

TEKULIMA

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agriculture, rural development,
land & environmental affairs
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA



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ABOUT US

The Department of Agriculture, Rural Development, Land and Environmental Affairs Administration is guided by a vision, mission and values developed to inspire and ensure alignment towards achievement of the department's objectives.

Our Vision

Our Vision is to be a Vibrant, equitable and sustainable communities with a united and transformed agricultural and environmental sector.

Our Mission

To facilitate an integrated, comprehensive, sustainable environmental and agricultural development in communities through ensuring social cohesion and collaboration by all sectors of society.

Our Values

Guided by the principles of Batho Pele, we will render services particularly based on the following values:

Result oriented, diligent and professional staff; Responsive to the needs of all citizens, particularly the poor, women, youth, elderly and persons with disabilities;

Driven by community-based development; A learning organization that is participatory in its approach and grows from its experiences and new knowledge and innovations; Promote and improve effective, efficient and responsive departmental systems and use of resources.

Act with honesty, ethical, impartial and with intergrity.

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Editors Note

Ms. Zanele Shabangu



As we close the third quarter of 2025/26 financial year, we reflect on a period marked by progress, partnership, and a deepening commitment to sustainable development across Mpumalanga. This edition highlights the significant strides made in environmental stewardship, agricultural innovation, capacity-building, and community empowerment across the province.

From the global stage at COP 30 in Brazil to regional knowledge-sharing platforms and hands on training initiatives, the stories in this issue underscore our collective determination to build a greener, more inclusive Mpumalanga. We celebrate the achievements of our officials, partners, farmers, graduates, and communities who continue to play a vital role in transforming our environmental and agricultural landscape.

Our engagements, from promoting environmental compliance in Bethal to empowering graduates and smallholder farmers continue to strengthen institutional capacity, stimulate local economies, and advance climate resilient development.

As we look ahead, the coming months offer numerous opportunities for stakeholders across the sector to deepen their participation, expand their knowledge, and connect with others who share our vision for sustainable growth.

We encourage all our readers, farmers, partners, community members, and industry professionals to participate in the upcoming events. Your involvement not only strengthens our collective impact but also ensures that Mpumalanga remains a leader in sustainable development, agricultural excellence, and environmental resilience. Our research corner is also meant for you.

I would also like to take this moment to applaud the Communication Services' team who worked tirelessly to make sure that this edition is what it is today, an informative, empowering and captivating publication for our readers. Let us continue working together to build a province where communities thrive and opportunities flourish.

“Enjoy the read.”

MEC HIGHLIGHTS JUST TRANSITION EFFORTS AT COP-30 IN BRAZIL



Agriculture, Rural Development, Land and Environmental Affairs MEC Ms Khethiwe Moeketsi attended the COP30 UN-Climate Change Conference at the Hangar Convention Centre in Belém, Brazil, that started on 10 – 21 November 2025. Moeketsi used the two-week long platform to reaffirm South Africa's commitment to a Just-Transition that is inclusive, people-centred and climate-resilient, while highlighting the central role of Mpumalanga as the country's energy heartland.

During her engagements, MEC Moeketsi emphasized that the transition to a low-carbon future must ensure that no worker, community, or region is left behind. She highlighted South Africa's approach, guided by the Presidential Climate Commission's Just Transition Framework, which balances the imperative of reducing emissions with the protection of livelihoods in coal-dependent communities. In particular, she stressed the importance of reskilling workers, creating new green job opportunities, and revitalizing local economies to mitigate the social and economic impacts of transitioning away from coal.

In her address during a panel discussion, MEC Moeketsi highlighted that Mpumalanga is pivotal to the success of South Africa's Just Transition. The province hosts the majority of the nation's coal-fired power stations and coal mines, and it is therefore at the forefront of the social and

economic impacts of energy transition. She noted the risks faced by communities when coal infrastructure is decommissioned, including job losses, declining local economies, and skills erosion, and called for intensified support to strengthen municipal capacity, diversify local economies, and ensure sustainable development in affected areas.

Looking forward, Mpumalanga Government remains committed to advancing Mpumalanga as a model of a fair and opportunity-driven Just Transition. The department will continue to strengthen local institutional capacity, support the growth of green industries, mobilize climate finance, invest in skills development and training, and ensure that communities participate meaningfully and transparently in planning processes.



MPUMALANGA HOSTS SADC ENVIRONMENTAL PRACTITIONERS CONFERENCE



The DARDLEA collaborated with the national Department of Forestry, Fisheries, and Environment, in hosting a successful 2025 Environmental Assessment Practitioners of South Africa (EAPASA) Regional Conference in Secunda, on 30 October 2025.

The EAPASA conference is an annual event that brings together environmental professionals from the SADC countries. This was the fourth conference, allowing relevant professionals within the environmental sector in Africa to identify synergies that can assist in standardising the environmental assessment practice and developing guideline documents for best practice.

Forestry, Fisheries and the Environment Deputy Minister Bernice Swart officially opened the conference, highlighting Mpumalanga's rich natural heritage and diverse ecosystems, pointing out the environmental challenges faced by the province, including air quality issues and carbon emissions. Despite these challenges, Swart noted the progress made in addressing them, such as the piloting of carbon capture technology by the Council for Geoscience.

Discussions at the conference centred around the Harmonisation of the Environmental Information Management (EIM) system, public participation, and environmental tools within the Southern African Development Community (SADC) region. They

also looked at Mining activities and environmental issues within the SADC region, Climate Change indices and disaster management: Implications of air quality and greenhouse gas emissions in the South Region, including ensuring a sustainable future for EIM through synergy.

Delegates were also taken on excursions to various sites, including the Evander Gold Mine Solar PV Plant, the Evander Gold Mine Water Treatment Plant, the Eskom Komati Power Station, the Elikhulu Tailings Reclamation operations, the Sasol Mine (both open-pit and underground), and the Eskom NTCSA Sasol Wonderkrag Substation.



DARDLEA OFFICIALS RETURN FROM NEMATODOLOGY COURSE IN KENYA



Three DARDLEA officials returned from a week-long Basic Crash Course in Nematology that took place from 8 to 12 December 2025, at the International Centre of Insects Physiology and Ecology (Icipe) campus in Nairobi, Kenya. The course provided basic training in methods to quantify, qualify and process plant parasitic nematodes in crops, with an introduction to beneficial nematodes, indicators of soil health, and nematodes for biocontrol of insects.

The course, fully sponsored by the Karuiki – VLIR-UOS, included a hands-on experience, allowing participants to get first-hand field conditions and conduct basic research in crop nematology. The officials are Agric Advisors. Pic, from left to right Mr. Micheal Magongwa, Mr. Linda Hlahla; Ms. Nzuila; Mr. Evans Otieno; Ms. Catherine Omutulem and Ms. Phaedra Keyser.



AGRIC GRADUATES COMPLETE TUT AGRIBUSINESS PROGRAMME



A total of 123 Agriculture graduates who were part of the DARDLEA's unemployed graduate programme received their Certificates of Competence at TUT's Mbombela Campus on 25 October 2025, after successfully completing the Tshwane University of Technology's Agribusiness Management Programme.

This, as the DARDLEA through its Structured Agricultural Training Chief Directorate, in partnership with Tshwane Business School and TSB, are on a mission of advancing management and entrepreneurship skills to shape the future of agribusiness and drive innovation within the agriculture sector.

There is a growing demand for the sector to develop tailor-made programmes that not only prepare graduates for employment but also equip them for entrepreneurial development. The collaboration in delivering the Agribusiness Management Programme underscored the ongoing commitment by the partners to empower young professionals, strengthen agricultural education, and promote sustainable economic development through knowledge, innovation and entrepreneurship.



Meanwhile, DARDLEA MEC Khethiwe Moeketsi also honoured the graduates on 27 November 2025 in Mbombela, that marked the end of their two-year long on-the-field programme with the Department, thanking them for their commitment and dedication.

GREEN SCORPIONS COMMEMORATE EMI DAY IN STYLE



The Environmental Management Inspectorate (EMI) teams were out in full force in the streets of Bethal in the Govan Mbeki Municipality, on an environmental awareness campaign promoting compliance among local businesses. The blitz was part of commemorating the annual EMI Day on 20 November, an opportunity for the EMI to show its committed to encouraging local businesses to promote sustainable practices and protect the environment for future generations.

The multi-disciplinary teams, divided into six, visited 12 facilities in and around Bethal, with a mission to promote awareness of the EMI's existence, ensure compliance with environmental legislation, improve environmental performance, and foster

cooperative governance. They engaged owners and managers of facilities, providing guidance on the benefits of compliance, and the importance of protecting the environment. The teams comprised of officials from the national Department of Forestry, Fisheries and the Environment, the DARDLEA, the SAPS, the local municipality, Nkangala and Gert Sibande Districts, the Department of Water Sanitation, the Mpumalanga Tourism and Parks Agency, and Good Green Deeds.

The Environmental Management Inspectorate is committed to working with local businesses to promote sustainable practices and protect the environment for future generations.



HEALTH & WELLNESS

HOW TO SURVIVE THE HEATWAVE



DO

Stay hydrated even when you are not thirsty

Eat small meals and eat more often

Avoid extreme temperature changes

Wear loose-fitting, lightweight, lightcolored clothing

Postpone outdoor games and activities

Take frequent breaks when working outdoors



DON'T

Leave children or pets **alone in enclosed vehicles**

Have drinks with too much **alcohol or caffeine**

Do **strenuous exercise** during the hot parts of the day

Venture out in high temperature

MARKET AGENTS INTRODUCED TO FARMERS DURING ROADSHOW



Market Agents who will be working closely with farmers that will be supplying the Mpumalanga International Food Market with their produce, crisscrossed the Ehlanzeni, Nkangala, Bohlabela and Gert Sibande Districts during the week of 10 – 14 October 2025, to introduce themselves to the potential suppliers to the market, the farmers. In Gert Sibande, farmers gathered at Elukwatini Environmental Centre. They were also informed about the Mpumalanga Government Nutrition Sourcing Bill B-2025, which was still open for public inputs, seeks to support emerging farmers, revitalize land reform farms, create jobs and enhance market access. The bill is still open for public input.

The Market Agents include MabFresh, Phambili Ngombono, Aluhlaza Fresh and Colette H Holdings, among others, and they used the opportunity to outline their expectations from farmers. They emphasize the importance of good quality products, SAGAP and HASAP certification, and adherence to the buyer's code, assuring farmers of a good working relationship and transparency. The agents will sell the produce on behalf of the farmers, who will receive payment within 5 days after supplying their produce.

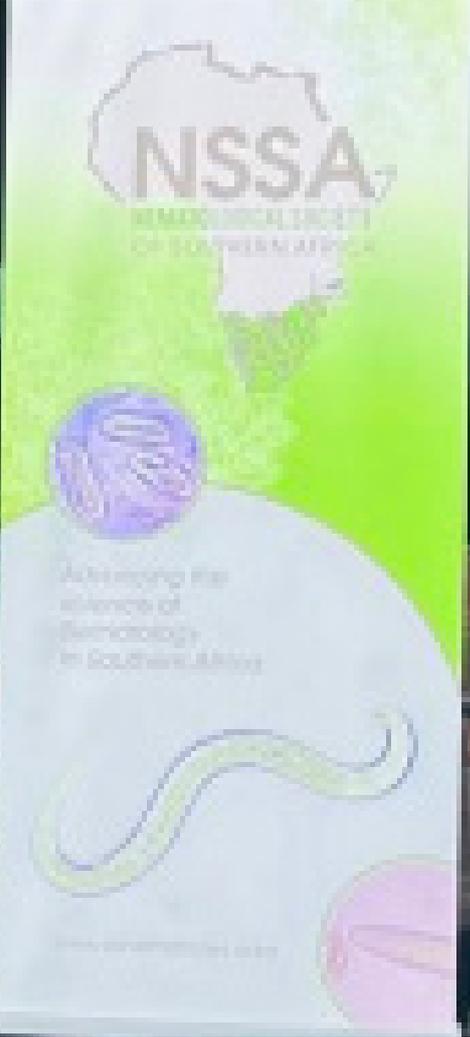


RESEARCHERS DISCUSS PROGRESS ON NEMATOLOGY RESEARCH

The 25th Symposium of the Nematological Society of Southern Africa (NSSA) ended on the 1st of October 2025 in Malelane near the Kruger National Park, after 3 days of discussions and engagements on the dangers posed by Nematode on crops. Delegates came from as far as the USA, Kenya, Czech Republic, Belgium, Netherlands, Zimbabwe, and Indonesia, including researchers, chemical companies, Extension Practitioners and students. They discussed progress made to date on the continuous research on Nematode, amongst others.

The Symposium presented a networking opportunity and knowledge on nematode symptoms and management strategies to both extension practitioners and researchers. It is expected that information shared will benefit mainly smallholder vegetable farmers in Mpumalanga, who face serious challenges in crop production due to nematode infestation that causes significant yield losses. Nematode are microscopic worms that damage the roots of a plant, preventing nutrients intake and excessively reducing the yields. They affect all kinds of crops.



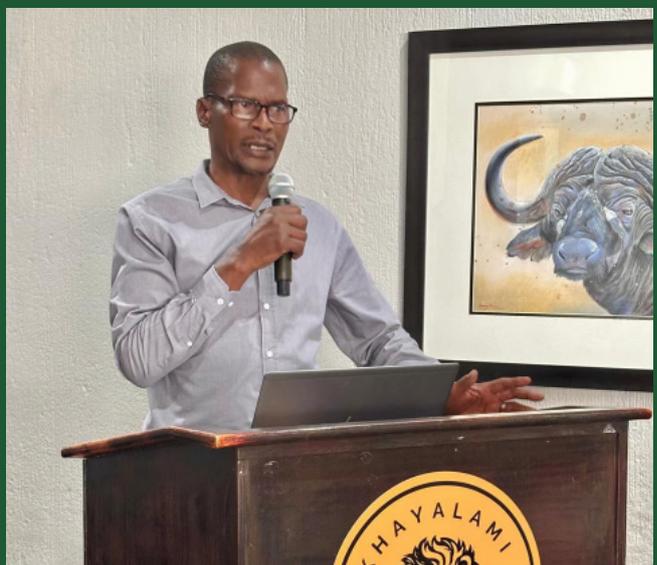


STAKEHOLDERS PUSH FOR GAS EMISSION REDUCTION PLAN

An interactive Greenhouse Gas Emission Reduction Plan (GHG-ERP) stakeholder consultation workshop for the agricultural sector took place in Mbombela on 09 October 2025, attended by stakeholders who included representatives from the national Department of Agriculture, the Agricultural Research Council (ARC), the Department of Forestry, Fisheries and the Environment (DFFE), and the DARDLEA.

Stakeholders explored practical and proven low-emission solutions such as Solar and biogas energy to reduce fossil fuel use, Bio-electricity and biofuels for clean power generation, Soil health, biodiversity, and wetland protection as natural carbon sinks. Participants emphasized the importance of continued education and capacity building around the subject matter and its objectives of reducing emission while supporting farmers in their quest to ensuring food security.

The National Greenhouse Gas Emission Reduction Plan (GHG-ERP) Stakeholder Consultation brought together farmers, government Departments, researchers and environmental experts, who discussed ways to reduce greenhouse gas emissions, promote climate-smart agriculture and build a resilient, low-carbon future for the farming sector. Presentations and discussions covered the provincial commitment to sustainable agriculture by the DARDLEA, the 9th National GHG Inventory and Emission Targets by DFFE, and Science-based mitigation strategies for agriculture by the ARC.





NKOMAZI SMALL-SCALE FARMERS GRADUATE AFTER FFS TRAINING



55 local farmers marked the end of their 12-month long training through the Farmer Field School (FFS) Programme during a graduation ceremony held at Embokodo International Church in Boschfontein under Nkomazi Municipality on October 14. The FFS programme is an extension approach assisting smallholder and subsistence farmers to learn how to grow crops the proper way, where they meet regularly to learn by doing, observe agro-ecosystems, and develop critical thinking skills for sustainable farming.

The FFS approach is a participatory, hands-on learning method that empowers small-scale farmers to solve their production challenges through shared experiences and experimentation. Initiated by the Food and Agriculture Organization (FAO), FFS is a “school without walls”. This approach contrasts with traditional top-down extension methods.

DARDLEA OBSERVES DISABILITY RIGHTS AWARENESS MONTH

The Department of Agriculture, Rural Development, Land and Environmental Affairs commemorated and observed the Disability Rights Awareness Month (DRAM) in Emalahleni on 21 November 2025, under the Theme: “Creating Strategic Multi-Sectoral Partnerships for a Disability-Inclusive Society”. DRAM, observed annually from November 3rd until December 3rd, is dedicated to raising awareness about the rights of people with disabilities, and promoting their inclusion in society, and in the workplace.

Speakers from various institutions were present to support the event. They included representatives from Autism SA, whose message emphasized that Disability is not Inability, focusing more on inclusivity in the workplace.

The DARDLEA’s Chief Director for Corporate Services Dr Pontsho Mabelane said the Department encourages every employee to disclose any form of disability, adding that no one is immune from disability. She added that the Department should strive for equity numbers to grow or strike a balance.



RESEARCH CORNER

Soil Acidity



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Introduction

Soil health is the foundation of good crop production. One of the most common challenges Mpumalanga farmers faces is soil acidity. Acidic soils reduce the availability of essential nutrients and can even release toxic elements that damage crops (Fageria & Baligar, 2008). In South Africa, many agricultural soils, especially in high rainfall areas, are naturally acidic (FERTASA, 2016). Acidic soils reduce crop growth, lower yields, and waste fertilizer investments. Understanding soil acidity and how to manage it through liming is essential for sustainable farming. Human activities, such as intensive farming practices and the application of acidifying fertilizers, have contributed to the issue in several regions (Penuelas et al., 2023). Therefore, the aim of this article is to create awareness among farmers about soil acidity, how to identify it, the causes, and its effect on crops and lime as a corrective measure.

pH levels in soils and interpretations

- 0-3.5 – Very Acidic
- 3.6-6.5 – Slightly Acidic
- 6.6-7.5 – Neutral
- 7.6-10.5– Slightly Alkaline

10.6-14– Very Alkaline

Very acidic soils: apply lime (calcitic or dolomitic liming materials) or wood ashes

Very alkaline soils: apply sulphur & ammonium based fertilizers

Availability of most nutrients is influenced by pH e.g. acidic soils will lead to aluminium and manganese toxicity and calcium, phosphorus and magnesium will be less available.

In highly alkaline soils, phosphorus and most micronutrients become less available

RESEARCH CORNER

Soil Acidity



Farmers can identify soil acidity in two main ways:

1. Soil testing - Nooitgedacht soil testing laboratory offers soil analysis services to smallholder and subsistence farmers of Mpumalanga province for free. The most reliable method is laboratory soil analysis, where the soil pH is measured. A soil with a pH (measured in Potassium chloride(KCl) or water (H₂O) below 5.5 is considered acidic, and corrective action such as liming is often needed (FERTASA, 2016).
2. Field observations - Certain symptoms in crops and soil conditions can also indicate acidity. These include:
 - Stunted crop growth and yellowing leaves despite fertilizer use.
 - Poor nodulation in legumes.
 - Prevalence of acid-loving weeds such as sorrel.
 - Soil with a sour smell or surface crusting (Hazelton & Murphy, 2016).

While visual symptoms provide hints, they should not replace soil testing, as other problems (like nutrient deficiencies) may present similar signs

Causes of soil acidity:

- Leaching: High rainfall washes away basic cations like calcium and magnesium.
- Fertilizer use: Continuous use of nitrogen-based fertilizers such as Limestone Ammonium Nitrate (LAN) and urea contributes to soil acidification (Fageria & Baligar, 2008).
- Crop removal: Harvesting crops removes nutrients, especially bases like Calcium (Ca), Magnesium (Mg), and Potassium (K), leading to increased acidity.
- Natural processes - leaching of nutrients by rain, decomposition of organic matter, and the type of parent rock.
- Farming practices - continuous use of ammonium-based fertilizers, crop removal of nutrients, and not replenishing soils with lime.
- Poor drainage - which leads to accumulation of acidic compounds.

Soil Acidity

How does soil acidity affect crops?

- Reduces availability of nutrients like phosphorus, calcium, and magnesium.
- Increases toxic elements such as aluminium (Al) and manganese (Mn), which damage roots.
- Poor root development and reduced yields (Kopittke & Menzies, 2007), meaning crops cannot access water and nutrients properly.

Conclusion

Soil acidity is one of the main barriers to crop productivity in many regions if not managed properly. Ignoring it leads to poor fertilizer use, stunted crops, and reduced harvests. Farmers should apply lime based on soil analysis results and the specific needs of their crops. By managing soil acidity through liming, farmers can unlock higher yields and ensure long-term soil fertility.

Recommendations

Farmers are encouraged to:

Test soils regularly (at least every 2-3 years).

Apply lime based on soil test recommendations rather than guesswork. Incorporate lime properly into the soil for best results. Combine liming with balanced fertilization to achieve higher yields and better soil health. Managing soil acidity through liming is not a cost, but an investment in long-term soil fertility and farm profitability.

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