

AGRI PROBE

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**Trailblazing
innovation in
agriculture**

Sclerotinia
camera wins at
CPSI Awards

**Iqhude:
A story
of true
grit and a
supportive
industry**

**Sweet,
warm winter**

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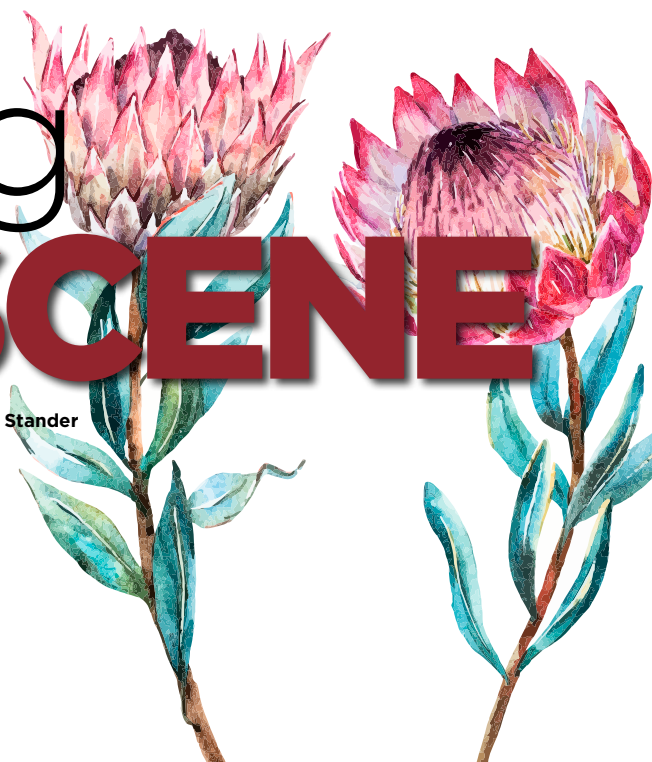
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Setting the SCENE



by Granville Stander



Sowing innovation in a season of change

Autumn is a wonderful time of the year – a gentle pause before winter. The air cools, trees shed their leaves and nature slows its rhythm. Our scarves emerge from drawers and the sharp whites of summer give way to the warm reds of burgundy wine. It's a season of preparation, a reminder that survival depends on adaptability.

This moment in nature, perhaps, reflects the global mood. Rising geopolitical tensions and an unpredictable trade environment signal a metaphorical winter – a period of uncertainty. Yet, winter is not a time of inactivity. Deep in the soil, seeds begin the quiet work of preparing for spring. In the same way, challenging times ignite the flame of innovation and resilience.

The latest edition of *AgriProbe* offers powerful insights into this principle. In this edition, we see how trailblazing innovation in agriculture is not a luxury but a necessity. Whether it's the application of cellphone technology to improve farming practices or the presentation of cutting-edge research at the International Potato Congress in Australia, agriculture is embracing the new, while it honours the old.

The enduring partnership in ostrich research exemplifies how long-term international collaboration yields meaningful results. Likewise, the Burgundy exchange programme celebrates 25 years of cultural and agricultural knowledge-sharing. These stories remind us that, in uncertain times, our strongest assets are the relationships and shared visions we cultivate.

“Challenging times ignite the flame of innovation and resilience.”

Even in fields like meat safety, the introduction of biological solutions signals a future-forward approach to public health and food security. Each article in this edition reflects a common thread: Sustainable progress comes from innovation, collaboration and the willingness to evolve.

As we brace for the global winter ahead, *AgriProbe* reminds us that now is the time to plant the seeds of tomorrow. Just as nature prepares silently and patiently for summer, so too must we invest in ideas, partnerships and technologies that will define the future of agriculture. There is wisdom in the season: It is in the heart of winter that the roots of spring take hold.

#ForTheLoveOfAgriculture 

Granville Stander

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COVER INSPIRATION

Cape warmth and wild beauty meet in this winter edition of *AgriProbe*.

From award-winning Cape Vintage enjoyed fireside in *Sweet Warm Winter*, to the inspiring journey of the Mxokozeli siblings in Iqhude, this issue captures the richness of South African land and spirit. Settle in with stories that celebrate resilience, innovation and the enduring bonds between people, place and product – from Calitzdorp's cellars to a thriving Protea farm rooted in family and hope.

Conceptual cover by Christopher Robin Design.



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Agriculture is responding to the **Premier's call** to all of us to **“step up”**

by Minister Ivan Meyer & Daniel Johnson



“Agriculture is not merely a sector but a cornerstone of our economy.”



Valencia oranges. Photo © Andrew Hagen

Ranked 4th, orange exports from the Western Cape were valued at R1.13 billion in 2024Q4 (see *Western Cape Agricultural Trade Quarterly Brief: 2024Q4*, page 60).

On 4 April 2025, I tabled the Western Cape Department of Agriculture's main appropriation budget of R1 billion for 2025/2026. I highlighted that the budget carries an undeniable responsibility to the people of the Western Cape, and we must all recognise our crucial role in this endeavour.

We must make 2025 the year we demonstrate our commitment to energising our communities. I asserted that the agriculture sector will rise to this challenge.

Agriculture is not merely a sector but a cornerstone of our economy. It contributes 11% to the Western Cape's GDP and employs over 313 000 individuals across various facets. This sector is instrumental in job creation, and we must ensure it continues flourishing.

The value of agriculture goes beyond

mere statistics. This sector is the most competitive in our five rural districts, with tourism, grounded in agricultural strength, steadily holding the second position. The agricultural sector's potential for growth is significant and must not be undermined.

Currently, 66% of the value of our agricultural production is exported, firmly positioning the Western Cape as a leader, since it accounts for 55% of South Africa's agricultural exports. Eight of the ten largest agricultural export products hail from this province, confirming that agriculture is not just a contributor but a powerhouse in our economy.

Our “Growth for Jobs” strategy is laser-focused on achieving concrete results through my Ministerial Priorities: **agriculture support, food security and nutrition, and market access.**



Citrusdal.

Photo © Grobler du Preez



Citrusdal lies in the upper Olifants River Valley, nestled between the Olifants River Mountains to the west and the Cederberg range to the east.

Did you know?

Citrusdal, settled in 1725, lies in a fertile valley explored since 1660. It produces 14% of South Africa's citrus, notably oranges, and boasts a 200-year winemaking tradition with diverse red, white and dessert wines.



Citrusdal was severely affected by heavy rains in both 2023 and 2024, with damage to the main access road cutting off the town.

In reviewing the past financial year (2024/25), I proudly highlight the achievements of our LandCare team, which delivered 876 technical services and rehabilitated over 23 000ha of agricultural land while creating 967 green jobs.



However, we faced undeniable challenges. The severe floods in April, June and July 2024 wreaked havoc on our agricultural sector, disrupting production and crippling transport routes crucial for delivering goods. The Cape Winelands, Overberg and West Coast districts bore the brunt of the damage, and we are committed to addressing these challenges head-on.



Flooded roads in Cederberg municipality,

10 July 2024. Photo and video clip by Kayleen Morgan/EWN.



Watch this!

Scan the QR code or visit shorturl.at/uOZj3



The aim, namely creating jobs – encapsulated by my motto “Jobs and Food on Your Table” – remains at the forefront of our efforts.



This story originally aired on 14 August 2024. In July 2024, the Western Cape experienced record-breaking rainfall and a series of cold fronts. What exactly unfolded – and what does it mean? SABC News spoke to Prof. Guy Midgley, Director at Stellenbosch University's School for Climate Studies.



Watch this!

Scan the QR code or visit shorturl.at/8dsFm to watch the video: “Cape Town had record rainfall in July.”

Published by SABC News.



Golden cayenne pepper. 



Case study 1 Sheena Paulus – *Where seeds of faith flourish*

Tri Toad Nursery, founded by Sheena Paulus in 2022, is redefining sustainable agriculture in South Africa. From a modest start in Philippi, Cape Town, it now supplies major retailers with high-quality seedlings – driven by innovation, resilience and a mission to make home-grown produce accessible to all.



Learn more!

Scan the QR code or visit shorturl.at/OrsFO



Audio on!

Scan the QR code or visit shorturl.at/U2G9I to listen to the podcast: “How Sheena turned her nursery into a R3 million business.” Published by Food For Mzansi.

Our department is advancing its commodity-focused approach to delivering essential producer support across prioritised value chains. We have fully established ten Commodity Project Allocation Committees (CPACs), including the vital Agri-Processing CPAC, which is crucial for job creation. Through renewed partnerships – eleven ongoing and two new MoUs with industry partners, such as Agri Western Cape – we are fortified in our mission to provide indispensable support to smallholders and larger farming enterprises.

Our Extension and Advisory Services sub-programme has conducted over 3 100 on-farm site visits and facilitated numerous educational events for farmers. This proactive approach is essential to enhancing skills and driving growth in our agricultural community.

Two success stories exemplify our collective achievements:

1 Sheena Paulus, owner of Tri Toad (Pty) Ltd, has utilised advisory services to establish a thriving business in vegetable and flower seedling production, creating 20 jobs in the process.

2 Natasha Williams of Signature Wines (Pty) Ltd has successfully expanded her premium wine brand into international markets, contributing significantly to our province’s agricultural diversity and economic vitality.



Red wine grapes.
Photo © Andrew Hagen

Case study 2 Natasha Williams – Behind the vine

Named after her small hometown, **Lelie van Saron** is Natasha Williams' personal project, launched with a 2017 Chardonnay and this 2018 Syrah in September 2019. Her winemaking philosophy is rooted in simplicity — crafting wines that express the purity of both terroir and grape variety through minimal intervention and natural methods.



Learn more!

Scan the QR code or visit www.thefemmevine.com/natasha-williams



Watch this!

Scan the QR code or visit shorturl.at/16SJY to watch the video: “#FacesOfWinter:

Natasha Williams: The Heart Behind Lelie van Saron & The Jade Range.”
Published by Food For Mzansi.

In summation, this budget and our strategic priorities assertively reinforce the paramount role of agriculture in the Western Cape. Through unwavering support, innovative solutions and a solid commitment to resilience, we will enhance the sustainability of this sector, ensuring it remains a key driver of job creation and food security in our province.

To achieve the above, the budget of R1 021 484 000 for 2025/2026 is allocated as follows:

Administration	R161 121 000
Sustainable Resource Use & Management	R143 901 000
Agriculture Producer Support & Development	R305 638 000
Veterinary Services	R117 838 000
Research and Technology Development Services	R155 538 000
Agricultural Economic Services	R47 223 000
Agricultural Education and Training	R69 243 000
Rural Development	R20 982 000

“ We must leverage our collective strength to foster a robust agricultural landscape. ”

We must leverage our collective strength to foster a robust agricultural landscape. Today, we reaffirm our commitment to ensuring the success of these initiatives, translating our efforts into tangible benefits for the people of the Western Cape.

Together, we will cultivate a thriving agricultural sector that not only withstands challenges but also seizes every opportunity for growth!

#ForTheLoveOfAgriculture AP



A Toast to Excellence

Wine Harvest Commemorative Event

honours **five luminaries** for their **lasting influence**

by Dr Ilse Trautmann
and Deona Strydom



Guy McDonald, Master of Ceremonies at the 2025 Groot Constantia Wine Harvest Commemorative Event.

On Thursday, **6 February 2025**, the annual Wine Harvest Commemorative Event honoured the achievements of five remarkable individuals in the South African wine industry for their exemplary standards worthy of emulation. This prestigious gathering has become a cherished tradition within the South African wine community, encouraging excellence and marking the pivotal birth date of South African wine

366 years ago in 1659 – when wine was pressed for the first time from Cape grapes.



The Western Cape Department of Agriculture has been involved with this event for several years with its annual donation to the event, but in an innovative step towards agri-workers, the department suggested the introduction of a new category, namely **Wine Agri-Worker**, to the 2025 event.



Kanonkop duo Johann Krige (left) and Marcus Lewis.

Marcus Lewis, from the farm Kanonkop, was nominated by the department as part of their annual Western Cape Prestige Agri Awards competition as the inaugural Wine Agri-Worker. The initiative honours the invaluable efforts of vineyard, cellar and agri-workers who are instrumental in the success of South Africa's wine industry.



All the leading sponsors and the award recipients at the Wine Harvest Commemorative Event 2025. **Back from left:** Clifford van der Venter (Groot Constantia Trust), Eulalia Fernandes (Air France-KLM), Willem Jordaan (*Die Burger*), Claude le Roux (Seabourne Logistics), Dr Ilse Trautmann (Western Cape Department of Agriculture), Reghardt Strauss (Standard Bank), Wrenelle Stander (Wesgro), Rico Basson (South Africa Wine), Tracy Mkhize (Cape Town Tourism) and Flip Snyman (MCC Labels). **Front from left:** Bennie Howard (Wine Advancement), Praisyl Dlamini (Growing Inclusivity), Johann Krige (1659 Award for Visionary Leadership), Jan Booysen (Viticulture & Viniculture) and Marcus Lewis (Kanonkop employee and Wine Agri-Worker winner).



An evening of glamour at the 2025 Groot Constantia Wine Harvest Commemorative Event.

The other 2025 recipients are amongst the exceptional leaders that have been acknowledged and praised in previous years and include **Johann Krige**, who received the 1659 Award for Visionary Leadership; **Praisyl Dlamini** (a cellar technology graduate of Elsenburg College) in the Growing Inclusivity

category; **Bennie Howard** in the Wine Advancement category; and **Jan Booysen** in the Viti- and Viniculture category.

Acknowledgements:

Other partners in this initiative include Groot Constantia, Standard Bank, Air France-KLM, South Africa Wine, Wesgro, *Die Burger*, Cape Town Tourism, MCC Labels and Seabourne Logistics.

#HappyBirthdaySAWine AP



Watch this!

Scan the QR code or visit shorturl.at/LmVW0 to watch the video: "Wine Harvest Commemorative Event 2025." Published by SA Wine Harvest.



For more information on the event and luminaries visit: shorturl.at/Oilih

For more information, contact **Dr Ilse Trautmann**: ✉ ilse.trautmann@westerncape.gov.za and **Deona Strydom**: ✉ deona.strydom@westerncape.gov.za

World Congress on Conservation Agriculture

by Lee-Ann Bell

Abstracts
now
available!



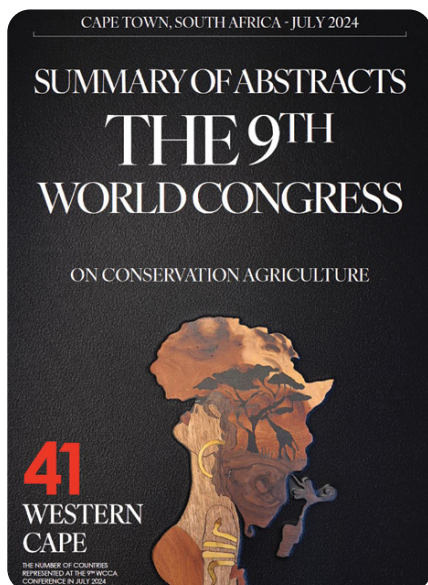
The 9th World Congress on Conservation Agriculture (CA) in Cape Town highlighted the transformative potential of sustainable farming. Representatives from around the world emphasised the urgency of adapting agricultural systems to combat soil degradation, climate change, food insecurity and biodiversity loss.

CA, based on minimal soil disturbance, permanent soil cover and diversified crop rotations, is celebrated for restoring soil health, conserving water and increasing resilience to extreme weather.

The congress showcased CA's global growth, with nearly 20% of the world's



Read the full report on the 9th World Congress on Conservation Agriculture by Prof. Johann Strauss in *AgriProbe*, Vol. 21, Issue 4 (2024), page 38. Scan the QR code or go to tinyurl.com/bdd8bbab



cropland now under CA practices.

Success stories from South America, Africa, Australia and Canada highlighted CA's benefits and challenges, including herbicide dependence and the need for diverse crop rotations. Mechanisation and understanding the soil microbiome were identified as critical enablers.

The congress called for coordinated global action, interdisciplinary research and innovative policies to support CA, aiming for 700 million hectares under CA by 2050. **AP**



Scan the QR code or go to shorturl.at/4lybN to download the PDF "Proceedings of the 9th World Congress on Conservation Agriculture".

For more information, contact **Lee-Ann Bell**: ✉ lee-ann.bell@westerncape.gov.za

Does the **fertilizer industry** hold **the key** to **Africa's food security challenges?**

by Tshepo Morokong (Western Cape Department of Agriculture) and Tim Cheyne (Head of Agriculture and Fertilizer at Argus Media)



Overview

On **10-12 February 2025**, the 14th edition of the Argus Fertilizer Africa Conference took place at the Cape Town International Convention Centre. This is the continent's largest commercial fertilizer conference and attracts more than 300 senior decision-makers from across the fertilizer and agribusiness supply chains. The notable attendees include executives from leading fertilizer companies, such as Omnia, Foscort and OCP Africa.

On 11 February 2025, Tim Cheyne, the head of Agriculture and Fertilizer at Argus Media, opened the event and welcomed all attendees. In his opening remarks, he acknowledged the volatile nature of markets

due to various disruptions, including the geopolitical tension affecting trade. He also emphasised the global importance of the fertilizer industry. Additionally, the event also provided valuable networking opportunities and facilitated the development of new business relationships.

During the conference, several important topics were discussed.



The event began with a keynote panel discussion focused on "Food Security for Africa", which highlighted how Africa is the new epicentre for food security research and development.

Other sessions included the Argus Global Price Outlook and what sustainability means for Africa, as well as a discussion on how industry can help farmers improve nutrient use efficiency by bringing innovation to the African fields. Additional topics covered included the digitisation of shipping and trade to reduce resource mismanagement, and a common purpose: sustainable development for a self-reliant African fertilizer market. The conference also featured the Argus Fertilizer Africa Awards Ceremony.



Deliberations from the keynote panel discussion at the 14th Argus Fertilizer Conference Cape Town

Key messages from the keynote panel discussion

Tim Cheyne delivered the chairpersons' opening remarks, highlighting the need for a better understanding of the changing nature of fertilizer producers from manufacturer to supply chain manager. He also spoke about the effects of trade disruptions on Africa's key producers.

The keynote panel discussion was moderated by Tshepo Morokong, a Deputy Director at the Western Cape Department of Agriculture (WCDoA). The distinguished panel included Seelan Gobalsamy, the Group CEO of Omnia Holding and the host sponsor; Julian Palliam, the CEO and President of Foskor; Habiba Moutakki, the Chief Commercial Officer of OCP Africa; and Niren Murugan, the COO of Export Trade Group (ETG).

Under the theme "Food security for Africa – how is Africa the new epicentre for food security research and development?", the panel members discussed relevant topics related to this overarching theme, and several key messages emerged from the discussion:

- Africa continues to face the pervasive challenge of food insecurity. On the demographic front, Africa has the second largest population after Asia, with more than half of the population still residing in rural areas, most of which are still agrarian communities. Africa accounts for 3% of the global economy and has one of the lowest GDP per capita in the world. The combination of high population growth and low economic growth is undesirable. Ideally one would like to see the economy growing at twice the rate of





From left: Tshepo Morokong, Seelan Gobalsamy, Julian Palliam, Habiba Moutakki and Niren Murugan.



population growth. It was also noted that the fertilizer application in Africa is low compared to the rest of the world. Some studies reported Sub-Saharan Africa applying between 15 and 22 kilograms per hectare (kg/ha) compared to the world average of 135 to 146 kg/ha. Could the increased access to fertilizer be the solution to Africa's food security crisis?

- African agriculture must become an attractive destination for investors, especially in an era of reduced aid funding.
- To achieve this, local players need to demonstrate both technical and commercial proof of concept to mitigate risks associated with investment opportunities.
- Investors and lenders should adopt a "patient capital" approach, focusing on

building human capital and value chains with a long-term perspective. Private sector players seek catalytic investments that can stimulate broader interest in the sector.

- At the same time, we must not lose sight of the primary goal: to produce nutritious food sustainably for a growing population.
- Artificial Intelligence (AI), machine learning and the use of data like soil mapping are already helping to increase productivity for farmers and improve farmland.
- To see this happen in Africa, AI must be used to change how farmers learn about best practices.
- To survive rapid disruptions and the "unknown unknowns", collaboration and resilient partnerships are critical. **AP**

For more information, contact **Tshepo Morokong**: ✉ tshepo.morokong@westerncape.gov.za or **Tim Cheyne**: ✉ tim.cheyne@argusmedia.com

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Trailblazing innovation in agriculture

Sclerotinia camera wins at CPSI Awards

By Lee-Ann Bell



Arie van Ravenswaay and Lizette Nowers.

Agriculture is at the heart of South Africa's economy, and combating crop diseases like Sclerotinia stem rot is critical to maintaining food security. This fungal disease, prevalent in the Western Cape's canola-producing regions, poses a significant threat each year.

Recognising the need for innovative solutions, the Western Cape Department of Agriculture (WCDoA) implemented a pioneering initiative to monitor and predict the disease's development.

This project, led by Arie van Ravenswaay and Lizette Nowers, has now been recognised with two prestigious accolades at the CPSI Awards:

- 1 Public Sector Trailblazer Award, won by Arie van Ravenswaay for innovative disease monitoring technology.



- 2 First runner-up in the Replication and Adaptation Category, shared by Arie van Ravenswaay and Lizette Nowers for the project's scalability and national relevance.





Stem bleaching, rotting and lodging due to Sclerotinia stem rot in canola.

Photo © Ciara Beard.



Severe infection on stem showing fluffy white fungal growth and sclerotes.

Photo © Ciara Beard.

Combatting Sclerotinia with precision

Sclerotinia stem rot thrives under specific weather conditions. Predicting its outbreak is critical, as fungicides must be applied shortly before infection occurs.

A key indicator of the disease's onset is the formation of apothecia, which are tiny fungal structures that develop from sclerotia in the soil.



Canola fields, Overberg region.

Photo © Sergio Lacueva



The WCDa's Sclerotinia Camera, stationed in Napier (-34.46910, 019.91003), monitors these structures during canola's flowering season. During the flowering season the system sends live image updates every four minutes, allowing producers in the vicinity of Napier to react in real time to favourable conditions for disease development. Each image is time-stamped, ensuring precise data for effective decision-making.

Did you know?

Canola is a specially bred variety of rapeseed (*Brassica napus*), developed in Canada for its low acid content – hence the name, derived from "Canadian oil, low acid". Canola belongs to the Brassicaceae family, related to turnip, cabbage, mustard and brussels sprouts. While widely grown in Canada since the 1930s, canola is a relatively recent crop in South Africa.

A collaborative effort with national reach

Sclerotinia is considered one of the most destructive diseases affecting oilseed crops such as canola, soybean and sunflower in South Africa. The pathogen *Sclerotinia sclerotiorum* also infects other plants, including cabbage, lettuce, and various weed species.

This trailblazing initiative has not only proven invaluable in the Western Cape but is now being replicated in Mpumalanga for monitoring Sclerotinia stem rot in soy. This collaboration between national and provincial governments showcases the potential for innovative agricultural practices to address challenges across South Africa.

The CPSI Awards highlight the critical role of technology in transforming agriculture. Arie's recognition as a Public Sector Trailblazer underscores the value of forward-thinking solutions, while the Replication Award demonstrates the initiative's adaptability to various agricultural contexts.



Back from left: Dr Maanda Dagada (Mpumalanga Department of Agriculture, Land and Environmental Affairs), Arie van Ravenswaay (Western Cape Department of Agriculture), Tumelo Moayatsi (Centre for Public Service Innovation, CPSI) and Banda Seyah (Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs). Front from left: Lee-Ann Bell (Western Cape Department of Agriculture), Lizette Nowers (Western Cape Department of Agriculture), Martina Bopope (CPSI), Sibusiso Mogale (smallholder farmer in Mpumalanga on whose farm the camera will be replicated for soy disease monitoring), Kgatlisso Hamilton (CPSI) and Happy Phathwa (Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs).



Sclerotinia sclerotiorum infection of soybeans occurs anytime during flowering and symptoms can be observed on leaves, pods, seeds and stems.



Sclerotinia sclerotiorum - stem rot and visible sclerotia on a soybean stem in summer.

A model for South Africa

As South Africa faces increasing agricultural challenges due to climate change and evolving diseases, projects like the Sclerotinia Camera set a benchmark for innovation and collaboration.



By empowering producers with real-time data, this initiative contributes to sustainable farming practices, ensuring healthier crops and greater food security nationwide.

For more information about the Sclerotinia Camera, contact Lizette Nowers at the WCDoA Plant Pathology Section via email at lizette.nowers@westerncape.gov.za or call 021 808 5269. 

For more information, contact **Lee-Ann Bell**: ✉ lee-ann.bell@westerncape.gov.za

Old world meets new

International World Potato Congress in Australia

by Dr Jacques van Zyl



Dr Jacques van Zyl, senior scientist in vegetable research in the Directorate Plant Sciences at Elsenburg, attended the 12th International World Potato Congress in Adelaide, Australia in June 2024 and also participated in the post-congress tour.

Dr Van Zyl delivered a scientific paper regarding the long-term conservation agriculture project in the Sandveld named: “Conservation tillage practices for potato production and the associated bacterial and fungal community analysis, spanning three production cycles”. The objective of the visit was to do a presentation, gain insight and accumulate the latest relevant knowledge and information regarding potato production that could enhance the productivity and sustainability of our local potato industry.



Dr Jacques van Zyl presenting at the congress



The theme of the 12th World Potato Congress was “Old world meets new” with more than 1 000 delegates from 40 countries.



Scan the QR code or visit shorturl.at/YT9Nr to download the presentation.





A visit to Kangaroo Island, which is known for producing high-quality, disease-free, early-generation potato seed.



Watch this!

Scan the QR code or visit to shorturl.at/zxo4H watch the video: 'Harvesting seed potatoes on Kangaroo Island'. Published by Kangaroo Island TV.

The congress aimed to catapult potatoes into the spotlight as a compelling, nutritional and health-conscious food choice, both domestically and internationally. The event highlighted the importance of the potato industry in the world and in Australia, where it is the largest horticulture industry in terms of production volume and the largest vegetable industry in terms of production value. The World Potato Congress has been holding high-level events for the past 30 years, providing networking opportunities to potato industry representatives from around the world and addressing food security issues through partnerships with various countries and non-governmental organisations.

The congress was organised according to the following technical themes:

- climate change
- potato genetics and future trends
- success of potatoes in developing nations
- innovative practices in disease control
- human health and nutrition
- soil nutrition
- food security - the role of the potato
- global yield trends
- the diploid seed revolution
- potato storage technology
- soil health
- marketing potatoes to the next generation
- novel seed production strategies
- consumer demands
- integrated pest management
- global trade issues and opportunities
- potato genetics and future trends

The congress highlighted the significance of potato production worldwide, which is the following: food security, economic importance, nutrition, sustainability, climate change mitigation, cultural significance, versatility, employment, trade, research and innovation. the post-congress tour included the following visits:

- The South Australian Research and Development Institute (SARDI) is dedicated to increasing the productivity, adaptability and economy of South Australia's primary industries, enabling sustainable use of natural resources, creating opportunities for market growth and addressing agricultural barriers and providing applied solutions.
- Zerella Fresh, a company and farm, is committed to reliable, year-round supply of the freshest available produce without the need for ground storage. To deliver these commitments, they work with a number of farmers in many growing regions throughout Australia to take advantage of different seasons plus local climatic and soil conditions.
- Kangaroo Island is known for producing high-quality, disease-free, early-generation potato seed, becoming an important part of the Australian potato industry. All seed on the island is independently inspected by the Australian Potato Industry Certification Authority (AUSPICA).



Dr Jacques van Zyl chatting with Clare Scriven, the South Australian Minister for Primary Industries and Regional Development.

Meetings and workshops with various research institutions and regional governmental institutions had a positive outcome as these institutions are interested in the potato research the Western Cape Department of Agriculture (WCDoA) is currently performing, as well as the envisioned aeroponic seed potato research planned for the future. The presentation delivered regarding the department's research on fungi and bacteria created an immense interest in our work. The main conclusion after attending the 12th World Potato Congress, workshops and various meetings is that the research currently in progress on conservation tillage on potatoes is relevant in achieving a more sustainable future for potato production in South Africa.

The recommendations for our province after participating in the congress are as follows:

- The WCDoA should continue with the research on sustainable potato production, as this is relevant in various countries as per discussions with role-players. This research is currently underway.
- Research projects on the nematode dynamics in small-scale potato production and crop rotation cycles should be considered as it plays a major role in



The Adelaide Convention Centre was the venue of the congress.

African countries relating to food security, or the lack thereof due to nematodes. A project has been approved and commenced in April 2025.

- A new project on the aeroponic production of potato mini-tubers in greenhouses should be undertaken in local conditions with local varieties. A project has been approved and commenced in April 2025. **AP**

“ The Congress aimed to catapult potatoes into the spotlight. ”



WPC 2024



Learn more!

Scan the QR code or visit shorturl.at/K79s4 to download all the 2024 congress presentations.

For more information, contact **Dr Jacques van Zyl**: ✉ jacques.vanzyl2@westerncape.gov.za

Iqhude: A story of true grit and a supportive industry

by Michelle Kruger,
Cape Flora SA



***Protea compacta* is a species of flowering plant in the family Proteaceae. It is similar to *Protea eximia*. Its distribution is from the Kleinmond to Bredasdorp Mountains in South Africa and is one of the best-known proteas in the cut flower industry.** Photo © Andrew Hagen

The Mxokozeli siblings' story is one of determination, grit and an innate love for farming. Bolstered by the success and reputation of their uncle Michael Mxokizeli, as well as the support from the Cape Flora community and local government, Justice, Phosiza and Thandiwe Mxokozeli are giving the Iqhude project wings.

Eight years into a 30-year lease of Riverside Farm, the Mxokizelis have already cultivated five hectares that produce

market-ready Cape flora varieties. This is part of 16ha earmarked for this purpose. The total size of the land is 1 235ha, of which 780ha is covered in fynbos.

From this natural fynbos, flowers and foliage are bought and harvested by an outside party. The family experimented with cash crops on the remaining arable land, but that proved to be unsustainable. They currently have 280 heads of livestock to assist with cashflow.



Justice Mxokozeli in the driver's seat, Thandiwe on the left and Phosiza on the right.

The journey to be appointed firstly as caretakers and then as lessees of Riverside Farm was not without challenges. Michael Mxokizeli did not meet the requirements for a bank loan and had to turn to the Department of Rural Development and Land Affairs (DRDLR) to become a candidate to be settled on a Proactive Land Acquisition Strategy (PLAS) farm. The family business, Iqhude Supply and Farming (Pty), was chosen from 50 applicants. A one-year lease with the DRDLR was signed in 2016, followed by a 30-year lease agreement, which includes an option to buy.

The Deciduous Fruit Producers Trust (DFPT) financially assisted with the procurement of plant material.



As of 2019 the Western Cape Department of Agriculture, through the Comprehensive Agricultural Support Programme (CASP), contributed close to R5 million to equip the farm with immovable and movable assets, as well as farming related consumables.



Protea eximia is one of the easiest proteas to cultivate and can be grown over a wide range of habitats. From seed, it will sprout within three weeks of planting and grows rapidly.



***Leucospermum conocarpodendron* is the largest species of the genus *Leucospermum*, reaching almost tree-like proportions of 5m to 6m.**

Photo © Andrew Hagen

Acknowledgements

The kind of on-the-ground progress made to date on Riverside Farm does not happen in isolation. A host of advisors and mentors provided and continue to provide their expertise to the family, including Kosie Lourens, an expert in the cut flower industry who also became the family's confidante; Chris van Schalkwyk, who assisted with planning and systems; and Gerhard Malan, sponsored by Cape Flora SA, who serves as agricultural advisor. Hennis Germishuys and Dr Rene Bastian, stalwarts from the Western Cape Department of Agriculture's office in Bredasdorp, continue to assist with the paperwork that keeps the government's support wheels in motion.

The mentors and advisors have high praise for the Mxokizelis' work ethic and progress. Gerhard observed that "the farm is well managed and if their finances allow, they will become a trusted supplier of quality products". Kosie is optimistic about the future of the Iqhude business: "I grew quite close to Justice, Phosiza and Thandiwe and I can tell you they are very motivated, positive and open to learning."

Jacky Goliath, Cape Flora SA's transformation representative and fellow small farmer, is impressed with what the family has achieved up to now. She believes the important matters to address now are marketing, ensuring accurate cost estimates, networking and relationship building within the industry.

New businesses all share certain challenges and in the case of this type of agricultural venture there is the added delay of three years to establish plant material before it can be harvested. "Because leases are not seen as collateral by banks, cashflow is always an issue. But we have made it this far and plan to pack in our own facility and export to the international market under the Iqhude brand by 2026/27."



 Fynbos cultivars most traded, include:

1 Protea – see cultivars: <https://shorturl.at/vtTI8>



2 Leucospermum – see cultivars: shorturl.at/xJ9cA



3 Leucadendron – see cultivars: shorturl.at/yaPPj



4 Greens & Other – see cultivars: shorturl.at/rZP4j

For the complete list of fynbos cultivars refer to the **International Proteaceae Register**: shorturl.at/OMfbL





1 Protea



Madiba *Protea cynaroides*,
also called the king protea.

Photo © Karin De Mamiel

3 Leucadendron



Safari Sunset

***Leucadendron laureolum x salignum*.**

Photo © Karin De Mamiel

Did you know?

The king protea is the national flower of South Africa. It also is the flagship of the Protea Atlas Project, run by the South African National Botanical Institute (SANBI).



Learn more!

Scan the QR code or go to
www.proteaatlas.org.za

4 Greens & Other



Blushing Bride
(*Serruria florida*)

2 Leucospermum



Rigoletto

***Leucospermum glabrum x cordifolium*.**

Photo © Karin De Mamiel



"Cape Flora SA has been instrumental in exposing us to the export value chain and commercial role players in it," says Justice.



Learn more!

Scan the QR code or go to
www.capeflorasa.co.za/export-standards-2/ to download export standards.





From left: Justice, Phosiza and Thandiwe Mxokozeli standing in their protea orchard. One can see the flowers are almost ready to be harvested. They planted these proteas, so they have much to be proud of.

Riverside Farm is situated in the historical Elim district in the flora-rich Overberg region. Its remoteness is further testament to the commitment of these three young people. Phosiza oversees the fields and according to her it's been hard to watch friends and family progress faster in bigger towns and cities. "But I love what I do, and it has made me resilient. You can put me down in a desert and I will survive. No day is the same and being part of something that went from zero to hundreds of beautiful flowers makes everything worth it." Thandiwe is in charge of the nursery tunnels and admin. She feels proud of what they've achieved. "I love waking up in the morning knowing I can create jobs for people. It feels good to put bread on someone's table."

Farming has been a lifelong dream and calling for Justice. In partnership with his family and with the support of the



Broad-leaf conebush (*Leucadendron gandogeri*) produces large, bright yellow bracts on long sturdy stems, with the male displaying its typical fluffy, pollen-bearing flower in the centre of the flower. Photo © Andrew Hagen

Cape Flora community, the Western Cape Department of Agriculture and other institutional organisations this dream is on its way to becoming a legacy for future Mxokizeli generations to build on. **AP**

For more information, contact **Karien Bezuidenhout**: [✉ manager@capeflorasa.co.za](mailto:manager@capeflorasa.co.za)

**isiXhosa summary****Ibali eliyinyani lohlalutyongangokuxhaswa kwi Candelo**

Usapho lakwa Mxokozeli – uJustice, Phozisa, no Thandiwe baqale uhambo ngokomelela nangokuzimisela kumsebenzi wabo obizwa Iqhude Lwabalimi. Ngokutsalwa yinkuthazo esuka kumalume, Michael Mxokozeli ngokuxhaswa ngabakwa Cape Flora uluntu norhulumente wase makhaya, olusapho luyitshintshile Ingingqi Yomlambo yase Fama. Kwiminyaka nje esibhozo, balime umgama ukuya kwisihlanu womhlaba okulungeleyo ushishino kwezoshishino kwi Cape (Flora) yezihluma ntyantyambo benenjongo ezingaphezulu. Ifama equka, 1, 235 yehektare yomhlaba, ilikhaya kumakhulu amabini anesibhozo emfuyo ne ibhosisi (uhlobo lwezityalo infybos eliqela).

Ngaphandle kwaphambi kwexesha kwemiceli mngeni wokufumana inxaso mali, kuqhuka nemali mboleko ebalulekileyo esuka kwe Sebe lase Maphandleni neMicimbi Zomhlaba, ukunyamezela kufezekiswe ngokufumana isivumelwano senxaso mali esuka kumaqumrhu ahlukeneyo kwezolimo. Impumelelo yabo iwongwa kwisikhokelo sokusebenza ngokuzincama kwabacebisi babo nangokuqhubekeka kokuxhaswa ngamaqumrhu afana no Cape (Flora) yezihluma ntyantyambo benenjongo ezingaphezulu. Nangona indlela eya kwingeniso isashiyeye ingumcelamngeni kodwa usapho lakwa Mxokozeli lunethemba. Banenjongo yokuqala eyeyabo indawo yokuthumela imveliso eyangaphandle ngonyaka ka 2026 baqhubekeke ukwakha indlalifa yesizukulwana esizayo.

**About Cape Flora**

Cape Flora SA is a non-profit company (NPC) established in 2005 with the purpose of identifying and addressing the strategic needs of the fynbos and protea industry. Their vision is to bring about a sustainable increase in the demand for, and supply of, high value and high-quality fynbos products to discerning international markets to the benefit of all

role players in the South African fynbos industry.

**Learn more!**

Scan the QR code or go to www.capeflorasa.co.za

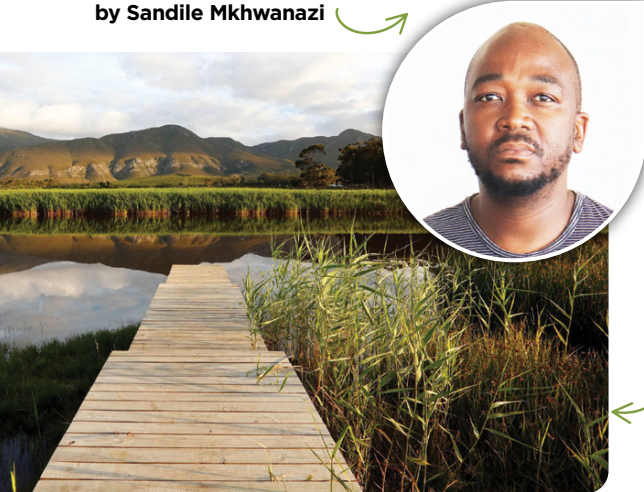
Cape Flora SA, in partnership with the Western Cape Department of Agriculture, supported Jacky Goliath of De Fynne Nursery in representing South African cut flower producers at the 2024 and 2025 Chelsea Flower Show in London, that won the Gold Medal two years in a row.

Watch this!

Scan the QR code or visit shorturl.at/LCnNi to watch the video: "Cape Floral Kingdom South Africa | RHS Chelsea Flower Show 2025." Published by Leon Kluge.

The Burgundy Exchange: 25 years of breaking bread

by Sandile Mkhwanazi



Springfontein Wine Estate, Stanford.

The Western Cape Department of Agriculture and Burgundy Exchange Programme ushered in its 25th year by welcoming a group of nine students from the partner French Agricultural College, the Centre de Formation Professionnelle et de Promotion Agricole de Beaune (CFPPA), to South Africa for the 2025 harvest season. The Elsenburg Agricultural Training Institute (EATI) hosted the students within the college hostel so that they could get a full South African experience of college life. The programme lasted from 24 February until 8 March 2025.

As part of the programme, the students were placed at specific farms in the Cape Winelands for two weeks of harvest as part of a skill and technology exchange, whereby they learnt how the South African wine industry handles the harvest season. “We are very fortunate that we get a couple of farms each and every year that are always willing to host students,” said Brenton Maarman, the local logistics co-ordinator for the Burgundy Exchange



Learn more!

Scan the QR code or go to shorturl.at/nZGqz



Watch this!

Scan the QR code or visit shorturl.at/g3Bgj to watch the video: “Springfontein Wine Estate from above.”

programme. He further said the college would look at formalising the relationships with these farms. The host farms were Joostenburg, Kanonkop, L’Avenir, Muratie, Simonsig, DeMorgenzon and Springfontein wine estates.

Jeanne Vito, winemaker of Springfontein Wine Estate, hosted their third student in the exchange and mentioned how exciting it was to get another student on the farm.



“ We are pleased with the work our student has done. He has integrated into our winemaking philosophy, which is rooted in ‘ubuntu’ and has really worked well with our team at the cellar. ”



The French and Western Cape delegation during the signing of the memorandum of understanding between CFPPA in Burgundy and the Western Cape Department of Agriculture.

Back row from left: Granville Stander, Len Conradie, Jacqueline Pandaram, Douglas Chitepo, Jerry Arries, Getrude Jacobs and Brenton Maarman.

Front row from left: Clint Starling, Lilia Alvarez, Dr Mogale Sebopetsa, Guillaume Bouché and Sandile Mkhwanazi.



Visiting French students with Brenton Maarman, EATI (first row, far left), Juan de Lora, RD (back row, third from right), Stephen Modiba, APSD (back row, fourth from right), Kachne Ross, SAWINE (first row, second from right), and Jody Wentzel, SRUM (front row, far right).

Department of Agriculture. In his remarks, Dr Mogale gave historical context on the exchange and milestones achieved since the department took over the programme.

He noted areas that can be explored in future, including a student-to-student exchange programme, engagement of technological transfer with the departmental extension services, and finally incorporating rural development programmes with a focus on women in agriculture.



Head of Department, Dr Mogale Sebopetsa, hands over a gift to Lilia Alvarez, International Cooperation Manager at CFPPA.

The students were given some time to explore the beauties of the Cape with visits to Table Mountain and Cape Point.

The future secured

Dr Mogale Sebopetsa, Head of Department of Agriculture, and a team of senior officials from the department met with Guillaume Bouche, Director of the Centre de Formation Professionnelle et de Promotion Agricole de Beaune (CFPPA), to sign a memorandum of understanding with the aim to strengthen the ties between Burgundy and the Western Cape



Chateau with vineyards in the autumn season in Burgundy, France.



Guillaume was extremely happy with the exchange programme and said he was looking forward to hosting more South Africans within the agricultural field in Beaune. **AP**

For more information, contact **Sandile Mkhwanazi**: ✉ sandile.mkhwanazi@westerncape.gov.za

Sweet, warm winter

by Brenton Maarman



Porto, Portugal: Three Sandeman Port wine barrels on a traditional boat with the city of Porto in the background.

Photo © Tinamou



Winter is synonymous with cold and often rainy grey weather, fireplaces, comfort food and red wine. To make this winter sweet and warm, unwind with a glass of Port.

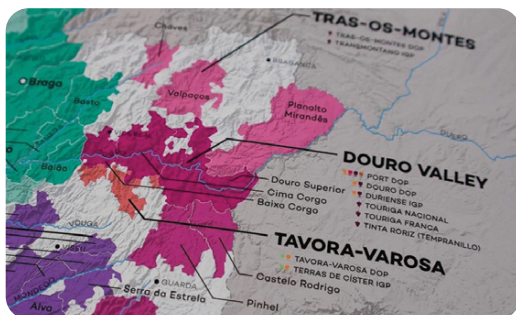
Port is the generic name for the fortified wines of the Upper River Douro in north-eastern Portugal close to the border with Spain. The region has a hot, dry climate. Granite and fragile schist soils contribute to the basic wine. The vineyards and wine estates also referred to as *quintas* are situated on the hills that line the Upper Douro and its tributaries. The best vineyards are to the east of the town of Peso da Régua and some around the town of Pinhão.

The wines of the region were officially demarcated in 1756. Demarcated means the quality of Port wine is protected



Two glasses of Sandeman Port wine - one red ruby and the other white (*branco*) style.

Photo © Tinamou



Map of the Douro Valley.

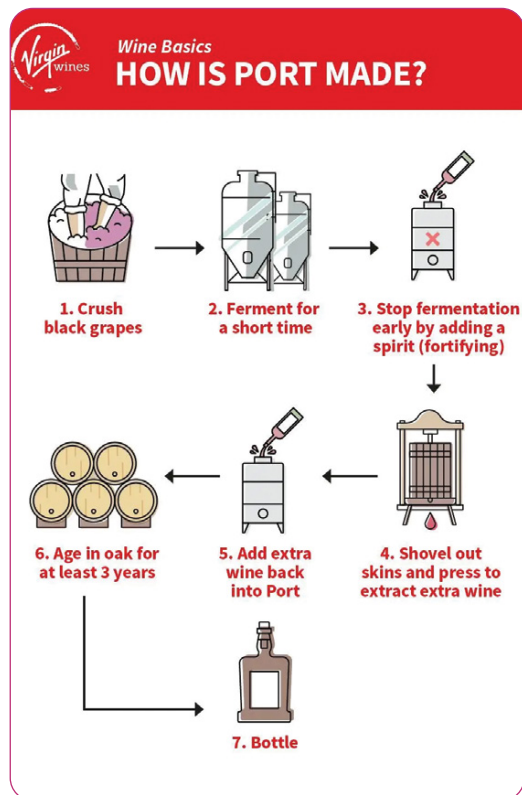


Figure 1: How is Port made?

Source: shorturl.at/efi97

How port is made

Grapes are hand-picked and taken to the estate to be crushed/destemmed and pressed. The traditional red grape cultivars that are used are Tinta Cão, Touriga Nacional and Touriga Franca. The white grapes are Malvasia, Rabigato, Viosinho, etc.

According to the classic port production method grapes were crushed by foot in *lagars* (wide, open-top wine fermenting tanks made from stone or neutral concrete). These days it is relatively rare but is still used in the best years for small quantities of the finest wines.

Fermentation occurs a little below 30°C and the fermentation is stopped when the ideal sugar level is reached. The addition of spirits stops the fermentation by creating an environment where the wine yeasts can't survive. The must is then pumped into a tank, one quarter filled with grape spirit (76% ABV).



Nestled on the banks of the River Douro, **Peso da Régua** was central to the Port wine trade, serving as the departure point for barrels transported by *barcos rabelos* to Vila Nova de Gaia for aging in traditional wine lodges. Photo © Bruno da Silva Alves

Fortification occurs at 12°B of unfermented sugar. After fortification Port wines typically have 20% (v/v) and 8°B unfermented sugar. The pulp is then pressed and transferred to 523l casks (**Figure 1**).

Legally, all Port wines must be aged for a minimum of two years before release. Aging Port in large oak barrels, also known as *balseiros*, or steel containers helps to maintain the Port flavour. Aging in smaller oak barrels, called *pipas*, gives Port a more nutty taste. The *pipas* do this by increasing

the amount of oxygen exposure to the wine.

There are different styles of Port (**Figure 2**):

- **Vintage Port** – Single vintage aged for two years in barrel. Bottled. Meant to age for 10-50 years in bottle.
- **Late Bottled Vintage Port** – Single vintage aged for four to six years in barrel. Bottled. Usually meant to drink young, although some are as long-lived as Vintage.
- **Tawny Port** – Multiple vintages aged for three years in barrels, but usually 10-40+ years. Bottled. Meant to be drunk soon after bottling.



Figure 2: What is Port wine?

Source: shorturl.at/WvKFI

Vintage port wine in a wine cellar in Porto, Portugal.

Photo © Robert Chmara



The different flavours in Port.

Source: shorturl.at/WvKFI



The top port producer cellar in South Africa is Boplaas Wines in Calitzdorp.



Learn more!

Scan the QR-code or visit:
boplaas.co.za

- **Colheita Port** – Single vintage aged for many years in barrels. Bottled. Meant to be drunk soon after bottling.
- **White Port** – Same as other ports, but made with white grapes.
- **Rosé Port** – Same as other ports, but made in a rosé style.
- **Crushed Port** – Blended Vintage Port.

Calitzdorp is the port capital of South Africa. Excellent ports are produced in this area because of its warm, dry summers and cold, frosty winters, similar to the climate in the Douro valley.



Since 2012, the word “Port” is no longer used in South Africa because of an agreement with the Portuguese. South African producers now use the label “Cape” followed by the style of wine (e.g., Cape Ruby, Cape Tawny and Cape Vintage).



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Blogs – Port Varieties, Fortified and Unfortified. www.wosa.co.za. 18 March 2025.



Boplaas proudly announced its latest results in the Platter Wine Guide 2025, receiving five stars for both the Cape Vintage Reserve Port 2022 and the Cape Tawny NV. The 2022 Reserve Port was also named Best Fortified Wine in Tim Atkin's *South African Wine Report*.

Port should be served at 16°C and it pairs excellently with blue cheese, chocolate and caramel desserts, salted and smoked nuts, and even sweet-smoky meats.



There is no need to get cold this winter – make it a sweet warm one by drinking a good glass of Cape Vintage! **AP**

For more information, contact **Brenton Maarman**: ✉ brenton.maarman@westerncape.gov.za





Doggie language fortune-teller!

Learn to “speak dog” with this fun, foldable fortune-teller! Just copy, fold and play – perfect for kids and families.

DOGGIE LANGUAGE

starring Boogie the Boston Terrier



ALERT



SUSPICIOUS



ANXIOUS



THREATENED



ANGRY



"PEACE!"
look sway/head turn



STRESSED
yawn



STRESSED
nose lick



"PEACE!"
sniff ground



"RESPECT!"
turn & walk away



"NEED SPACE"
whale eye



STALKING



STRESSED
scratching



STRESS RELEASE
shake off



RELAXED
soft ears, blinky eyes



"RESPECT!"
offer his back



FRIENDLY & POLITE
curved body



FRIENDLY



"PRETTY PLEASE"
round puppy face



"I'M YOUR LOVEBUG"
belly-rub pose



"HELLO I LOVE YOU!"
greeting stretch



"I'M FRIENDLY!"
play bow



"READY!"
pry bow



"YOU WILL FEED ME"



CURIOUS
head tilt



HAPPY
(or not)



OVERJOYED
wiggly



"MMMM..."



"I LOVE YOU, DON'T STOP"

Kan my selfoon my help om beter te boer?

Monitor aggregaatstabiliteit met die selfoontoepassing SLAKES

deur Anélia Marais



Grond is noodsaaklik vir lewe op aarde. Alle voedingstofsiklusse maak op een of ander stadium 'n draai deur grond. Landbouers moet die welstand van grond monitor – maar hoe?



Grondlaboratoriums regoor die land doen basiese chemiese en fisiese analises wat belangrik is vir die verbouing van landbougewasse. Sommige laboratoriums meet ook aspekte van die grondbiologie, maar laboratoriumanalises is duur en word dikwels afgeskeep.

Dit is waar die SLAKES-selfoontoepassing 'n verskil kan maak (shorturl.at/GiULw). Hierdie selfoontoepassing is gratis op die Google Play- en App-winkels beskikbaar (**Figuur 1**).



Leer meer!

Skandeer die QR-kode of besoek shorturl.at/MLsXn



Get the Slakes App

Our Slakes mobile app is available for download from the App Store or Google Play.



Figuur 1: Só lyk die SLAKES-toepassing vir selfone.

“ Die Direktooraat Plantwetenskappe het hierdie selfoontoepassing getoets teenoor 'n standaardlaboratoriumtegniek vir die meting van aggregraat-stabiliteit. ”



Leer meer!

Skandeer die QR-kode of besoek shorturl.at/Jlvcj

Hierdie toepassing meet die spoed waarteen die grond blus. Grond wat 'n goeie struktuur het, vorm kluite. Verkieslik moet die grond krummelrig wees – nie te los nie (sand) en ook nie te taai nie (klei). As 'n grondkluit (of aggregraat) met water in aanraking kom, blus dit. Die spoed waarteen dit blus, is 'n aanduiding van hoe maklik of moeilik die grond erosie sal ondergaan.

Net omdat 'n toepassing beskikbaar is, beteken nie noodwendig dat dit goed werk nie – dus is dit belangrik om dit deeglik te toets, veral onder plaaslike toestande.

Die Direktooraat Plantwetenskappe het hierdie selfoontoepassing getoets teenoor 'n standaardlaboratoriumtegniek (shorturl.at/Atu5f) vir die meting van aggregraatstabiliteit.

Die grond was afkomstig van drie van die Wes-Kaapse Departement van Landbou se navorsingsplase. Al drie het sanderige leemgrond (**Figuur 2**), maar die klimaat en reënval verskil grootliks.

Outeniqua (33.987630 S, 22.420645 O), naby George het diep gronde, ryk aan organiese materiaal en sanderig, met min sliik en klei. Langgewens (33.276981 S, 18.703856 O), naby Malmesbury in die Swartland, se gronde is vlak en klipperig met baie sand en minder klei en sliik. Tygerhoek (34.150364 S, 19.904785 O), naby Riviersonderend se klipperige grond het heelwat klei en sliik. Reënval wissel van die minste (minder as 400 mm per jaar winterreën), op Langgewens, tot die meeste (700 mm reg deur die jaar), op Outeniqua.



Figuur 2: Algemene voorkoms van die gronde van Outeniqua (bo), Langgewens (middel) en Tygerhoek (onder).

»

Drie aggregate (2-5 mm groot) van lug-gedroogde grond, is in 'n Petribakkie geplaas, met die selfoonkamera op 'n retortstaander (**Figuur 3**). Die eerste foto is geneem waarna die water bygevoeg is. Die toepassing neem dan vir 10 minute lank elke sekonde 'n foto, alvorens die blussingsindeks van tussen 0 en 1 gegee word (**Figuur 4**). Hoe kleiner die indekssyfer, hoe meer stabiel is die grond.



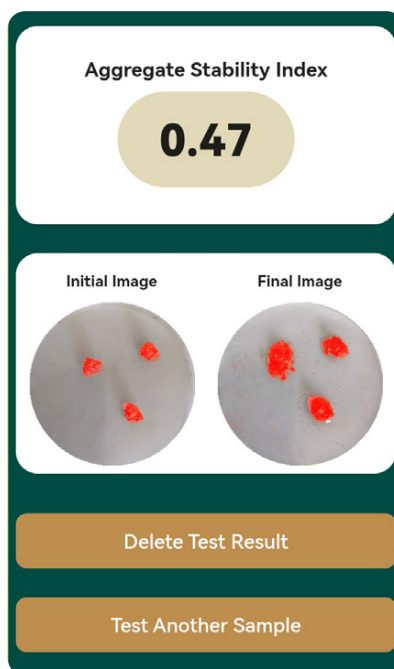
Figuur 3: Die opstel van die apparaat.

Aggregate is 'n fisiese kenmerk van gronde, maar word beïnvloed deur chemiese, ander fisiese, asook biologiese aspekte van grond. Ander laboratoriumanalises is uitgevoer om te bepaal of die stabiliteit van grondaggregate verbande met hierdie grondaspekte het. Die grondvog en deeltjiegrootte is fisiese aspekte van grond wat 'n invloed op aggregaatvorming het, met grondvog, klei en slik wat aggregate help vorm, terwyl aggregate moeiliker in droë sandgrond vorm.

Organiese materiaal word allerweë as 'n aggregaatvormer beskou. Ammonium-stikstof is 'n chemiese produk van mikrobiële afbreking van organiese materiaal of kunsmistoediening. Organiese koolstof, die meetbare komponent van

organiese materiaal, is gemeet, asook die aktiewe koolstof (AktC), wat die maklik-opneembare koolstof vir mikrobies is. Mikrobies, die biologiese aspek van grond, help om aggregate te vorm. Grondensiemerke, slegs afkomstig van mikrobies, is gemeet met die FDA (fluoresien diasetaat)-metode en dien as 'n aanduiding van algemene mikrobiële aktiwiteit in die grond.

Aggregaatstabiliteit, hetsy met die SLAKES- of die Eijkelkampmetode bepaal, behoort verbande met hierdie chemiese, fisiese en biologiese aspekte van grond te hê.



Figuur 4: 'n Tipiese resultaat soos verkry met die SLAKES-selfoontoepassing

Vergeleke met die Eijkelkamp®-masjien, was die resultate van die SLAKES-toepassing baie bevredigend. Die korrelasie (hoeveel die twee metodes ooreenstem) was statisties beduidend ($P < 0.0001$), wat beteken dat die twee metodes soortgelyke resultate behoort te lewer (**Tabel 1**).



Leer meer!

Skandeer die QR-kode of besoek shorturl.at/Atu5f

Tabel 1: Korrelasies tussen die verskillende veranderlikes wat gemeet is by al die plase.

Veranderlikes	% C	% Sand	% Slik	% Klei	% Am N	AktC dpm	FDA dpm	% Vog	SLAKES-indeks	Eijkelkamp %
% C	1	0,317	-0,054	-0,468	0,707	0,784	0,654	0,453	0,695	0,759
% Sand		1	-0,892	-0,942	-0,104	0,254	0,474	-0,450	0,689	0,221
% Slik			1	0,689	0,431	0,078	-0,194	0,617	-0,459	-0,003
% Klei				1	-0,153	-0,465	-0,616	0,265	-0,764	-0,352
% Am N					1	0,788	0,444	0,683	0,360	0,562
AktC dpm						1	0,665	0,301	0,591	0,466
FDA dpm							1	-0,056	0,641	0,372
% Vog								1	-0,003	0,540
SLAKES-indeks									1	0,603
Eijkelkamp %										1

Vetgedrukte syfers is statisties beduidend by 95% waarskynlikheid. Am N = ammoniumstikstof; AktC = aktiewe koolstof; FDA dpm = mikrobiiese aktiwiteit dele per miljoen.

Daar was beduidende korrelasies tussen byna al die gemete veranderlikes, wat daarop dui dat aggremaatstabiliteit weliswaar as 'n gemeenskaplike faktor tussen die biologiese (AktC en FDA), fisiese (deeltjiegrootte) en chemiese (% ammoniumstikstof en organiese koolstof) beskou kan word (**Tabel 1**).

Dit is belangrik dat enige grondanalise slegs vergelyk moet word binne dieselfde area. Klimaat, grondgebruik, tipe plante en selfs die seisoen kan al hierdie gemete veranderlikes beïnvloed en daar moet versigtig omgegaan word met algemene vergelykings.

Dit is 'n nuttige en kostedoeltreffende meting wat deur enigiemand met 'n slimfoon gebruik kan word.



Die gratis selfoontoepassing SLAKES kan die aggremaatstabiliteit van grond toets, 'n kenmerk gekoppel aan baie fisiese en biologiese aspekte van grond. Resultate dui daarop dat dit goed korreleer met 'n erkende laboratoriumtoets. **AP**

Vir meer inligting, kontak **Anélia Marais**: ✉ anelia.marais@westerncape.gov.za



isiXhosa summary

Ngenxa yokuba i-app yezolimo ikhona, ayithethi ukuba iyasebenza kwimozulu yethu nakwimihlaba yethu. Isicelo se-SLAKES seefowuni ezihlakaniphile zavavanywa. Esi sicelo silinganisa ukutyibilika kwee aggregates zomhlaba, nto leyo ebonisa ukuba uzinze kangakanani na umhlaba. Imihlaba ezinzileyo kuneka ingabikho lula kukhukuliseko. Uzinzo oludibeneyo lukwadityaniswe neminye imiba yempilo

yomhlaba. Injongo yolu vavanyo yayikuthulekisa olu setyenziso kunye novavanyo lozinzo olusekwe kwilabhoratri. Iziphumo ezithelekisekayo zibonisa ukuba le app eneneni inika isalathiso esifanekileyo sozinzo oludityanisiweyo lomhlaba, kwaye uzinzo oludityanisiweyo lukwanxulumanisa kakhulu neminye imiba yempilo yomhlaba elinganisiweyo, nto leyo eyenza ukuba ibe sisixhobo esilunedo kumafama.

Disclaimer:

The *AgriProbe* editorial team and the Western Cape Department of Agriculture accept no liability for any loss, damage, or adverse outcomes resulting from the use of the SLAKES smartphone application. While the app was tested and shown to provide

a reasonable indication of soil aggregate stability under specific conditions, its suitability may vary across different climates and soil types. Users are advised to exercise discretion and consult relevant experts before relying on the app for decision-making.

High-throughput sheep abattoirs

Meat safety microbiological surveillance programme

by Dr Donna Wylie



The Western Cape Veterinary Services Sub-programme: Veterinary Public Health (VPH) meat microbiological surveillance programme continues with promising results. As reported in a previous *AgriProbe* issue, sampling data demonstrated that hygiene processes implemented at high-throughput beef abattoirs in the province are effective.

“The results received indicate that hygiene processes implemented are effective.”

The same sampling method and tests were conducted on a defined sample population at all high-throughput sheep abattoirs. Indicator organisms including Total Plate Count (TPC), *Escherichia coli* and *Enterobacteriaceae* were surveyed to determine the bacteriological quality of the carcasses produced at the abattoirs, which in turn correlates directly with the efficacy of hygiene protocols implemented at these abattoirs.

Hygiene protocols are the cornerstone for ensuring safe meat for public consumption. These protocols are the only way to manage microbiological food safety risks. High numbers of indicator organisms on carcass

meat suggest that hygiene protocols implemented may not be effective. High numbers of these organisms also directly correlate with a reduced shelf life of meat.

Specific pathogenic organisms, those capable of causing severe food borne disease, such as *Listeria monocytogenes* and *Salmonella* organisms, are also tested for in this programme.

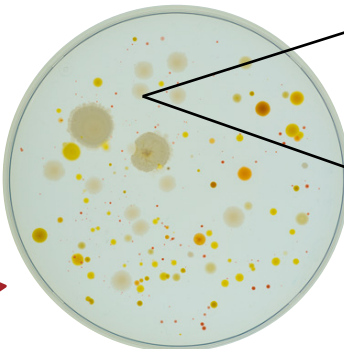
The results received from high-throughput sheep abattoirs are promising and indicate that hygiene processes implemented are effective. We can verify that the food safety assurances provided by these sampled abattoirs are being met.



Learn more!
shorturl.at/kfIMu



What is a Total Plate Count? The TPC test is a method of determining the number of viable bacteria in a food sample. This test is essential in assessing the safety and quality of food products, as high levels of bacteria can indicate poor hygiene or inadequate processing conditions, which can lead to foodborne illness.

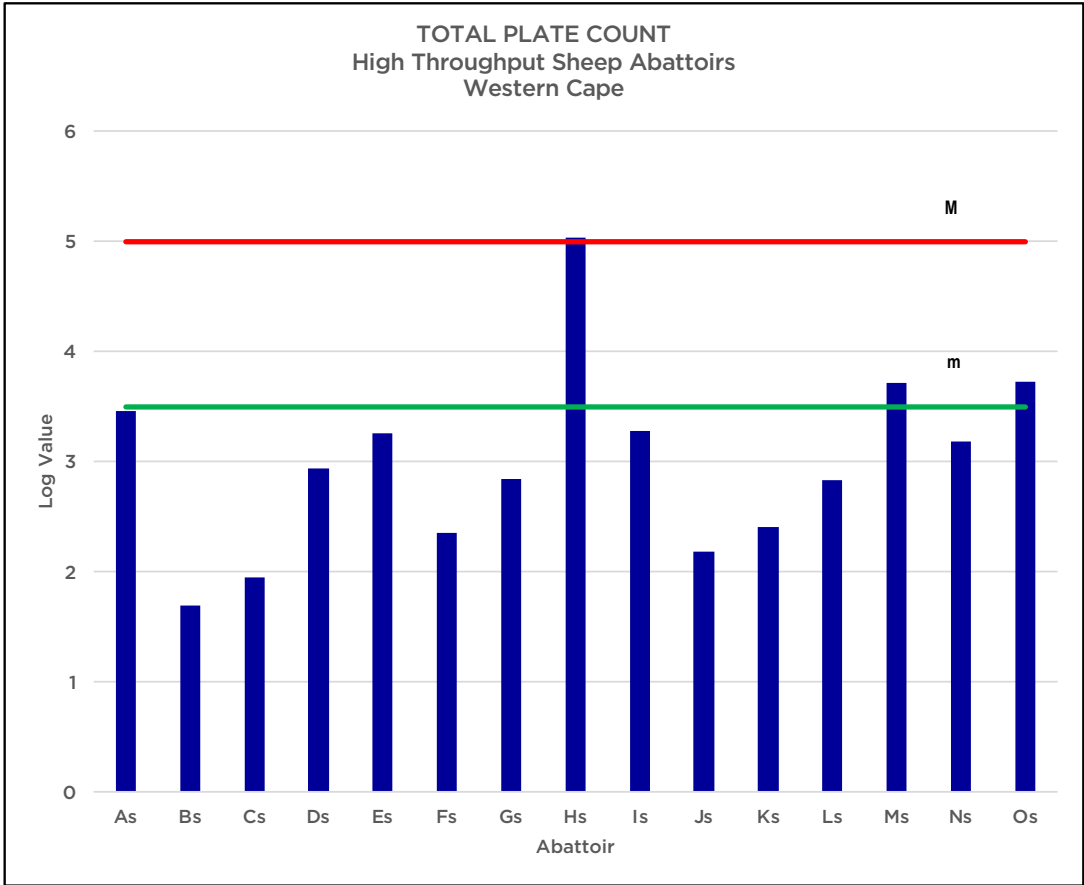


Emerging bacterial colonies on an agar plate.



Low-temperature electron micrograph showing a cluster of *Escherichia coli* bacteria at 10 000x magnification.

Image courtesy of the USDA Agricultural Research Service (ID: K11077-1).



Highest Total Plate Count finding from each abattoir sampled.

The **graph** above presents TPC results obtained from the sampled abattoirs. Names have been removed to maintain anonymity.

The **graph** shows the highest TPC (the “worst-case” scenario) received at each of the sampled high-throughput sheep abattoirs. The highest value is used for each abattoir to ensure consistency when presenting results and to eliminate bias. ‘M’ (red line) is a standardised food safety limit used to differentiate marginally acceptable levels from unacceptable levels. This is the limit that should not be exceeded for more than 12 out of every 20 samples taken at an abattoir.

Whilst limit “M” has almost been exceeded by one of the abattoirs, it is important to note that only 1 out of the 20 samples taken at the abattoir was this high, which

means that hygiene protocols implemented at the abattoir are still effective in ensuring a safe final product, but they should be monitored closely.

Limit “m” (green line) differentiates good quality from marginally acceptable quality. This limit indicates that if a defined number of samples (for example, 12 out of every 20 samples) exceed limit “m” then hygiene protocols need to be monitored and possibly reevaluated at the abattoir, as there is a potential for a microbiological food safety risk occurring.

Whilst limit ‘m’ was exceeded or nearly exceeded by several of the abattoirs in this sampling category, only 1 of the samples out of 20 taken at each of the abattoirs exceeded this limit, indicating that hygiene processes are adequate but require monitoring.



Overall, the general trend of results at high-throughput sheep abattoirs showed a higher level of indicator organisms compared with high-throughput beef abattoirs. This finding correlates with numerous research studies conducted on the comparison between cattle and sheep slaughter globally.

In general, it is more challenging to minimise microbiological cross-contamination when slaughtering sheep due to their wool coats, especially in animals that have not been clipped before slaughter. However, despite the general trend of higher indicator organisms, results show that hygiene protocols implemented at these abattoirs are still effective in ensuring a safe final product.

It is also important to note that no life-threatening pathogenic organisms were found at any of the sampled abattoirs.



This surveillance programme is vital in demonstrating to industry and the public that hygiene measures enforced by the meat safety regulations are ensuring a safe final product for public consumption.

A secondary role and one that should not be overlooked, is that microbiological monitoring conducted by the abattoirs,

“ Hygiene measures enforced by the meat safety regulations are ensuring a safe final product. ”

if done right, can be a valuable tool for monitoring and demonstrating the efficacy of their own hygiene and slaughter techniques. If results are trended and followed over time, increases in bacteria on carcasses, especially those over the acceptable levels, can act as an early warning system to alert the abattoir owner and it can allow for corrective action to be implemented before disaster strikes. If there is a general trend of increasing indicator organisms at an abattoir, then hygiene protocols being implemented are not effective and can be reevaluated and improved before a food safety risk occurs.

As the microbiological surveillance programme across abattoirs of the Western Cape continues, it is hoped that there will be a continuing trend in results obtained so far, which indicate that hygiene processes are being met by our abattoirs, and safe meat products continue to be produced for our people. **AP**

For more information, contact **Dr Marthinus Wolhuter**: ✉ marthinus.wolhuter@westerncape.gov.za

The benefits of long-term international partnerships for ostrich research

by Dr Anel Engelbrecht and Prof. Charlie Cornwallis



Photo © Olexander Panchenko

The ostrich research effort of the Western Cape Department of Agriculture (WCDoA) has benefitted tremendously from collaboration with numerous institutions and individuals. One such partnership started more than a decade ago after Prof. Schalk Cloete (Elsenburg) and Prof. Charlie Cornwallis (United Kingdom) were introduced to each other by Prof. Michael Cherry from Stellenbosch University.

Charlie recalls: In 2007 I was working at Oxford University where I shared an office for six months with a visitor from South Africa, Michael Cherry (Zoology Dept, SU). This fortuitous event would tie me to South Africa for the next 17 years, providing

insights into one of the strangest farmed species, the ostrich.

At the time, I was working on the reproductive biology of chickens, but I was interested in studying how genetic differences between individuals influence the reproductive success of newly domesticated species. Michael had a PhD student, Maud Bonato, who was collecting data for her study on immunocompetence and mate choice at the Oudtshoorn Research Farm. We got a small grant from the Oppenheimer fund in Oxford that allowed me to visit South Africa and Michael introduced me to Schalk Cloete (a specialist scientist at the WCDoA at the time).



Irek Malecki (Australia), Schalk Cloete (WCDoA) and Charlie Cornwallis (United Kingdom) on their way to the Oudtshoorn Research Farm in 2007.

Schalk was extremely welcoming and broad-minded. I grew up on a farm, but my research up to that point was in Evolutionary Biology, rather than agriculture. Luckily, Schalk saw the value of understanding reproductive behaviour to increase production and we travelled to Oudtshoorn where I got to meet the Oudtshoorn Research Farm team. After some planning and numerous discussions, we first set up an experiment to examine how crossing different breeds (South African Blacks and Zimbabwean Blues) influenced mating, fertilisation and hatching success.

We found that females and males prefer to mate with partners of the same breed, reducing the mating success of crosses. In addition to this result, there were two other interesting findings. First, Blue females reduced their egg-laying rates when paired with Black males, whereas Black females maintained high laying rates irrespective of who they mated with. Secondly, Blue males had higher fertilisation success than Black males, regardless of who they mated with. Together, these results showed that to improve crossbreeding outcomes, it is important to remove possibilities of same-breed matings (e.g., only keep males and



Photo © Quintus Strauss



Situated in the Klein Karoo, the **Oudtshoorn Research Farm**

lies approximately 8 km outside Oudtshoorn in the Eden district. Covering 843 hectares, it is the world's first dedicated ostrich research facility, established in 1964. The farm plays a vital role in supporting the region's primary agricultural enterprise – ostrich farming – and continues to serve as a key resource for both local and international ostrich research.

females of opposite breeds on farms). Blue males crossed with Black females produced the most chicks because of high fertilisation success and egg laying rates.”

This was only the start of a long and fruitful partnership. The complementary expertise of the researchers in South Africa and Europe, and the combined resources, enabled the team to make progress on several fronts.

Over the years they examined the effects of:

- 1 social breeding group composition on production;
- 2 the development of the gut microbiome on chick growth and survival;
- 3 the capacity of breeders to cope with temperature extremes and its effect on reproduction; and
- 4 different artificial insemination techniques to develop an assisted reproductive technology production system.



Mads Schou and his PhD student, Lea Huber, with an ostrich chick implanted with a data logger to monitor temperature.

What is the optimal breeding group composition for highest production?

In South Africa, ostrich breeders are typically kept in large flocks or in small groups such as trios. However, it is not known what group size maximises chick production and whether the genetic composition of groups is important.

In 2010 Charlie moved to Lund University, and with an injection of funds from the Swedish Research Council, Knut and Alice Wallenberg Foundation along with support from the Western Cape Department of Agriculture, we could test how the composition of social groups influenced the number of eggs and chicks that breeders produced.

An experiment was set up together with PhD student Julian Melgar and Maud Bonato, where groups were established with one to three males and one to six females, respectively, with individuals varying in genetic relatedness to each other. Over seven breeding seasons the rates of mating and



Ostrich chick hatching.

aggression, the number of eggs laid, and the genetic parentage of chicks were determined across a total of 110 breeding groups.

It was found that:

- the optimal group size for the production of chicks was one male and four females;
- groups with one male and six females do not suffer fertility problems, as is commonly thought;
- only one male typically reproduces when males are related, especially when competing against unrelated males;
- relatedness amongst females has little



Ostrich chicks, Oudtshoorn.

- effect on reproductive success; and
- males and females generally avoid inbreeding where possible.

Why do chicks die?

In 2014, a project was started to investigate why ostrich chicks have such variable growth and often suffer high mortality. Evidence from other animals was accumulating that the gut microbiome is very important for juvenile health, and autopsies on ostrich chicks often showed that bacterial enteritis was a problem. However, it was unknown what bacteria were involved and if this was just symptomatic of another underlying issue.

The development of the gut microbiome was first characterised, showing that both harmful (e.g. *Enterobacteriaceae*, *Peptostreptococcaceae*, *Porphyromonadaceae*, *Clostridia*) and beneficial bacteria (*Lachnospiraceae*, *Ruminococcaceae*, *Erysipelotrichaceae*, *Turicibacter*, *Roseburia*) are present soon after hatching. The effects of these bacteria on chick health,



however, are typically not observed until four to six weeks of age, when dysbiosis was typically associated with chick mortalities. It was also found (by experimentally manipulating access to breeders' faeces) that chicks can acquire beneficial bacteria and develop a mature gut sooner by frequently ingesting adult faeces. Often chicks are raised separately from breeders, however, without access to adult faeces, which may contribute to the malformation of the gut microbiome, adversely affecting chick



How will climate change influence ostrich production?

One of the striking things about ostriches is their ability to cope with extreme temperatures. This has led to many conversations over the years about how they do this, and whether they will be the only ones left as climate change continues! A colleague in Lund, Erik Svensson, was particularly interested in examining how much genetic variation there was in temperature tolerance using a thermal camera he had just bought. This is important

as genetic variation in thermal tolerance gives an indication of how populations might cope with more extreme temperatures, and with it, how ostrich farming will be affected by climate change.

After about 10 years of taking thousands of thermal images, Mads Schou joined the group as a post-doc. Mads had been working on thermal tolerance in fruit flies, which is all well and good but obviously can't compete with the charismatic ostrich. He started by analysing how temperature fluctuations influence the reproductive success of males (sperm traits) and females (egg-laying rates) and whether this was linked to their ability to keep cool, as measured by thermal imaging. The findings were extremely surprising.



Charlie Cornwallis with one of his PhD students, Elin Videvall, who investigated the ostrich gut microbiome.



Even though ostriches are famous for their ability to survive in deserts, the fertilisation capacity of males and egg-laying rates of females were significantly reduced by temperatures above 30°C and below 15°C, even when birds had *ad libitum* food and water.



Common ostrich (*Struthio camelus*), Kgalagadi Transfrontier Park.

Photo © Barry Lovegrove as published in *The Living Deserts of Southern Africa*.



Oudtshoorn Research Farm.

Photo © Quintus Strauss

The thermal images indicated that individuals that are better at keeping head temperatures within a certain range (which they potentially do by dissipating/conserving heat through their long necks) have higher reproduction. Further follow-ups showed that individuals with genes for tolerance to high temperatures were more susceptible to cold temperatures, and vice versa. Consequently, it will be difficult to breed ostriches that are able to cope with both high and low temperatures, which may be a problem in the future as temperatures become more volatile.

Mads was able to secure funding from the European Union to continue this work, which landed him a lectureship at Aarhus University in Denmark. He now coordinates the research on thermal tolerance, which is examining the effects of temperature fluctuations across the entire ostrich lifecycle from egg to adult.

These projects have all run in parallel with the development of assisted reproductive technology, initiated by Schalk, Irek Malecki (from Australia) and Maud Bonato (from France), and continued by Dr Pfunzo Tonny Muvhali and Nelleke Lotz. This has provided key insights into the processes underlying variation in fertility of males and females and has demonstrated that artificial insemination of ostriches is possible.

The whole is greater than the sum of the



Technician Bernard Snyman (left) with some of the support personnel on the farm.

parts, and the partnership has enabled research that would otherwise not have been possible. The work has been greatly helped through the support of the WCDoA management, everyone at the Oudtshoorn Research Farm, as well as Dr Adriaan Olivier (industry veterinarian in Oudtshoorn).

Numerous students that worked on these projects have since graduated, while investigations into acclimation, optimal breeding group composition and genotyping continue. The research directly benefits the ostrich industry by providing insights into optimal breeding flock ratios, reproduction and health. Some of the publications stemming from the collaborations are listed in the references.

To view references, turn to page 48. 

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The benefits of long-term international partnerships for ostrich research

by Dr Anel Engelbrecht

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Regenerative Agriculture – building soil health

by Dr Samantha Adey



Regenerative agriculture is gaining popularity worldwide – it is a farming approach that focuses on the regeneration of nature and biological systems within the farming system. This builds resilience

into the food supply-chain and helps farmers to adapt production to the impact of climate change, and also to mitigate the impact of food production on climate change.



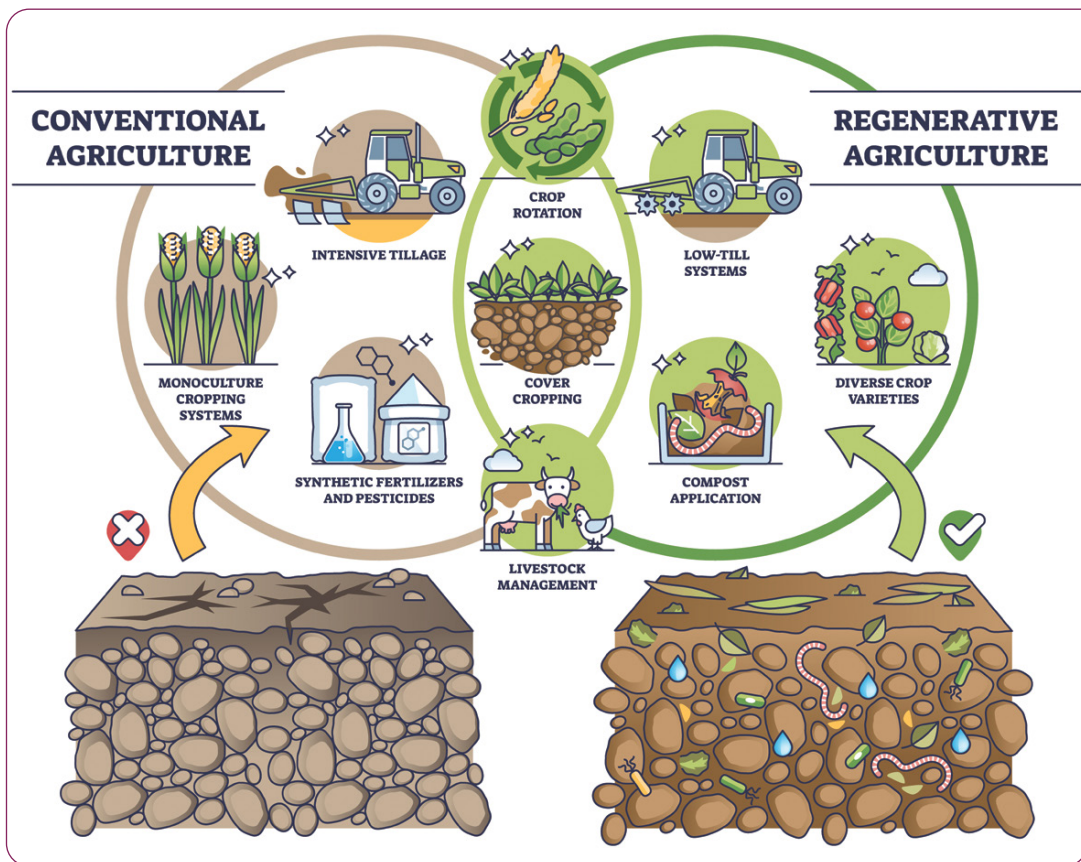


Figure 1: Regenerative Agriculture vs Conventional Practices

Healthy soil is the foundation of sustainable food systems and thriving ecosystems.

This outline highlights the key differences between regenerative agriculture – focused on restoring soil health, biodiversity, and ecological balance – and conventional methods, which often lead to soil degradation and long-term environmental harm. Understanding these contrasts is essential as we work towards a future where farming supports both people and the planet.



Regenerative agriculture focuses on the practices of building the soil health, reducing the use of external inputs, increasing biological nutrient cycling, promoting the diversity of species, and integrating livestock into production systems.

Soil health can be improved through conservation agriculture, where soil tillage is minimised, a permanent soil cover (minimum 30%) is maintained, and a diversity of plant species is cultivated. Plants can be grown in rotation or through intercropping. Soil health provides ecosystem services, such as the regulation

of the atmosphere and climate, primary production, nutrient conservation, carbon sequestration, water purification and erosion control (Millennium Ecosystem Assessment, 2005).



Scan the QR code or visit shorturl.at/7P7v1 to download the Millennium Ecosystem Assessment

Thus, the management of agricultural soils not only improves agricultural productivity, but can also contribute positively to the larger environment, mitigating the impact that food production has on climate change (Whittaker *et al.*, 2023).



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The use of cover crops has numerous benefits, and these include:

- Improved chemical and physical soil properties (Hubbard *et al.*, 2013; Whittaker *et al.*, 2023);
- biological effects such as pest control

and weed suppression (Cordeau *et al.*, 2015);

- moisture conservation (Qi and Helmers, 2010);
- reduced rain impact and run-off (Sharma *et al.*, 2018); and
- reduced soil erosion (Blanco-Canqui *et al.*, 2015).

Cover crops increase the amount of organic matter in the soil, which increases the nutrients that are available to subsequent crops (Hubbard *et al.*, 2013). Nitrogen availability, from biological nitrogen fixation is increased, and excess soil nitrogen is retained for the following growing seasons (O'Reilly *et al.*, 2012). This is particularly relevant for crop production where nitrogen is often the limiting element. The use of cover crops contributes to the sequestration of atmospheric carbon dioxide and nitrous oxide (Whittaker *et al.*, 2023), thus reducing the effects of climate change (Fageria *et al.*, 2005).

In healthy soils, micro-organisms are able to improve the availability of existing supplies of nutrients. In soils with nutrient deficiencies, they can only be made productive through the input of either organic or inorganic fertilisers (Miles, 2023).



Beautiful rolling hills of canola flowers and farmlands in spring with the Klipheuvel Wind Farm in the background. Near Caledon in the Overberg. Photo © Roger de la Harpe





Montagu is situated in the fertile Keisie Valley. The valley's climate and soil are ideal for the production of various fruits and vegetables. Photo © Maria Luisa Lopez Estivill



A local example shows how changing to regenerative production methods, has increased profits. A farmer in the Keisie Valley near Montagu, struggled with the rising cost of agro-chemicals, and found that he was applying double the amount with poorer response. He sought advice from other farmers in the area that had changed to regenerative farming methods, using weeds as cover crops, no-till practices and focusing on soil health. The farmer realised that by controlling the weeds, he was destroying an important ecological process and was damaging his soil. He now uses small-livestock to control

“ The adoption of regenerative agriculture is critical for maintaining and improving soil health, agroecosystem resilience, and in so doing improving human health. ”

the weeds in his orchards and vineyards.

Increasing the diversity of plants in the agricultural system improves the quality of the chemical and biological soil properties, and contributes to carbon accumulation in the soil. This makes the production system more resilient. Cover crops – one of the key components of regenerative agriculture – increase plant diversity, protect the soil and enhance nutrient cycling. The adoption of regenerative agriculture is critical for maintaining and improving soil health, agroecosystem resilience, and in so doing improving human health (Wall *et al.*, 2015). **AP**



Regenerative farming has made him realise that there are no quick fixes, as the agroecosystem is a living, interconnected system that requires holistic change. His input costs have declined significantly, and he is producing a quality, profitable crop (Kriel, 2021).



Canola fields with the Riviersonderend Mountains in the background.

Photo © Roger de la Harpe



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Western Cape agricultural employment performance in the last quarter of 2024

by Tshepo Morokeng¹

¹ Macro and Resource Economics, Western Cape Department of Agriculture



Summary

The Western Cape employment grew by 2% in the fourth quarter of 2024, bringing the total provincial employment to 2.8 million employed individuals. Sectoral employment numbers show the largest employment in terms of the relative share of total provincial employment are in community and social services (22%), finance (21%) and trade (18%). Agriculture (incl. forestry and fisheries) accounted for (7%) and agri-processing (4%), therefore combined agricultural value chain accounts for at least 11% (313 083) of the provincial employment. Primary agriculture jobs increased by 10% adding 17 903 jobs when compared to Q3_2024. It is also evident that agricultural jobs were severely affected by floods and other extreme environmental conditions, and employment growth of 18% is required to return to the levels last seen in Q4_2023. Despite this, the Western Cape contributed 21% to the total national agricultural employment, highlighting its significant role in South Africa's agricultural sector.

1. Introduction

One of the main priorities of the Western Cape government is to stimulate economic growth to create more job opportunities. This objective supports South Africa's National Development Plan (NDP) for sustainable and inclusive growth, aimed at reducing the unemployment rate, increasing the labour force participation rate to 65% and creating an additional 11 million jobs in 2030 (NPC, 2011).

Chapter 6 of the NDP emphasises the importance of an integrated and inclusive rural economy, with agriculture identified as a key sector that could contribute 11 million jobs by 2030. Existing literature and policy papers highlight the need for targeted investment to stimulate the economy. Agriculture requires investment in irrigation infrastructure, expansion of the area under production, energy security and provision of support to enable smallholders to transition to commercial farming (Nhemachena, Matchaya, Nhlengethwa, & Nhemachena, 2018.).



In addition, the overall support of down and upstream sectors.

This article analyses the agricultural labour market performance in the Western Cape, based on the fourth quarter labour force survey statistics for 2024 (Q4_2024) from Statistics South Africa. It will begin with an overview of employment and performance of various sectors in this quarter (Q4_2024) (Stats SA, 2025), followed by a discussion of jobs in agriculture and agri-processing.

2. Overview of employment

The South African QLFS is a household-based sample survey that gathers information on the labour market activities of individuals aged 15-64 years, who reside in the country and are not institutionalised (Stats SA, 2024b).

Table 1 presents employment numbers by sector in the province, including absolute numbers per quarter and annual growth rates for Q4_2024. During the last quarter of 2024, there were 2 811 717 employed individuals in the Western Cape. The sectors employing the largest share of the labour force in the province are community and social services 22% (607 989 jobs), finance 21% (587 048 jobs), trade 18% (509 127), manufacturing 11% (306 689 jobs), construction 11% (245 239 jobs), agriculture (incl. forestry and fisheries) 7% (192 818 jobs), transport 7% (184

123 jobs), agri-processing 4% (20 265 jobs), private household services 6% (158 187 jobs), utilities 0.4% (10 426 jobs) and mining 0.4% (10 071 jobs).

Overall employment in the Western Cape increased by 2% (62 493 jobs) and there was an improvement in job numbers in four sectors, namely community and social services, finance, agriculture and transport. Notably, primary agriculture employment increased by 10%, adding 17 903 jobs in the province. However, compared to the same quarter in 2023 (Q4_2023 versus Q4_2024), the agricultural sector's current employment base needs to increase by 18% to rebound to previous levels.

3. Agricultural labour market performance

Figure 1 illustrates trends in agricultural employment across the nine provinces of South Africa in the period Q4_2023 to the same quarter in 2024. Additionally, it shows the relative contribution of each province to total agricultural employment in Q4_2024. The Western Cape leads in agricultural jobs, contributing 21% (192 818 jobs) to total agricultural employment in the country. KwaZulu-Natal follows it at 16% (152 294 jobs), and Mpumalanga and Limpopo are in third place at 14% each.

Figure 2 on the right-hand page illustrates

Table 1: Western Cape fourth quarter 2024 labour market performance per sector

Sectors	Number of jobs (Q4_2024)	% Change (Q3_2024 vs Q4_2024)	% Change (Q4_2023 vs Q4_2024)	Relative share of total_Q4_2024 (%)
Agriculture (incl. forestry and fisheries)	192 816	10%	-18%	7
Community and social services	607 989	6%	6%	22
Construction	245 239	-2%	2%	9
Finance	587 048	11%	8%	21
Agri-processing (food, beverage and tobacco)	120 265	-2%	16%	4
Other manufacturing	186 424	-6%	-7%	7
Mining	10 071	-6%	161%	0
Private households	158 187	-17%	-12%	6
Trade	509 127	-3%	-0.2%	18
Transport	184 123	14%	24%	7
Utilities	10 426	-20%	-35%	0
Total for Western Cape	2 811 715	2%	2%	100

Source: Stats SA, 2025

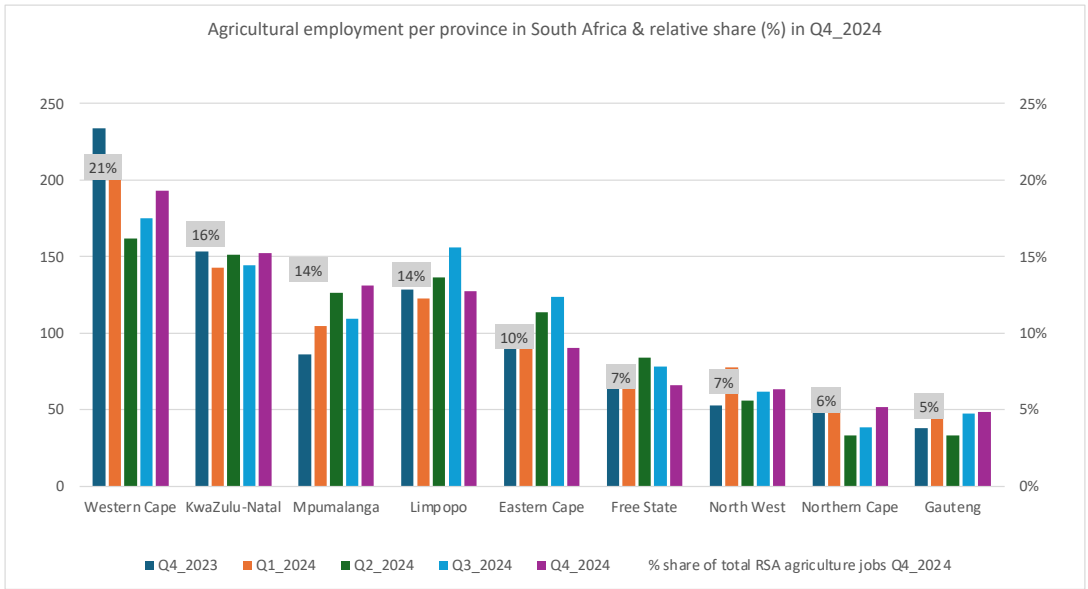


Figure 1: Quarterly primary agricultural employment trends per province Q3-2023 to Q4_2024 and % share in Q4_2024

Source: Stats SA, 2025

a disaggregation of the primary agricultural employment by subsectors in the Western Cape based on Statistics South Africa data (Stats SA, 2025a). It can be noted from the figure that the significant share of agricultural employment in the province

is in the growing of crops at 78% (149 693), followed by farming of animals at 13% (25 974) and the remaining 9% (17 151) distributed in other primary agricultural subsectors. The agricultural sector is important to the economy of the province

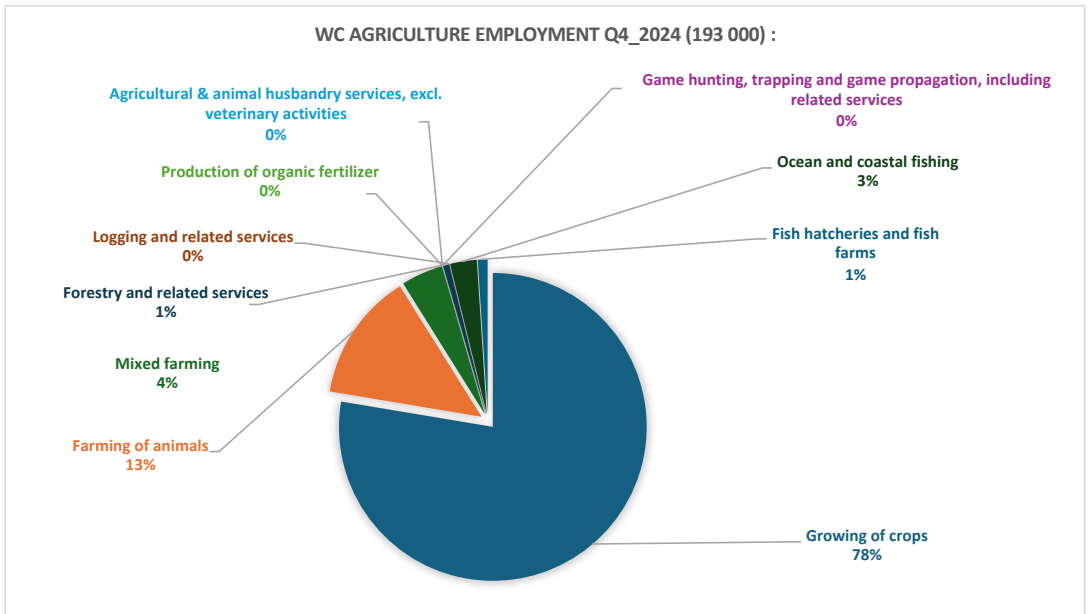


Figure 2: Western Cape primary agricultural employment by share of subsector

Source: Stats SA, 2025a

and creates jobs in the rural areas absorbing low, semi and skilled labour force.

Figure 3 illustrates the Western Cape quarterly total agri-processing jobs in absolute terms and percentage share (%) per subsector for the period Q1_2022 of Q4_2024. Overall, a total of 120 jobs were generated in the fourth quarter of 2024. It can be observed from the figure that a significant share of jobs in agri-processing are the manufacturing of other food products 40% (48 000 jobs), followed by the production, processing and preservation of meat, fish, fruit, vegetable,

oil and fats subsector 30% (36 000 jobs); then manufacturing of beverages 23% (28 000 jobs); and the rest other jobs in the manufacturing of grain mills and dairy products. A look at the last quarter of 2024 (Q4_2024) shows there was an improvement in job numbers by 16% (16 929 jobs).

Figure 4 shows the Western Cape agricultural and agri-processing sectors' employment number for the period Q1_2022 to Q4_2024. Both sectors combined recorded 313 083 jobs in Q4_2024, contributing 11% to total provincial employment.

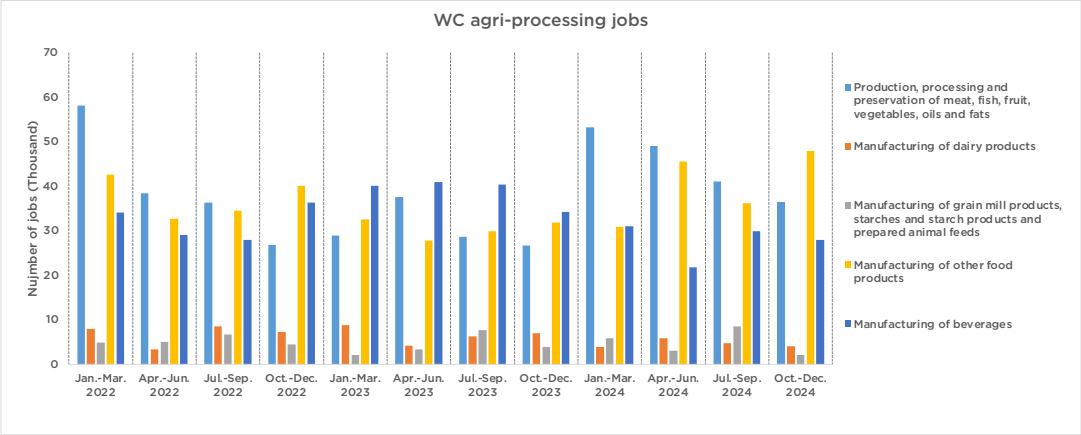


Figure 3: Western Cape agri-processing jobs, Q1_2022 to Q4_2024

Source: Stats SA, 2025a

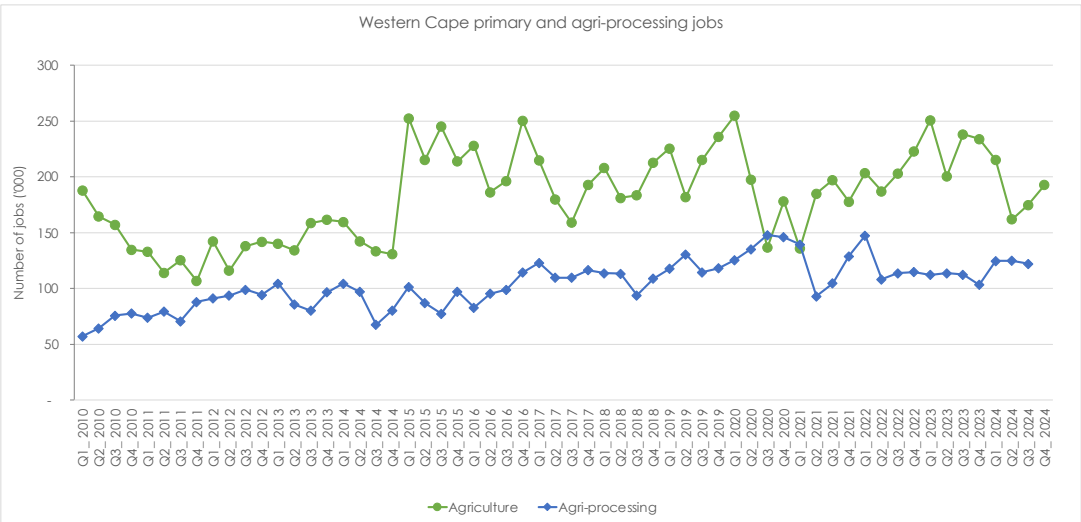


Figure 4: Western primary and agri-processing employment trends, Q4_2008 to Q4_2024

Source: Stats SA, 2025



4. Conclusion

In the fourth quarter of 2024, the Western Cape labour market increased by 2% due to growth in community and social services, financial services and transport services on a quarterly and annual basis. Despite the annual decline in agricultural jobs, this sector continues to show resilience since it accounts for a large share (21%) of the national agricultural primary agricultural jobs. In the province, agriculture and agri-processing accounts for 11% of the 2.8 million jobs. Agricultural jobs increased by 10%, adding 17 903 jobs compared to the previous quarter. However, when compared to the same quarter in 2023, the provincial agricultural job numbers have not yet fully rebounded.

5. Policy recommendations

- Encourage and support investment in agriculture for irrigation infrastructure, energy security and expansion of area

under production.

- Provide tailored support to farmers to enhance the productivity and adoption of relevant technologies. Providing comprehensive support to enable smallholder farmers to transition to commercial farming, and access to finance, capacity development and market access
- Integrated rural development that promotes agricultural development and encourages youth participation in agriculture
- Ongoing monitoring and evaluation of agricultural value chains to track progress and bottlenecks affecting productivity and employment generation, coupled with reliance on data-driven insights to inform adjustment to policies and programmes in the landscape.
- Active participation and collaboration among all key stakeholders based on shared values and support for the growth of agriculture. **AP**

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Western Cape Agricultural Trade Quarterly Brief: 2024Q4

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Theme: The global agricultural markets shifts, post the USA national elections

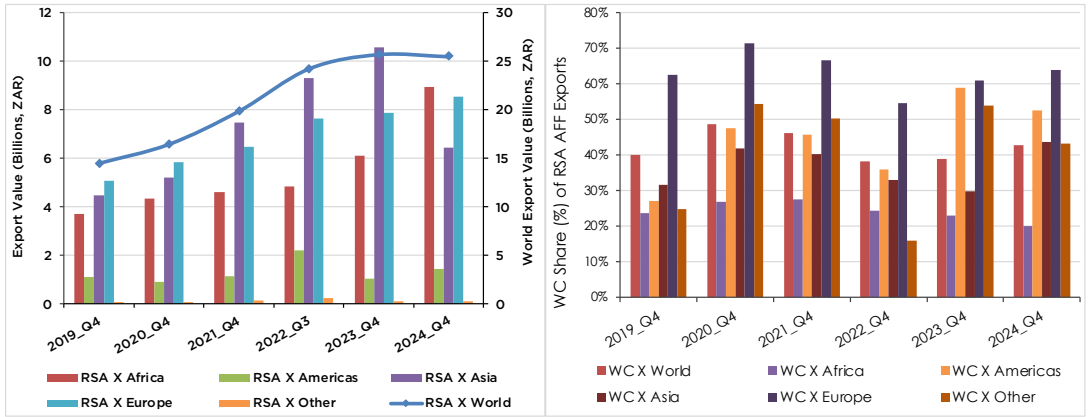
1. Introduction

This brief report provides insights and outlines the shifts in the South African (RSA) and Western Cape (WC) agricultural (agriculture, forestry and fisheries) trade trends by delving into the changes realised in export and import values, market shares, and product performance dynamics. The RSA agricultural trade contribution to the country's total exports was approximately 20% in the fourth quarter of 2024 (BFAP, 2025). The RSA agricultural exports declined marginally by 1% in quarter four of 2024 year-on-year (y/y), underpinned by declined export trade in Asia and other regions (Oceania & Antarctica), whilst the agricultural imports realised an increase (12%), this driven by the Americas' (154%) and the Asian (12%) market performance, accompanied by an import decline of 44% from Europe. The WC agricultural exports increased in the fourth quarter, however,

saw a decline in the national agricultural export's share contribution to Africa and the Americas. In the past two years, the net trade status of South Africa in the fourth quarters has been relatively improving (BFAP, 2025).

2. Western Cape agricultural export markets by region

In **Figures 1a and 1b**, we observe the RSA and WC agriculture, forestry and fisheries (AFF) export performance and trends by region. The RSA agricultural exports declined slightly from R25.7 billion in 2023Q4 to R25.5 billion in 2024Q4, a 1% decline y/y. RSA exports to the African market had a share of 35%, with exports rising from 24% (R6.1 billion) in 2023Q4 to 35% (R8.9 billion) in 2024Q4. Intra-continental trade plays a crucial role for RSA as the country plans to tap into potential markets and seeks to unlock additional export markets within the context of the African Continental Free Trade Area (AfCFTA) (BFAP, 2025).



a) WC agricultural exports by region

b) WC share (%) of RSA agricultural exports by region

Figure 1: Western Cape agricultural exports by region

Source: Quantec, 2024

The second largest share of RSA's agricultural exports were destined for the European market valued at R8.5 billion (34%) in 2024Q4, increasing from R7.9 billion (31%) in 2023Q4. The RSA agricultural exports to Asia declined by -39%, from R10.6 billion in 2023Q4 to R6.5 billion in 2024Q4. RSA grains and oilseeds (maize, soya beans) were among the agricultural products that saw massive export declines to the Asian market, caused by the mid-summer 2023-2024 drought in the country. On the other front, the WC agricultural (AFF) exports to the world grew by 8% y/y, from R10 billion in 2023Q4 to R10.9 billion in 2024Q4 (**Figure 1a**). Additionally, the WC agricultural exports to Africa increased from 14% in 2023Q4 to 17% in 2024Q4. This can be attributed to the export facilitation and promotion under the newly enacted AfCFTA. It should be noted that agricultural trade in **Figures 1a and 1b** is at primary agriculture, whereas the trade values presented in **Table 1** are products at HS code level 6, which include agricultural and agri-processing products at highly disaggregated levels.

The WC's agricultural export share contributed 43% to RSA agricultural exports to the world in 2024Q4, this share remaining strong in Europe (64%) and the

Americas (53%) respectively in 2024Q4. The election and the new administration of President Donald Trump in the United States of America (USA) brings nothing but uncertainty and new dynamic trade patterns in the global market. How RSA and other African countries will trade with the USA, in particular under the African Growth and Opportunity Act (AGOA), with the eligibility list set to be revised in 2025, is still unclear and concerning.

The top 10 agricultural exports from the WC included wine (9%), cranberries (9%), fresh grapes (8%), oranges (5%) and apples (5%) in the fourth quarter of 2024 (**Table 1**). Fresh grapes and dried grapes increased by 32% and 71% respectively on a y/y basis in 2024Q4. The increase in the demand for dried grapes is associated with the growing global demand for healthy snacks and food ingredients. Apples and pears did not perform well as the other top ten exported agricultural products, only growing by 2% and 0% respectively. We should expect improved export values as the pome industry is expecting an increase in export volumes due to more favourable weather conditions, ensuring good fruit quality and new orchards coming into production (Hortgro, 2025). The new market access for SA apples to Thailand will also improve the export values in the next quarters of the year.



Table 1: Western Cape's Top Agricultural (HS6) Exports to the World: 2024Q4

Rank	Product Name	HS Code	Export Value: 2024Q4	Share (%):2024Q4	Y/Y Growth (%): 2023Q4 vs 2024Q4
1	Wine <=2l	HST220421	1 956 148 668	9%	8%
2	Cranberries	HST081040	1 836 341 032	9%	8%
3	Fresh grapes	HST080610	1 620 052 004	8%	32%
4	Oranges	HST080510	1 132 799 745	5%	8%
5	Apples	HST080810	1 105 729 055	5%	2%
6	Wine >10l	HST220429	718 351 659	3%	8%
7	Hake	HST030474	614 966 616	3%	6%
8	Peaches & nectarines	HST080930	476 102 305	2%	8%
9	Dried grapes	HST080620	396 482 539	2%	71%
10	Pears	HST080830	322 098 582	2%	0%
	Others	Others	10 631 821 315	51%	4%
	Total		20 810 893 520		8%

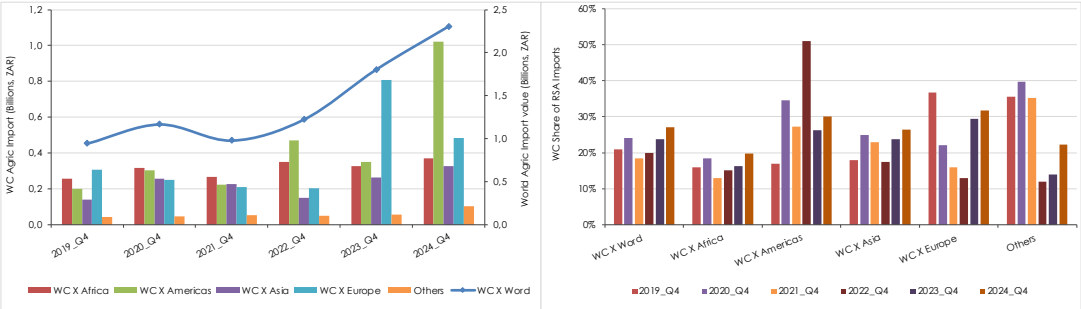
Source: Quantec, 2024

3. Western Cape agricultural (AFF) import market by region

Figures 2a and 2b demonstrate the trends of RSA's and the WC's agricultural (AFF) imports by regions quarterly from 2019 to 2024. The RSA agricultural imports increased by 12% y/y from R7.5 billion in 2023Q4 to R8.5 billion in 2024Q4, with the Americas' share rising from 18% to 40%, and Europe's share declining from 36% to 18% in the same observed quarters. The WC's agricultural import contribution to RSA imports from Europe remained at 32%, reflecting a traditional market and strong relations with the EU, where the country faces low tariff impositions.

Ammonium dihydrogen orthophosphate (fertiliser) (10%), followed by sardines (6%),

maize (5%), semi-milled or whole milled rice (5%), spirits (4%) and water (incl. mineral waters) (4%) were amongst the top imported agricultural products by the WC in the fourth quarter of 2024 (Table 2). Maize (excl. seed for sowing) recorded the highest growth at 32612615%, rising from R1.9 thousand in 2023Q3 to R642.8 million in 2024Q4, driven by the demand for animal feed in the WC region. It is more cost-effective for the WC to import yellow maize through the Port of Cape Town instead of transporting it from inland regions during periods when shortages occur, such as drought seasons and planting seasons (Van der Vyver & Kotzé, 2024). RSA faced a drought in its mid-summer season of 2023-24, causing a decline in the production of its summer grains and oil seeds.



a) Western Cape imports by region

b) Western Cape share (%) of RSA imports by region

Figure 2: Western Cape agricultural (AFF) imports by region: 20219Q4 to 2024Q

Source: Quantec, 2024

Table 2: WC Agricultural (HS6) Imports from the World: 2024Q4

Product Name	HS Code	Import Value: 2024Q4	Share (%)	Y/Y Growth (%): 2023Q4 vs 2024Q4
Fertiliser (ammonium)	HST310540	1 241 095 240	10%	48%
Sardines	HST030353	746 801 358	6%	184%
Maize (excl. seed for sowing)	HST100590	642 796 612	5%	32612615 %
Semi-milled/wholly milled rice	HST100630	633 485 516	5%	-58%
Spirits	HST220820	540 148 192	4%	751%
Waters (incl. mineral waters)	HST220210	487 260 716	4%	36%
Whiskies	HST220830	452 685 892	3%	22%
Sardines	HST160413	355 771 453	3%	103%
Crude oil	HST151211	273 671 391	2%	118%
Tuna, skipjack & bonito	HST160414	259 850 814	2%	125%
Others	Others	7 337 630 975	57%	-2%
Total	Total	12 971 198 159		15%

Source: Quantec, 2024

4. The global agricultural market performance of the Western Cape

The WC agricultural (AFF) exports to the world performed well in 2024Q4, accounting for R10.90 billion, and agri-processing (Food, Beverages and Tobacco, FBT) products valued at R9.04 billion in the same quarter. The agricultural exports increased by 8%, whereas the FBT exports increased by 5%

from the previous 2023Q4. The United Kingdom (UK) (11%), Namibia (9%), the USA (7%), Botswana (6%) and the Netherlands (6%) were the top five countries the WC exported FBT products to in 2024Q4. The Netherlands (20%), the UK (17%), the United Arab Emirates (8%), the USA (5%) and Germany (4%) were the top five countries the WC exported AFF products to in 2024Q4.

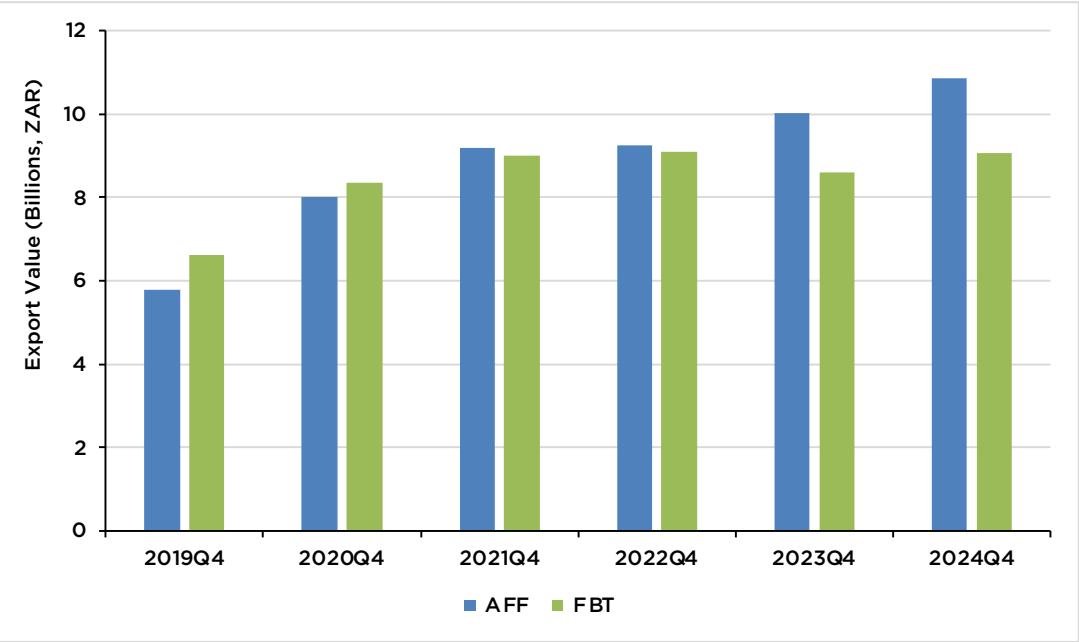


Figure 3: Western Cape AFF and FBT exports to the world: 2024Q4

Source: Quantec, 2024





5. Conclusion and recommendations

This brief report showed that the WC achieved a steady increase in its agriculture exports globally. While its exports to the USA and Europe remain important, the exports to the Asian and African markets are equally important for the WC agricultural sector and these non-traditional new markets from these regions must be explored. This can be supported by the new and revived trade agreements (i.e., bilateral protocols, MoUs) and the lifting of bans from Asian countries in terms of citrus to China and Vietnam, red meat to the Middle East, and the removal of other trade barriers of some horticultural products in the recent years. Part of the WC's strategy and commitments are to drive export-led inclusive growth, hence

it is important to look at the agricultural trade trends, global shifts and domestic events that are influencing the province's trade performance, economic growth and employment creation.

Recommendations

- The WC should continue to explore markets in Asia, Africa, the East and the Americas as the uncertainty of the outcome of the AGOA agreements is still to be cleared.
- Implement strategies and interventions to anticipate disease outbreaks in the fruit (i.e., citrus) and livestock industries well in advance to meet global requirements of phytosanitary standards.
- Improving the logistics and port infrastructure will be critical for the performance of agricultural exports to traditional markets, as well as in the reopened and new export markets, such as India, China, Vietnam, Thailand, Saudi Arabia and the Philippines.
- The WC should continue to support first-generation/emerging farmers and facilitate their access to local and export markets.
- The WC government and industry associations should support all farmers, including emerging farmers, to remain competitive at farm level and in the global market to gain foreign earnings and to grow agricultural exports while creating jobs. 



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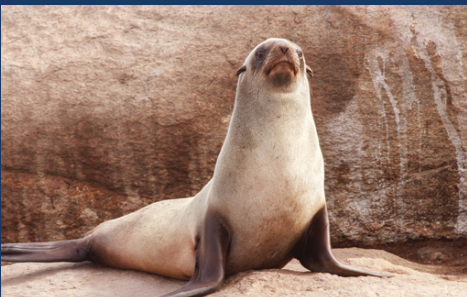
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RABIES IN SEALS

Five Frequently Asked Questions



Several Cape fur seals (*Arctocephalus pusillus*) have tested positive for rabies in the Western Cape in June 2024. While this is an emerging situation, we wish to share a selection of answers to five frequently asked questions.

1 How was the seal rabies discovered?

In May 2024, a dog with rabies was reported to the state veterinarian in Cape Town. The owner suspected it had been bitten by a seal, so samples were taken from aggressive seals reported in that week and sent for rabies testing. When they tested positive, this triggered the testing of seal samples that had been taken and stored by Sea Search, an independent research organisation since 2022.

2 How long have seals had rabies?

The earliest positive case that has been identified so far was in August 2022 in Cape Town. It is likely that the outbreak started before this.

3 How did seals get rabies?

Preliminary virus sequencing results show the seal rabies viruses are most closely related to rabies viruses from other wildlife species in Southern Africa. It therefore seems most likely that the outbreak started with a seal that was bitten by another rabid wild animal, such as a jackal, on the coast.

4 What should I do if I am attacked by a seal?

Get to safety as quickly as possible. If you have a wound or scratch, wash it very

thoroughly with soap and water. Then go to your nearest clinic or doctor immediately and tell them you suspect you have been in contact with a rabid animal.

5 How can I protect myself and my community from rabies?

If you suspect an animal has rabies, report it immediately to your local state veterinarian so that it can be responded to quickly.



Make sure all your dogs and cats are vaccinated against rabies and their vaccinations are kept up to date. This is required by South African law.



Those working with seals on a frequent basis are advised to consult their health care practitioner about receiving pre-exposure rabies vaccinations.



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