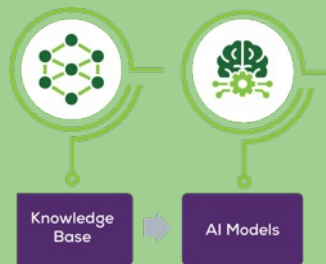
Curated Private Information and Data



End to End Private Label Platform

Industry Leading Models

Large Language Models and AI by market leaders



White-label Interface

Intuitive User Interfaces by AEELAs



Phase 1
Data Management

Phase 2
Data Transformation

Phase 3
AI Training

Phase 4
Conversation with Farmer

Platform Features



End to End Generative AI: AELA manages all aspects of generative AI in a scalable and extendable platform built specifically for Agriculture. We use the best models at any given time to provide the most reliable and accurate results.



Curated Data: Best in class LLM and GenAI built on **YOUR** enterprise data and research. Allows you to control the messaging and dissemination of information to users by curating and managing all aspects of information being trained.

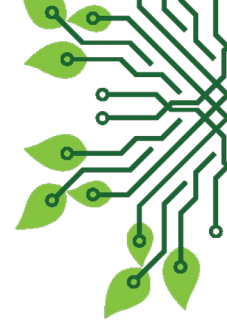


Gold Standard Technology: Multi-tenanted, best of breed technology developed on a world class deployment platform. Using more than 30 years of platform experience our team have developed the AELA platform from the ground up using containerized microservices



Document & Research Manager: Comprehensive DAM (digital asset manager) to manage research projects for training of the AI knowledgebase in a structured, and controlled way. Built in Ethical Guardrails protect the integrity of the knowledgebase

Mobile App Features



Personalized Agricultural Advice: Data-driven advice tailored to individual farmers based on land conditions, climate, and available resources.



Real-Time Weather Forecasts and Climate Adaptation: Up-to-date weather forecasts and strategies to adapt to climate variability, mitigating risks associated with extreme weather events

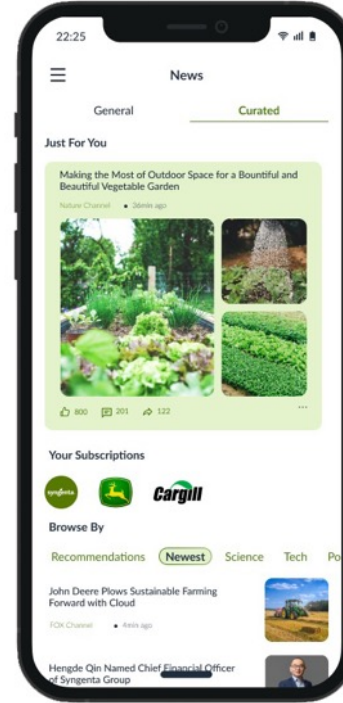
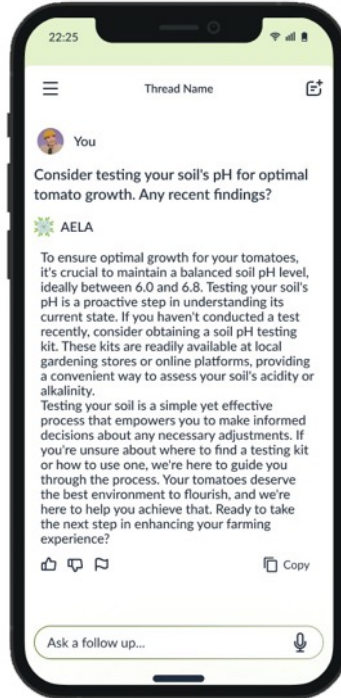
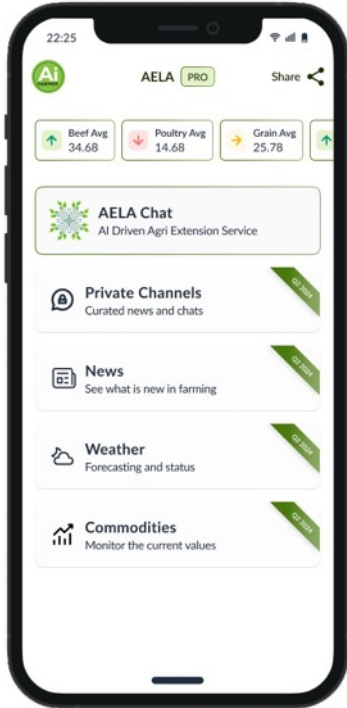


Market Insights and Economic Guidance: Valuable market trends, prices, and demand insights for informed decision-making in crop selection and selling strategies.



Natural Language: Offers multilingual support to cater to the diverse linguistic landscape of the agricultural sector.

Mobile App



Web Interface



Total Documents Trained

8 293

+28.5% +723 new documents

Dashboard

Users

AI Engine

Chatbot

Digital Asset Manager

Help Center

Settings

Jacques



AI driven Agri Extension Service

Dashboard

Welcome Back, jacques!

The current status and activity on AELA.

12 Months

30 Days

7 Days

24 Hours

Select Dates

Filters

AI Engine Status

Document Training

Documents that are in progress

Optical Character Recognition (OCR)

283

Digital Decoration & Enhancement

599

Training & Embedding

482

Ready

12829

Top Channels

Opt-In channels with specific streams of information

AELA Internal

Free Tier

89%

Southern African Agri Initiative

Free Tier

64%

Global Forum for Food and Agriculture

Free Tier

100%

58

Active Reviews

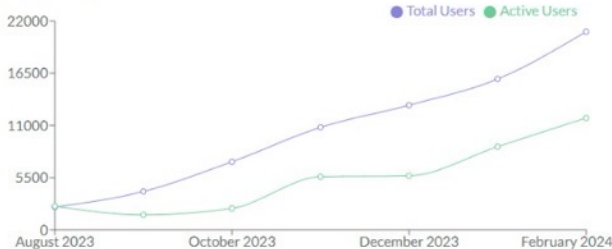
43 Pending

74%

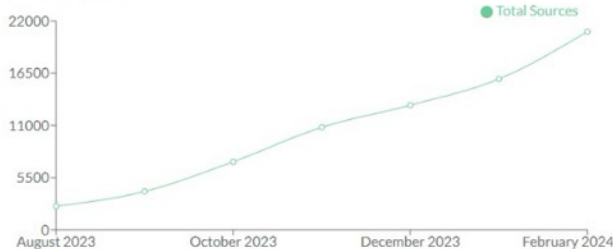
38,294

Questions Asked

Users Growth



Sources Growth



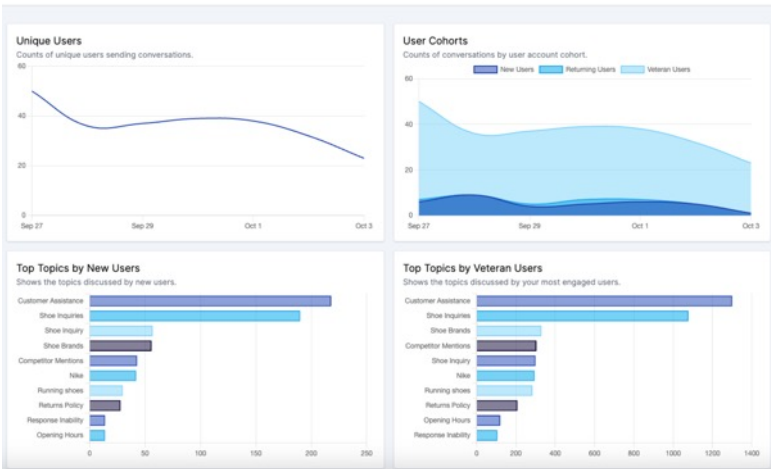
EchoPulse - Analytics

At the heart AELA lies EchoPulse, our innovative suite of observability tools designed to enhance the user experience through analysis and intentional intervention. EchoPulse distinguishes itself in the field of artificial intelligence by providing an unmatched understanding of user engagement. It's not just an observability suite; it's a pathway to optimizing the GenAI experience.

User Engagement

Track how users are engaging with your product over time.

Today Yesterday 7D 30D 90D Custom



Topics > Running Shoes

Today Yesterday 7D 30D 90D Custom

Overview Transcripts

Conversation Volume

563

Up 13.5% compared to the prior period.

Message Volume

1481

Up 13.6% compared to the prior period.

Average User Sentiment

0.23

+0.0 compared to the prior period.

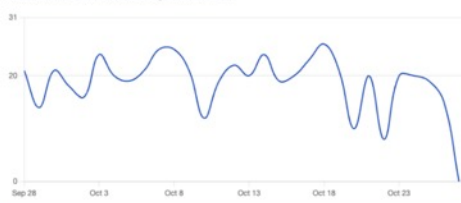
Average User Rating

0.17

+0.07 compared to the prior period.

Conversation Volumes

Shows the count of conversations ingested over time.



Average Sentiment

Shows the average sentiment of user messages over time within this topic.



Most Frequent Adjacent Topics

View what topics most frequently occur alongside this topic.



User Thumbs Up/Down Ratings

View the trend of user thumbs up/down ratings over time within this topic.



AI driven Agri Extension Service

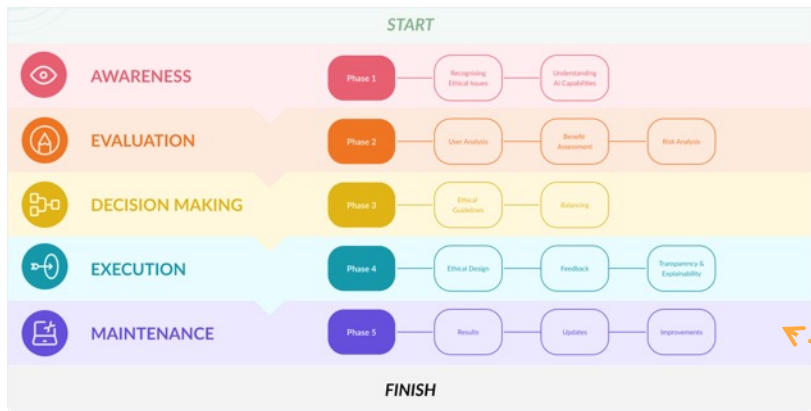


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Responsible

We have developed a comprehensive ethical framework

The AELA platform was developed with Ethical AI in mind, and followed the principles and standards as set out by our groundbreaking Ethical Framework



Human-centric approach to AI



Innovation: Our GenAI Difference

Additional to other LLM and GenAI products available, AELA offers

- ✓ Agri-First: Team of agricultural specialists dedicated to advancing farming solutions.
- ✓ Ethical AI: Prioritises data ethics, bias mitigation, and legal compliance.
- ✓ Curated Data: Authority scoring ensures data reliability and integrity.
- ✓ Private Channels: Secure channels for personalised stakeholder-user interactions.



Human-in-the-Loop

EchoPulse

Unlock the Potential of **Precision Agriculture** with AELA

We at AELA are committed to empowering the agricultural community by transforming how knowledge is delivered to farmers worldwide. With over three decades of technological expertise and a deep-rooted passion for agriculture, we've crafted AELA - your ultimate AI-driven Agricultural Extension Service. AELA stands at the forefront of innovation, breaking language barriers, transcending geographical boundaries, and ensuring personalized, actionable advice that steers the agricultural sector toward a sustainable and prosperous future.

Embrace the future of farming with AELA: Where every decision is data-driven, every challenge is an opportunity, and every farmer's success is within reach.



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Additional Slides



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AELA
AI driven Agri Extension Service

AELA EchoPulse

EchoPulse, our innovative observability tool suite, revolutionises user experience through advanced analysis and intervention.

User Insight:

Deep-dive analytics uncover key trends, topics, and sentiments from user interactions, offering a personalized experience.

Sentiment Analysis:

Advanced engine distinguishes emotional tones in conversations, providing detailed insights into user engagement.

Real-Time Tracking:

Monitors user engagement in real-time, offering actionable insights for dynamic, responsive platform interaction.

Quality Management:

Drives continuous improvement with data-driven insights, enhancing messaging strategies and data training quality.

Human Intervention:

Identifies critical scenarios for human input, enhancing data quality and providing valuable assistance across sectors.

Adaptive Learning:

EchoPulse enables AELA to evolve dynamically, learning from user interactions for a consistently relevant and engaging experience.

Platform Admin



Total Documents Trained

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+28.5% +723 new documents

Dashboard

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Dashboard

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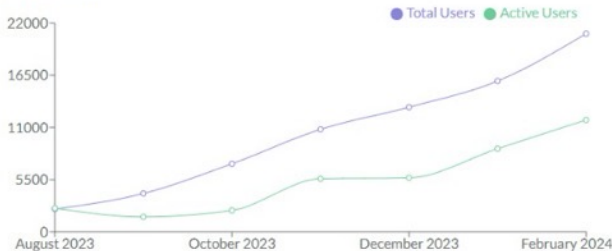
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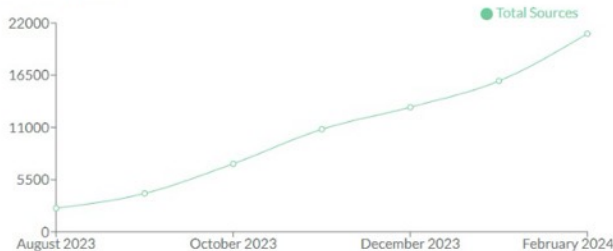
38,294

Questions Asked

Users Growth



Sources Growth



AI driven Agri Extension Service



Platform Admin – Research Manager

The screenshot displays the AELA Platform Admin interface, specifically the Research Manager section. The interface is divided into three main areas:

- Left Sidebar:** Contains navigation links for Dashboard, Users, Digital Asset Manager (expanded), Projects, Overview, Inventory, Analytics, Audit, Assignments, AI Engine, Chatbot, and Settings.
- Top Header:** Shows the AELA logo, a breadcrumb trail (Digital Asset Manager > Site Map), the current URL (aela.co.za/agri/Agriculture.html), a search bar, and a filters icon.
- Main Content Area:**
 - Tree View:** A hierarchical list of research topics under 'Livestock Farming'. The selected item is 'Selection of livestock species'.
 - Details Panel:** A form for editing the selected item, including fields for Title, URL, HREFLANG, Category, Workflow Status, Meta Description, Meta Keywords, Tags, and Priority.

EchoPulse - Evaluation

← Back to Latest Version

Compare Results for 2 versions in Airline Test Set

Add Comparison ▾

Summary

Version 21

9 evaluations run

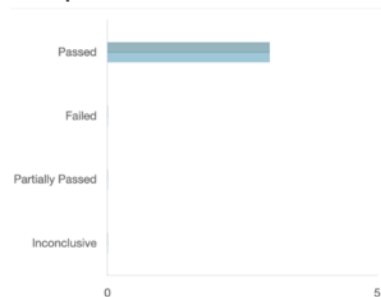


Version 22

9 evaluations run



Attempts Answer



Faithfulness



	Attempts Answer		Faithfulness		Refuse Answer	
Version 21	N/A		N/A	N/A		
Version 22	N/A		N/A	N/A		

Version 21

bad_example_2



Refuse Answer ▾

Version 22

bad_example_2



Refuse Answer ▾

By continuously learning from real user interactions, EchoPulse ensures that your platform remains at the cutting edge, offering a user experience that is always relevant and engaging.