

AGRI PROBE



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**Olympic
Games
Winners**

**Rooibos
baan die weg**

**Learning beyond
the farm gate**



Research and news magazine of the Western Cape Department of Agriculture

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Setting the SCENE



by Dr Mogale Sebopetsa, Head of Department

A change in the season is necessary for growth. This is the case with agriculture and humans. We had a rough 2020 with many “new normals”, which we have somehow managed to overcome and navigate. This year was not any different but I felt more prepared and resilient for what was coming my way. The power of science gave a glimmer of hope, not only to myself, but many others, as the vaccination roll-out was finally set in motion. I was eager to get my jab to get things back to some sort of “normal” and it was encouraging to see the number of citizens that had the same attitude.

The Western Cape has already seen over 3,2 million vaccinations being carried out. It signifies that we are all in this together and that there is a silver lining around this dark cloud. Again, I would like to encourage you to take advantage of the vaccination drive and get vaccinated. It is the right thing to do so that we can continue to save lives and livelihoods.

The agricultural sector has continued to walk hand in hand to protect the welfare of farmers and agri-workers, to ensure that productivity and food security remain unharmed. This resilience could be seen in the sector's growth of 13,1% in 2020.

Agriculture is a wealth creator that has the potential to lead our economic recovery efforts in the Western Cape. It is therefore of the utmost importance that we uphold the integrity of the sector. We must

continue to dialogue and harness every person's contribution for a public-private partnership that works for our citizens.

I would like to thank our stakeholders for their labour of love of the past two years. Without you, there would be no growth. Without your support in managing COVID-19 and your efforts to promote the vaccination drive, we would have had another negative outcome instead.

The Western Cape Department of Agriculture would like to reaffirm its commitment to the sector. We are here for you as we try to ensure that no citizen is left behind, with food security and improved food production for a prosperous Western Cape.

As we enter the summer months, I would like to remind you that some parts of the province are still experiencing drought and everyone is encouraged to use water sparingly as a way of embracing the “new normal”. Keep in mind that there can be no food security without climate security. You can count on me to support your efforts as we make sure agriculture thrives in the Western Cape; it is the basis upon which everything depends, after all.

Enjoy this festive edition of *AgriProbe* compiled especially for you,

#ForTheLoveOfAgriculture

Wishing you a safe festive season!





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ON OUR COVER

Pomegranate is known as one of the world's oldest fruits, with many health benefits and bursting with goodness and taste. The pomegranate industry has shown remarkable growth in production value over the past decade. As a climate change-friendly alternative crop of choice for fruit farmers, there is potential for further economic growth and job creation in the future. The festive season, a time of plenty, calls for this juicy fruit to take front stage.

Full article can be found on page 57



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AGRICONNECT

THE VOICE OF AGRICULTURE

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by Minister Ivan Meyer

Delivering on our brand promise brings hope and tangible benefits

Our resilience and our capacity to overcome whatever life throws at us have been tested in recent times. The agricultural sector's recent performance aptly reflects that we have what it takes to repel these challenges.

As highlighted recently at the launch of the BFAP Baseline – *Agricultural Outlook 2021-2030* of the Western Cape, agriculture's economic performance in 2020 is significant. It grew by 13,1% in the pandemic year, and 2021 will likely be another good year for the agricultural sector. This view is underpinned by the expected bumper harvest for major summer crops sold at relatively high prices. It is also reflected in the record exports from major fruit sectors such as citrus, pome fruit, and table grapes – a real story of hope.

This brings me to our brand promise.

In March 2021, I was introduced to alien clearing contractor Linda Jansen at Zonquasdrift, located downstream of the Berg River in the Drakenstein Municipality of the Cape Winelands. At the time, she and her team were clearing alien vegetation along the river.

Invasive alien plants (IAPs) use excessive amounts of water, decreasing water available

to the agricultural, domestic, and industrial sectors. In addition, the overgrown IAPs in the river stream cause severe soil erosion, increasing water turbidity and reducing water quality. They also out-compete indigenous vegetation and negatively impact the ecological infrastructure that contributes to healthy and functioning ecosystems.

Fast forward to September 2021, and I bump into Linda Jansen again. This time it is at Nursery Day 2021, hosted by the Western Cape Department of Agriculture's (WCDoA) Sustainable Resource Use and Management Programme's Indigenous Tree Nursery, based at the Worcester Veld Reserve. Linda and her team were loading indigenous trees onto the back of bakkies and trailers on this day. The recipients of these donations of indigenous trees were local farmers and organisations such as the Bonnies People Project, Seed2Harvest, and Fairtrade Africa. They were a disparate group that joined in a shared mission to restore our ecological infrastructure. I also had the honour of donating indigenous trees to the West Coast region of the Women's Agricultural Society – we know them as the VLW. So the Sustainable



Resource Use and Management team of the department and its partners had come full circle by removing alien vegetation and replacing it with indigenous plants.


Established in collaboration with Breedekloof Wine & Tourism, the Worcester Veld Reserve indigenous Tree Nursery aims to mitigate the impact of climate change. Cultivating and growing indigenous trees that can be put back into their original environment improves the landscape's natural biodiversity and reduces flood risk to farmers along our rivers. The nursery does so by contributing directly to restoring ecological infrastructure in the landscape that plays a vital role in supporting agriculture. It is a cost-effective means of adapting to climate change and, at a landscape level, also

offers substantial employment opportunities.

Alien clearing projects also contribute to job creation and restoring dignity in rural towns with high unemployment levels.

Linda Jansen captures what the Western Cape's brand promise of *optimism and worth* means when she says: "With the support of the Department's LandCare Programme, I can contribute to reversing the damage caused to our ecological infrastructure. I am blessed that I can create jobs that support 240 households in the Tulbagh area".

The WCDoA does what it does for you, the people we serve. By doing so, we deliver tangible benefits that bring hope to your lives and your community.

#ForTheLoveOfAgriculture 



Management registers 174 agri-workers for their COVID-19 jab

by Robyn Carstens, robync@elsenburg.com

Executive team members of the Western Cape Department of Agriculture (WCDa) visited Broodkraal Estate near Piketberg to enrol agri-workers older than 35 for their COVID-19 vaccinations. It formed part of the WCDa's Mandela Day activities.

The Rural Development Programme's sub-programme: Farm Worker Development hosted the initiative on 19 July, and 174 agri-workers from Broodkraal and the surrounding farms were successfully registered.

During the visit, the WCDa's head of department, Dr Mogale Sebopetsa, commended the leadership of the farm for allowing the team to register their workers. "President Mandela would have wanted us to do it. I want to urge everyone here to try and get vaccinated. We have to fight this monster and cannot afford any disruptions in agriculture."

The agri-workers were grateful to the leadership teams of Broodkraal and WCDa for the opportunity to register. One of the Broodkraal team leaders, Marie George, said: "I'm glad that the agricultural management team encourages us to register and be vaccinated. That is a very good thing. I would also like to encourage other people to go for their vaccinations."

Another agri-worker agreed that it is much better to go for the vaccination. "By going for it we can help improve the COVID-19 situation ... I am definitely going for my shot", said supervisor April Mmihule.

The department continues to urge all agri-workers to take part in the vaccination roll-out in the country. Our agri-workers play an essential role in the food value chain in the Western Cape and beyond. They are important for the food value chain to remain strong during the COVID-19 pandemic. **AP**



Growing and supporting OUR PROFESSIONALS

by Ashia Petersen, ashiap@elsenburg.com



Anthea Benjamin



Ashraf Mohamed



Juan-Pierre Scheepers



Nceba Sophazi



Nkosinathi Ziqubu



Nomfume Mofu



Sizwe Mlotshwa



Sophie Mapheto

Government is sometimes criticised for developing policies but lacking in implementation. The Western Cape Department of Agriculture (WCDoA) is aware that a critical part of translating policies and strategies into implementation is the human element. Technical engineering skills are scarce and with the requirement for professionally registered engineers and engineering technicians, the WCDoA was faced with a major challenge. Unfortunately, through our recruitment processes we were unable to find suitable professionally registered officials. A programme to support candidates was born through this need. Over the past ten years the Engineering

Candidate Programme has been remarkably successful with a number of officials obtaining their professional registration with the Engineering Council of South Africa. Some of these officials who started in the Candidate programme are currently permanently employed and two have been appointed in middle management positions. Seven new candidates have joined our programme; two candidate engineers, and five engineering technicians. We wish them all success with the professional registration process and contributing to the sustainable management of natural resources. **AP**



OOR DIE MIKROFOON

deur Eloise Pretorius, eloisep@elsenburg.com

Hier in die pylvak van 2021 is dit beide 'n vreugde en voorreg om terug te kyk op die weë van *RSG Landbou*. In 'n jaar wat gewis sy uitdagings vanweë die pandemie opgelewer het, was dit duidelik dat radio 'n onmiskenbare rol in ons “nuwe normaal” speel. Veral wat betref die oordrag van goeie-nuus landboustories, en om hedendaagse planmakers 'n kans te gee. Winston Churchill se woorde “never let a good crisis go to waste” het gereeld by my opgekom tydens die vervaardiging van onlangse programme. Dit was onvergeetlik om hoorbeelde saam te stel oor boere, wetenskaplikes en ander liefhebbers van landbou wat verbetering aangehou het om lewensnoodsaaklike bydraes te maak in 'n ongewone tyd.

Lizelle Wentzel en Wilanie de Villiers van Western Cape Microadventures is twee avontuurlustige vriendinne wat graag hulle liefde vir die natuur en platteland met mense deel. Hiervoor het hulle mikroavonture ontwikkel wat kort wegbreke aan gaste bied. Die storie oor hulle deeltydse klein besigheid wat gedurende grendeltyd vlerke gekry het, was een van die vele hoogtepunte gedurende ons Juliemaand-programme. 'n Hoorbare bewys dat 'n virus geen avontuursoeker



Mikroavonture bied gaste kort wegbreke.

stuit nie, en dat plaasekskursies 'n groot behoefte by stadsjapies is. Waar daar 'n vroueboer is, is daar 'n weg. Een waar innovasie en rentmeesterskap sentraal staan tot boeregoed en die gemeenskap. Knap voor ons Vrouemaand-programreeks het ons aangedoen by Jo-Andra Cloete Gregory van Joostenberg-vlakte. Haar landboupad was aanvanklik onbeplan, maar die hartsreis wat sy onderneem het om haar plaas te vestig, het een geword waarop daar nie teruggedraai kan word nie. Our Poultry Place is die naam van haar plaas en onderneming, en dis hier waar duisende kuikens hulle



Jo-Andra Cloete Greegory.



Ingrid Jones.



V.l.n.r. is Eugene Rood, Louis de Kock en Rick Kleinhans.

eerste lig onder haar wakende oog aanskou. Dis egter haar liefde vir mentorskap wat van haar 'n helder lig in landbou maak. Jo-Andra het destyds lewende kuikens en hoenders uit haar Opel Corsa in informele nedersettings gaan verkoop. Vandag bestuur sy een van die snelgroeiendste hoenderplase in Suid-Afrika. Beide haar seuns heet Matteo – 'n naam van guns wat sy wil verdubbel en voortsit. Haar innovasies tydens inperking is ongekend. “Ek staan saam met my hoendertjies op, maar gaan slaap beslis nie wanneer hulle tot ruste kom nie.”

Augustus se programkalender is gewis een waarop ek trots is. Bekende TV-persoonlikhede soos Ingrid Jones en Suzaan Steyn het saamgekuier en van hulle kosbaarste landboustories gedeel. Beide het verklap dat hulle droom van 'n lappie grond wat hulle graag self sou wou bewerk. Hulle voel dat Vrouemaand binne landbou gehuldig moet word as 'n lewensaar vir inspirasievroue. Bekendes in die Wes-Kaapse Departement van Landbou het ook gewys waarom vroue in wetenskap geen nutjie is nie, en dat die geleenthede binne hierdie sfeer onbeperk is. Herbesoek gerus die programme op **www.elsenburg.com** en luister weer na dr. Ilse Trautmann, Lisa

Smorenburg, Annalene Swanepoel en prof. Stephanie Midgley.

Reeds op 'n vroeë ouderdom was Louis de Kock lief vir landbou; later was dit veral varspodukteverhandelings wat hom laat “tiek” het, en in hierdie geval laat “kliek” het. **Nile.ag** is 'n aanlynplatform vir boere, enig in sy soort en die breinkind van de Kock en twee ander landbou-entoesiaste. In Oktober was hy een van die jong stemme waarmee ons kennis gemaak het, en ek wil jou aanmoedig om te gaan terugblaai op ons webtuiste om 'n formidabele landbouspan se storie te hoor.

Dieregesondheid, 3D avokado's, spookstories en nuttige landbouwenke van ons mees gerekende wetenskaplikes sluit die jaar af op *RSG Landbou*. Dit, en soveel meer. Net om weer vere reg te skud vir 'n nuwe hoofstuk in landbou en 'n jaar wat ons met optimisme en hoop inwag. Intussen is jy altyd welkom om wenke en staaltjies met my te deel deur 'n e-pos te stuur na eloseip@elsenburg.com.

“Sien” jou binnekort weer op die radio! **AP**

New Deputy Director General:

Agricultural Research and Regulatory Services at the Western Cape Department of Agriculture

by Mary James, maryj@elsenburg.com

Dr Ilse Trautmann was recently appointed as Deputy Director General: Agricultural Research and Regulatory Services (DDG: ARRS) at the Western Cape Department of Agriculture (WCDa).

Dr Trautmann is no stranger to the Western Cape agricultural sector, having been a driving force of agricultural research and technology in her position as Chief Director: Research and Technology Development Services (RTDS). She has served in the WCDa for more than a decade and in senior management positions in the department since 2003.

Before working at the department, Dr Trautmann was in management positions at the Agricultural Research Council (ARC) after her career as senior agricultural researcher with the ARC Nietvoorbij from 1991. Before this she served as a part-time lecturer at Stellenbosch University and the University of the Western Cape. She had a close association with the Foundation of Research Development (FRD) where she worked as a postdoctoral associate and a researcher in her early career.

Dr Trautmann has been a keen agriculturalist from early on. She grew up in a farming family in the Cape Winelands, where she was exposed to agriculture when she was still young.

She has always been a groundbreaker when it comes to academics. She graduated from Stellenbosch University with a BSc cum laude (botany, zoology) in 1981, a BSc Hons cum laude (plant physiology) in 1982 and an MSc cum laude (plant physiology) in 1984. In 1990, she obtained her PhD in plant physiology, also from Stellenbosch University.

With a curiosity for all things new in technology, her deep passion is to improve agriculture through science. She also has a keen interest in technology transfer, from the conventional to the latest online methods, and under her leadership the research team has excelled at all levels.

Dr Trautmann is a trusted name in the agricultural fraternity. With her extensive knowledge and understanding of the sector and the various industries driving it, she is often sought to give advice and guidance to



industry role players. She serves as a board member of the SA Academy for Science and Arts and of Winetech. She was recently also invited to serve on the Hortgro Science Advisory Council.

Agricultural Research and Regulatory Services is one of two branches in the department, the other being Agricultural Development and Support Services with Darryl Jacobs as DDG. The DDG: ARRS post

was advertised for the first time in February 2021. She will be the first incumbent in this post. The branch includes the programmes RTDS, Veterinary Services, and Agricultural Economic Services – the more scientific, economic, and regulatory programmes of the department.

“Ilse is an experienced senior manager and I am happy to have her take up this new portfolio. I believe in science and the



programmes within this branch deliver some of the most essential services to the sector, making it critical for agriculture's competitiveness. I am excited to see how she puts a stamp on this position, in a uniquely Ilse way." Dr Mogale Sebopetsa, Head of Department, WCDoA.

Dr Trautmann on her new appointment and the way forward: "I would like to grow this branch to a new level of service delivery and seek synergies between the three programmes, also on the innovative and technologically advanced level. And foster better partnerships with our other programmes and stakeholders in the sector. One of my major focus areas would be

people and skills development of the staff in the branch. And my question will remain: what makes our three programmes different to our counterparts in other provinces and how can we better serve our clients in the sector?"

Dr Trautmann is known for her drive and passion, always thinking outside of the box. These are exciting times for the WCDoA, with the endless possibilities offered by innovation and technology, blended with a powerhouse personality steering the Agricultural Research and Regulatory Services "ship". Houston, this eagle has landed.



UP CLOSE AND PERSONAL WITH DR TRAUTMANN

- **Your favourite food?**

I love beetroot and veggies! And a peri-peri chicken makes me smile.

- **What are your hobbies?**

I have many of those – theatre, wine tasting, playing golf, travelling (local and abroad), working in my luscious vegetable and herb garden, cooking, and then one of my passions, preserving. I am the jar lady in my family, my group of friends and some colleagues have tasted my products. And then there are my three furry friends – two Siamese and one Tonkinese (cross between Siamese and Burmese).

- **If I were to turn back the clock and come back as a different person, I would have been ...**

A medical doctor, especially in the rural areas where medical needs are so high.


- **What makes you happy?**

To be alive and healthy, to be surrounded by family and friends and great colleagues, and having a job, while millions in South Africa are unemployed. This is indeed a privilege and I cannot but smile!

- **If you could master one new skill in an hour, what would it be?**

Learn to make sushi!

- **Which book are you reading at the moment?**

My latest book was in preparation for my recent trip to the Kgalagadi Transfrontier Park. A marvelous book! But I also like reading agricultural magazines! 



World Food Day (WFD) 2021 celebrated at Ceres, Witzenberg Municipality

by Dr Hlamalani Ngwenya, hlamalanin@elsenburg.com
and Vusumzi Zwelendaba, vusumziz@elsenburg.com

The genesis of World Food Day

The Food and Agriculture Organization (FAO) of the United Nations (UN) was founded on 16 October 1945 after World War II. FAO continues to lead the annual World Food Day (WFD) celebrations on 16 October.

This year's UN WFD celebration under the theme "Our actions are our future" was special in the sense that it came after the first ever Food Systems Summit convened by the UN Secretary-General in September 2021. It also came at a time when the world continues to battle with the challenges of the COVID-19 pandemic, which has had devastating effects on the food security of many individuals and households, especially in developing countries.

South Africa responds to the call

As a country, South Africa puts the issues of food security high on the development

agenda and has the necessary policy framework and resources to address these issues. The country also joined over 150 countries across the globe to celebrate WFD. This year, South Africa used the day to create awareness on the National Policy on Food and Nutrition Security (NPFNS) and encouraged different actors at various levels to proactively participate and contribute towards sustainable food production systems.

WCDoA celebrates WFD 2021 in style

The Western Cape Department of Agriculture (WCDoA) has made WFD one of its flagship projects. We do not merely talk about WFD; we celebrate it in action. We continue to use our resources to tackle food security challenges where they matter most: at community and household level.



Where was the WFD celebration held?

For 2021, the WFD celebration resources were channelled to support households, communities, and school projects in the Witzenberg Municipality. The event took place in Ceres, although projects spanned across the Witzenberg Municipal area.



food security projects. These projects are:

- Babbelbekkies Groentetuin (PA Hamlet);
- Suikerbekkies Dagsorg Garden (PA Hamlet);
- Oppi Koppi Food Garden (PA Hamlet);
- St Marks Primary Food Security Project (PA Hamlet);
- Jack and Jill (PA Hamlet);
- Eyamanina Hatchery (Nduli);
- Aviat Creche Community Garden (Ceres);
- WF Loots Primary Food Garden (Wolseley);
- Witzenberg Primary Food Garden (Wolseley);
- Badisa Food Garden (Wolseley);
- Helpmekaar Groentetuin (Wolseley); and
- Tulbagh Clinic.



Who are the beneficiaries?

This year, the WCDa has reached a record of 179 households (HH) as beneficiaries. A rigorous selection process was used to reach the number of beneficiaries that are spread across 11 communities. PA Hamlet (48 HH); Bella Vista (25 HH); Ceres (5 HH); Nduli (10 HH); Waterval (22 HH); Tulbagh (23 HH); Pine Valley (8 HH); Kluitjieskraal (4 HH); Wolseley (18 HH); Op-die-Berg (10 HH) and Koue Bokkeveld (6 HH).

In addition, the WCDa also supported 12 projects, i.e. nine community and three school



Plant one tree, eat-for-free drive

One fruit tree can give a household food for life. And with this goal in mind, we planted 170 fruit trees (85 lemon and 85 fig trees) across the municipality as part of the WFD celebrations.

Mountain of food for the needy

With the support of sponsors and staff members, a generous food mountain was built and displayed at the event. This food has been donated to five local NGOs/NPOs in the area.

The main sponsors to the food mountain included AB InBev, the Department of Social Development in the Western Cape, Pioneer Foods (now known as Pepsi), Celia Farm, and Goede Hoop Vrugte. The Witzenberg Municipality supported the event through filling of water tanks for all the households food gardens supported.

A hybrid event

The main event was held in hybrid mode with a small face-to-face audience at Ceres town hall and most people joining the live stream on YouTube.

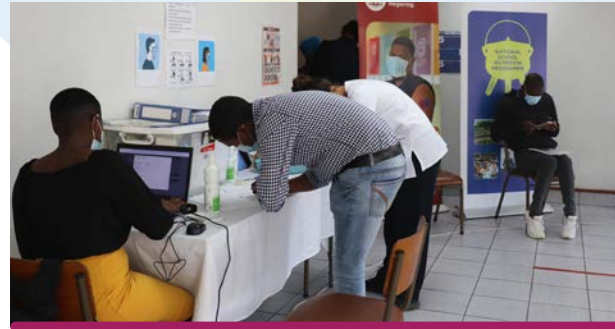
Scan the QR code to watch World Food Day 2021 event.



Moderated by Dr Ngwenya, the programme had high-level dignitaries such as the Western Cape Minister of Agriculture, Dr Ivan Meyer; the Executive Mayor of the Witzenberg Municipality, Alderman Barnito Klaasen; the Executive Deputy Mayor of the Cape Winelands District Municipality, Cllr Dirk Swart; the Head of Department (HoD) Dr Mogale Seboetsa and the Deputy Director General, Mr Darryl Jacobs. The key message emerging was that food is a symbol. It is a symbol of hope (as the Minister would say, “higher opportunities for people who excel”), care, wealth, dignity, and strength.

Vaccination drive

The event also provided an opportunity for the department to set up a vaccination site to encourage people to vaccinate against the COVID-19 virus. In collaboration with the Western Cape Department of Health, this was also a success.



Planting the seed through school competition

We believe in planting the seeds of food security in the minds of children at an early age. In addition to the school gardens, we have initiated a school competition with two schools in the area. The school children were encouraged to create posters and 3-D designs around the topic of food security. The winning ideas were awarded at a special event hosted on 15 October 2021. **AP**

New chief director for Agricultural Producer Support and Development

by Robyn Carstens, robync@elsenburg.com



Dr Hlmalani Ngwenya has been appointed as the new chief director for Agricultural Producer Support and Development (APSD). She started her new position on 2 August and starts on the cusp from the previous Farmer Support and Development programme to the reimagined APSD programme in the department.

Dr Ngwenya is originally from Giyani Bushbuckridge in the northern part of Limpopo. For anyone who struggles to pronounce her name, she grants permission to call her “Be Surprised Crocodile”. Her name Hlmalani is a Tsonga word meaning “be surprised” and her surname Ngwenya means “crocodile”.

She has a PhD in sustainable agriculture, specialising in the facilitation of systemic

change in the context of agricultural extension service delivery systems. She also holds a master’s and honours degree in consumer sciences specialising in community nutrition, and a BEd and senior secondary teacher’s diploma.

With 29 years of extensive experience in the agricultural sector, Dr Ngwenya has held several positions including teaching and lecturing at an agricultural high school, a college of agriculture, and two universities (Pretoria and Free State). She held management posts in the private sector and international non-governmental organisations. She also worked as an international development consultant in the broader agri-food systems and nutrition at national, regional, and global levels.

Her major career highlights include doing assignments in over 50 countries and moderating high-level policy dialogues. She has also been instrumental in moderating the current pre UN Food Systems Dialogues at regional level.

During an APSD outreach held in the Saldanha Bay municipality, Dr Ngwenya

She worked with organisations such as:


- the Food and Agriculture Organisation (FAO) of the United Nations (UN);
- the UN World Committee on Food Security;
- the International Fund for Agricultural Development (IFAD);
- the Forum for Agricultural Research in Africa (FARA);
- the African Union Commission, especially the Comprehensive African Agricultural Development programme (CAADP);
- the Global Forum for Rural Advisory Services (GFRAS);
- the International Food Policy Research Institute (IFPRI);
- the African Forum for Rural Advisory Services (AFAAS);
- the Regional University Forum (RUFORUM); and
- other organisations, including donor agencies.



It is important to grow your plate, fight hunger, and contribute to the livelihood of our communities and families.”

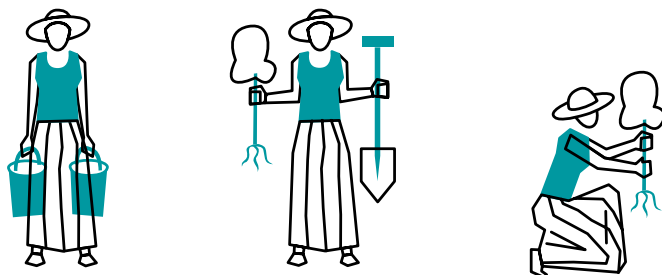
hit the ground running by encouraging the women of Stompneus Bay to arm themselves with the tools for fighting hunger. “When you plant a seed, you need to nurture it before you benefit from the harvest. When you look at your plate, ask yourself: what percentage of that did I grow myself? It is important to grow your plate, fight hunger, and contribute to the livelihood of our communities and families.”

“We warmly welcome Dr Ngwenya to the Department of Agriculture”, says Dr Mogale Sebopetsa, head of department. “Strong leadership with solid agricultural and extension experience is key to the future growth and sustainability of our sector. I look forward to working closely with her and we wish her all the best.”

When asked about her hopes for the sector, she replied, “Whenever you talk about agriculture, everybody thinks of farming. Yes, farming is a core aspect of agriculture, but we need to unpack and understand the sector beyond primary production. People need to have an understanding of the sector in order to appreciate what it offers. When we look at the projections of the increasing population, every mouth needs to be fed and is being fed by us who are in the agricultural space. The sector is changing, and we need to embrace those changes, innovate, and make the sector more profitable and inclusive for everyone”. 

Goedverwacht women participating in agriculture during COVID-19 pandemic

by Tebogo Osekeng, tebogoo@elsenburg.com



The Goedverwacht community of the West Coast in the Bergriver municipality has been at the centre of food production since its inception. As a result, primary agricultural practices have been adopted from generation to generation to secure household income and acquire wealth over time. Vegetables, livestock and rooibos tea are the most produced and valued commodities in this area.

Similar to the global trends in rural farming systems, women in this community play a significant role in the local economy through various farming activities and sales of agricultural produce. Like other women in Goedverwacht, Merle Dietrich,

Hisstar Cornelius, and Julian January realised their own potential and put their childhood experience to the test. They started collaborating after obtaining land from the Moravian Church (land custodian) to produce organic vegetables. The women are inspired by the popular annual “Snoek & Patat” festival and supported by the Western Cape Department of Agriculture (WCDoA) food security and household initiatives. Both play a vital role in empowering the women and other producers in the area. The women praise the collaborative work from various stakeholders such as the Ecwin company and Merle Dietrich for their technical support to gain market linkage and access.



The national lockdown in March 2020 ignited a much-needed innovation and diversification plan for alternative livelihood strategies after the “Snoek & Patat” event was affected negatively. In spite of the harsh impact of the pandemic on the operations of agribusinesses, the women in the community – along with other subsistence farmers – displayed resilience through producing organic vegetables in particular. In support of this initiative, Ecwin decided to start a 100% organic vegetable production venture following strict organic principles. The objective is to produce organic products for their restaurants, guest houses and markets in the West Coast to overcome the challenges brought about by COVID-19. As a result of the pandemic, guesthouses have been experiencing a low guest turnover since 2020. Alternative markets had to be established to generate income.

Currently, this project supplies other certified organic suppliers, while awaiting organic production compliance certification and hopefully becoming part of the agri tourism market by supplying directly to end-users. Revitalising and adopting indigenous practices has been a great asset to this growing organic venture. The relevance of

The objective is to produce organic products for their restaurants, guest houses and markets in the West Coast to overcome the challenges brought about by COVID-19. ”

indigenous knowledge continues to be an advantage and it has the greatest potential for market access for the underprivileged communities across Africa. Amid economic instabilities, organic practices are the most cost-effective and cater for the promising market opportunities for vegan and chemical-free produce.

Like most ambitious women-led initiatives, the Goedverwacht women dream to have a fully functional agro-processing facility to add value. Such an establishment would grant them an opportunity to enter markets that are currently not easy to penetrate, as well as help boost the local economy. **AP**

Creating new opportunities for youth through “fit-for-purpose” skills development



by Dr Harry Swatson, harrys@elsenburg.com



Agricultural and related skills development along the entire value chain is a core element of support and empowerment of youth in agriculture. However, skills development per se may not be effective if youth are not guided on how to apply the acquired knowledge and skills on a specific farm enterprise. They feel energised and inspired to become agri-entrepreneurs if they get support.

A writer, like a soldier, should not be caught off-guard. A few months ago, I was asked to mentor four agricultural graduates and realised how exciting it would be to interview minds that think alike. Graduate interns Luvo Nkume, Sivuyisiwe Glasamba, Erin Smith, Sive Tsholoba, and Yanga Nyanga have been placed at the crop section and they manage tunnel vegetable production. These graduates, who are on a two-year experiential training course, fell in love with agriculture while in high school. Through their studies, they discovered that their destiny was in farming. From taking part in community garden projects and backyard gardening they never looked back. They write down all their technical experiences on a pamphlet aimed

at upskilling other resource-limited youth, covering vegetable production in the field and in greenhouses. One of their initiatives is to get broader recognition in the agricultural industry. Writing a technical manual is not an easy task and the target audience demands that it have many illustrations to make it more interesting and understandable.

So, what are their thoughts on the agricultural sector? That the existing agricultural sector is unable to absorb the urbanised youth labour force, and that agriculture is a rural activity not practised by urban and peri-urban dwellers. “Since I started working in the Graduate Internship Programme, I value its importance because it has helped me to develop my practical skills in the tunnel cultivation and management of vegetable crops such as tomatoes and cucumbers” – Erin Smith. According to Luvo Nkume: “Having been exposed to vegetable production in the tunnels and in the fields, my agricultural production skills have improved. I have learnt a lot and I am now more confident in integrated pest management and greenhouse vegetable production. I hope to set up my own tunnel



in future.” According to the graduates, urban agriculture in its diverse forms must be promoted and practised. This includes planting indigenous vegetables, herbs, and medicinal plants, permaculture, vermiculture, water harvesting, and composting, to mention but a few. This will support rooftop gardens, backyard and community gardens, container or used tyre vegetable gardens, encourage local markets, and make use of various innovative food production techniques in communities. Agricultural interventions should be restructured by establishing localised diversified vegetable farming sectors. This should be supported by implementing climate-smart agroecological and ethical farming practises. The impact of climate change is devastating the agricultural sector in rural farming communities and is one of the biggest threats in addition to the unfolding COVID-19 pandemic.

For youth in agriculture to be successful depends on a combination of working hard and smart, harnessing agriculture-related opportunities along the entire value chain, and challenging obstacles. One should liberate one’s mind from oppressive, limiting assumptions. Youths indicate that their participation in the graduate programme is more than a job. Passion and commitment as the driving force will put them on the journey to excellence in agricultural activities

and agribusiness. To them, learning about agricultural innovations aligned to the 4IR is a way of life.

They say that the following factors contribute to youth not being able to access food:

- Youth unemployment
- Socio-economic exclusion
- The collapse of the rural or township economies
- The inability of youth to adapt to the changing socio-economic conditions

With respect to food security threats, all of us, regardless of where we live, must contribute to the production of our own food.

They indicated that they have learnt a lot about tunnel vegetable production. Aspects such as fertilisation, irrigation, and control of pests such as caterpillars, whiteflies, aphids, and red spider mites were covered. According to them, good practice is to remove leaves from under a cluster of mature tomatoes to encourage greater air circulation and prevent fungal diseases. The avoidance of an overhead sprinkler irrigation system is important. This is because wet leaves encourage early and late blight infections. To avoid transmitting viral diseases to greenhouse tomato plants, people who smoke must always wash their hands. I was impressed by their down-to-earth manner and passion. **AP**



by Tshepo Morokong, tshepom@elsenburg.com

Highlights from the BFAP Agricultural Outlook 2021–2030

The Bureau for Food and Agricultural Policy (BFAP) launched its annual baseline event in the Western Cape on 17 September 2021. The Agricultural Outlook for 2021–2030 was opened by the Minister of Agriculture in the Western Cape, Dr Ivan Meyer and Head of Department Dr Mogale Sebopetsa. Various industry stakeholders gathered under this year's theme of "Fostering the growth and sustainability of inclusive value chains".

The BFAP team presented the outlook on agricultural production, consumption, prices, and trade in South Africa and the Western Cape. The focus was on key commodities of importance to the province. Minister Meyer highlighted the key priorities of the Western Cape government, namely job creation, safety, and well-being. Under these overarching priorities, he also listed his ministerial priorities:

- Structured education
- Training and research
- Farmer support
- Rural safety
- Market access
- Climate change

The Bureau for Economic Research gave an overview of the macroeconomic environment given the state of South Africa's

economy. Several risks are associated with the outlook period:

- The potential for COVID-19 mutations and slow vaccination rates
- Energy supply constraints hampering growth with higher tariffs and the large debt burden of Eskom
- Social unrest and the risk of rampant looting
- Fiscal risks including the rising wage bill and the proposed National Health Insurance
- Global supply bottlenecks driving stock shortages
- Faster-than-expected tightening of monetary and fiscal policy

Prof Ferdi Meyer provided an overview of the agricultural markets, farm profitability, and commodity prices with a few key messages. Agriculture's economic performance in 2020 is a major highlight because of its 13,1% growth during the pandemic year. It is expected that 2021 will be another good year for the farming sector with BFAP projecting real annual growth of 7,6% in agricultural gross domestic product (GDP).

This is underpinned by the expected bumper harvest for major summer crops, sold at strong prices, and the record exports from major fruit sectors such as citrus, pome fruit, and table grapes.

The outlook presented a conservative growth path for the agricultural sector, which can easily be accelerated by:

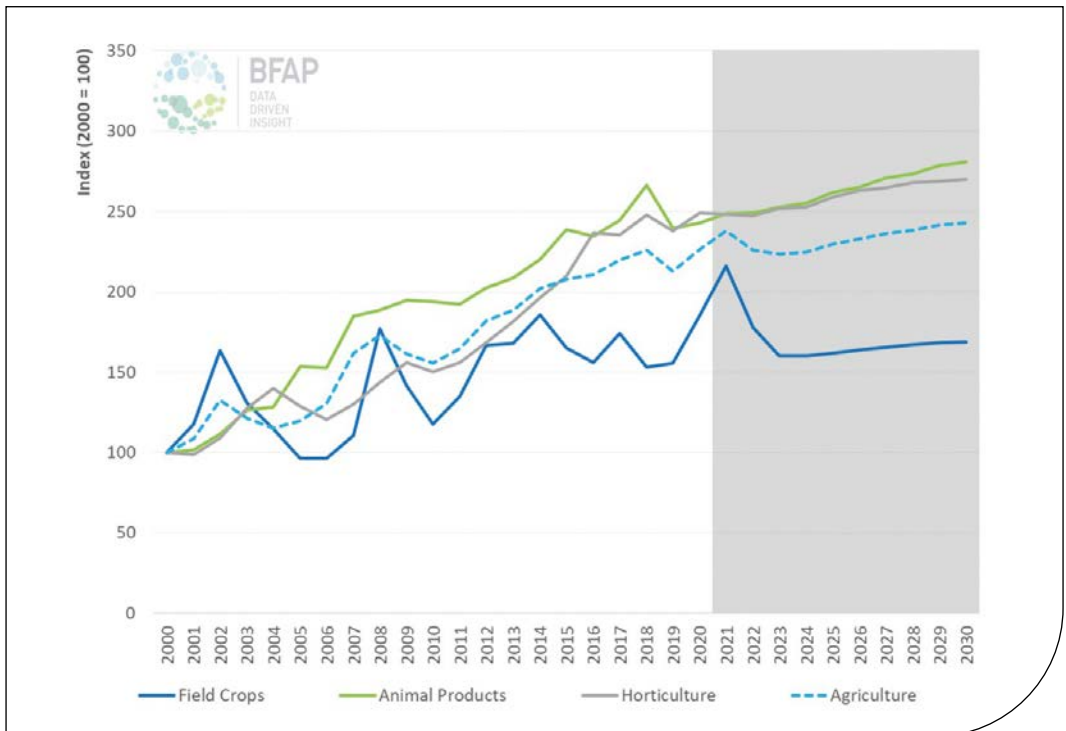
- creating a stable policy and investment environment;
- developing and maintaining infrastructure (electricity, roads, and water); and
- effective state support services including farmer support programmes.

The need to invest in agroprocessing was emphasised, given the increase in primary production. Value addition enhances agricultural value and creates jobs. The lack of value addition is hampering the growth of most sub-Saharan agricultural value chains because the focus is on expanding primary production but limiting investment in agroprocessing (value addition).

Agricultural outlooks

Figure 1 shows the performance of key agricultural sub-sectors and projected growth from 2021 to 2030. With animal and horticultural products in the lead, followed by field crops, agriculture overall shows growth in the medium term. Vegetable gross production value was R21,58 billion in 2020. Potatoes contributed 37%, green mealies and sweetcorn 27%, tomatoes 13%, onions 11%, carrots and pumpkins and gem squash each 3%, and others 6%. BFAP's Outlook suggests that global meat prices declined by 4,5% year-on-year, due to logistical challenges, reduced food services sector sales, and weaker household spending. Poultry was the most affected compared to sheep, pork, and beef meat.

Figure 1: Agriculture and sub-sector baseline and growth projections for 2021 to 2030



Source: BFAP, 2021

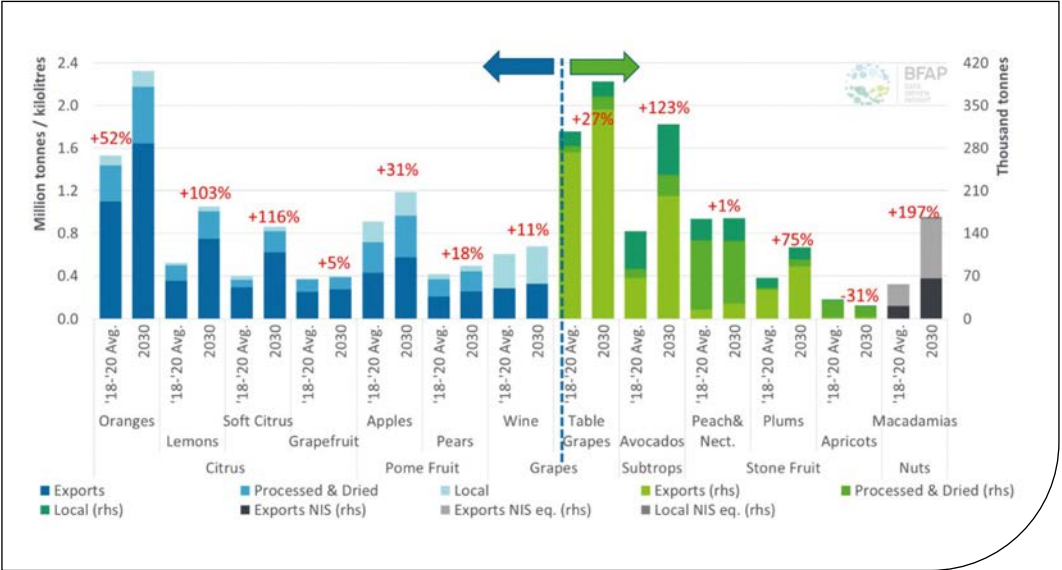
In 2020, the deciduous fruit sector performed very well, and it is expected to continue growing in volume and value in the medium term. Deciduous fruit contribute 23% to the horticultural gross value added. The citrus and subtropical fruit industries have also shown exceptional performance in 2020 and benefited from the export market with stronger currencies against the rand. Table grape production is expected to increase by 22% during the period 2021 to 2030 with reference to 2018-2020 as the baseline period to approach 400 000 tonnes. In 2020, apple production increased by 10,3% and is expected to continue increasing in 2021. Moreover, during the outlook period it is expected to increase by 19,6% relative to the baseline years of 2018 to 2020. In value, apples grew by 16,7% to R7,8 billion in nominal terms and this value is expected to reach R14 billion in the next decade.

In 2020, pear volumes grew by 5,9% although it is small relative to apples. Pears' gross value added is expected to reach

R5,6 billion in the next decade according to BFAP projections. Peach and nectarine production grew by 14,2% year-on-year for 2019/2020. However, plum production growth was low at 2,8% from a low base volume in 2019. With respect to volumes, Figure 2 shows strong growth across the board, though it varies by industry. This growth is export-driven, and it shows a huge improvement in the 2021 season from the negative impact of the drought in 2018 and 2019. The citrus industry is in its fourth consecutive season for record exports. With further expansion in planting area, these sectors are expected to create more job opportunities due to high employment multipliers.

The ports infrastructure is critical and needs to be improved to manage the massive growth in volume that is expected as indicated in Table 1. Overall, ports will need to increase their capacity by 53% of the current volumes to manage the projected volumes in the next ten years. This is also

Figure 2: Breakdown of the volume growth for fruits and nuts



Source: BFAP, 2021

critical for the Western Cape as a dominant player in the horticultural sector (grapes, stone fruits, pome fruits, citrus). Based on the World Bank's ranking of South Africa's ports, the pre-COVID-19 and COVID-19 constraints experienced at the ports clearly require attention.

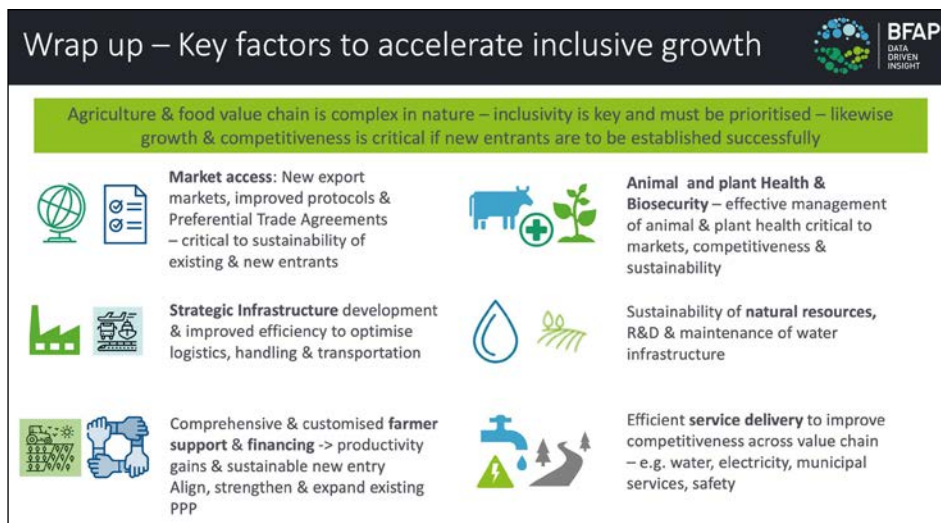
There is also a need to improve coordination between various stakeholders producing and capturing agricultural statistics in the informal and formal agricultural sector for better representation. ^{AP}

Table 1: Actual export cartons for 2020 and projections for 2030

Commodity	Export cartons 2020	Export cartons 2030	Equivalent carton size
Apples	36 713 600	45 967 651	12,50 kg
Pears	16 821 120	20 257 215	12,50 kg
Peach and nectarine	6 879 143	10 030 048	2,50 kg
Plums	8 372 799	18 506 721	5,25 kg
Apricots	363 233	648 117	4,75 kg
Oranges	74 207 600	109 640 418	15,00 kg
Soft citrus	23 786 333	41 200 082	15,00 kg
Grapefruit	14 163 059	15 972 230	17,00 kg
Lemons	28 082 733	49 874 357	15,00 kg
Table grapes	63 172 873	76 348 347	4,50 kg
Avocados	15 014 250	50 280 669	4,00 kg
Total	287 576 743	438 725 855	+52,6%

Source: BFAP, 2021

A key factor for accelerating inclusive growth area



Source:
BFAP, 2021



Farmers taken on tour at
Epping Fresh Produce Market 2.

LEARNING BEYOND THE FARM GATE: **A market access study for deciduous fruit producers**

by Babalo Mbuqe, babalom@elsenburg.com and Nuhaa Sentso, nuhaas@elsenburg.com

Excitement, inquisitiveness, and a keenness to learn. These were some of the emotions felt by fresh fruit producers who attended the local market access study tour from 9 to 10 June 2021. Market access for producers is a ministerial and apex priority for the Western Cape Department of Agriculture (WCDoA) for the next five years. This is to increase market access and international opportunities for agricultural exports from the Western Cape and maintain the export position

of the agricultural sector over the next term. The WCDoA, through the Agricultural Economic Services Programme, collaborated with the Fresh Produce Exporters Forum (FPEF). It organised a study tour focused on black commercial fruit producers as part of capacity building support under the Market Access Programme. The department has been facilitating study tours to the European Union, specifically to the Netherlands and Germany, for the past few years. However, it



has become apparent that most producers are not familiar with the fruit value chain in the local market, hence this local market access study tour was organised. The goal of the study tour was to help producers to better understand the logistical processes along the local fruit value chain through visits to various components of the chain.

On 9 June 2021, fresh fruit producers accompanied by officials from the department, visited the Perishable Products Export Control Board (PPECB) offices. PPECB is an organisation that provides official inspection and certification services for South African fruit. At this facility, the process of inspection and certification, and the appropriate documentation needed to export cargo were explained. Producers



Farmers attending a presentation at GoReefers.

also visited a cold storage facility that assists in maintaining the freshness of the fruits while the cargo undergoes certification. Producers were also made aware of their role in ensuring that their fruit arrives at its destination as fresh as possible. This is done by ensuring that the container is properly cleaned and sufficiently chilled to maintain the preservation temperature of the produce. Producers must also ensure that packaging used to pack the






produce is firm and stable. This will help to minimise the likelihood of loss and damage during loading and transportation.


On 10 June 2021, producers were taken to the Cape Town Fresh Produce Market in Epping. They were given a brief history of the market and its performance compared to other markets in the other provinces. This was followed by a discussion on the role of the market. The producers were taken on a tour of the market floor for various fruits and vegetables followed by a tour of the market's cold storage and ripening facility. Representatives of Prokon presented on the importance of inspection and training for all employees in the workplace.

Producers then visited GoReefers to get information on the transportation of fresh produce in refrigerated containers. The final stop was at Capespan where the citrus commodity executive, Gerald Gant, addressed the producers on the importance of focusing on product quality and how to get help. This can be done by using a sales agent that is experienced in marketing specific fruits and vegetables. Another key takeaway was to build a relationship and trust the sales agent to get a better

understanding of the farmer's business. This will enable the sales agent to help farmers look for those markets in which they can meet the requirements and demand, and execute sales that will help maximise profit.

Producers were given an opportunity to comment on the study tour:

 John Sauls, owner of Hillsight farming: "This tour was indeed a good thing for upcoming black producers. More needs to be done to equip us on the fruit value chain."

 Daniel Dampies, owner of DNG Enterprises (Pty) Ltd: "The study was interesting and opened a new level of understanding [for me] in [terms of] the different activities of production and marketing of our fresh produce."

From the producers' remarks, one can conclude that the study tour has indeed served its purpose.



XHOSA SUMMARY



Ukufunda ngaaphaya kweengcingo zefama: Ukhenketho olungezifundo-nzulu Ngokufikeleleka kwiiKarike Zeli ngabavelisi beziqhamo ezibaleka amanzi

Imivuyo nokungxamela ukufunda, le ibiyimvakalelo efunyenwe ngabavelisi beziqhamo abaye bazimasa ukhenketho ngezifundo-nzulu kufikelelo kwiiMarike zeli nobeluphakathi komhla wesi 9 - 10 kweyeSilimela 2021. iSebe leZolimo eNtshona Koloni lenze intsebenziswano kunye nabeQonga Lweemveliso Zeziqhamo Ezithunyelwa kumanye amazwe laze lalungiselela olu khenketho lungezifundo-nzulu, nobelugqale kubavelisi abamnyama beziqhamo kumgangatho wokushishina njengenxalenye yokuphuhlisa izakhono. Olu hambo luye lwaquka notyelelo olude lwafikelela kwiBhodi Yolawulo Lweemveliso Ezonakalayo Kwezithunyelwa kumanye amazwe, kwiMarike Yeziqhamo Nemifuno e Epping ese Cape Town, GoReefers nase Capespan. Apho baye bafunda ngokubaluleka kwentsulungeko yemveliso, ulawulo lokugcinwa kweemveliso kwisibandisi, ingakumbi ngeyona nto yenzekayo kwimveliso zabo emva kokuba ziphumile efama.

“Enyanisweni, olu hambo lube yinto ebalulekileyo kubavelisi abamnyama abasakhulayo. Kusekuninzi ekusafuneka kwenziwe ekusixhobiseni ngokurhwebelana ngeziquhamo”, la ibe ngamazwi athethwe ngomnye wabavelisi othe wazimasa olu hambo ngenjongo yokufunda-nzulu. Enyanisweni omnye umntu angaqukumbela athi olu hambo ngokufunda-nzulu luyifezile injongo yalo nanjengokuba abavelisi bemnke bechwayitile benemvakalelo ephezulu ngokufunqulela amashishini abo kumgangatho olandelayo. **AP**



Farmers arriving at PPECB accompanied by WCDa officials.

2021

“Olympic Games” winners!



by Riaan Nowers, riaann@elsenburg.com

In August, the wildlife ranching industry really demonstrated how resilient it is, especially in the way it bounced back from 2020's stringent COVID-19 lockdown measures imposed on the industry. This year, for example, the industry has already housed 6% more game auctions by the end of August, resulting in a 9,1% increase in animal sales from the previous year.

A more promising indicator may be that gross auction turnover exceeded the final 2020 turnover by more than 9,5%.

When the results for the September and October sales become available, the 2021 performance may compare very well to that of 2019 and 2020.

With the Olympic Games having just finished, it may be interesting to imagine species in our wildlife ranching arena receiving medals!

When thinking of medal positions, most people would expect the more glamorous species such as sable antelope, buffalo, and roan to hit the podiums. It is therefore quite

surprising to note that plains game and some colour variants got onto the “Olympic” podium. By the end of August the medal winners in the “2021 Olympic Games” were (in terms of numbers sold):

Gold medal: Giraffe
Silver medal: Golden wildebeest
Bronze medal: White-flanked impala

Knocking on the door was Burchell’s zebra, lechwe, waterbuck, and even blue wildebeest. From a pricing performance, kudu is undoubtedly the species that really deserves a gold medal. Kudu bulls achieved excellent prices in most game auctions. These prices also extended to kudu cows and breeding groups.

It is also pleasing to note that average turnover in the third quarter increased by 16,8% above that of the second quarter of 2021 and is also substantially higher than that achieved in the previous year. The graph below shows that most of the auctions

realised a turnover of between R1 million and R2 million. It was also interesting to see an increase in numbers, quarter-on-quarter, in auctions with a turnover of more than R2 million.

As the results from September and October come in, it will be interesting to see how 2021 compares to the previous two years. It may be more helpful to compare 2021 with 2019 as the latter was the last “normal” year experienced by the game ranching industry. It is predicted that 145 game auctions will have taken place during this year. This is outstanding given the fact that several live auctions were cancelled and changed into timed and online auctions, compared to the record high of 151 game auctions in 2019.


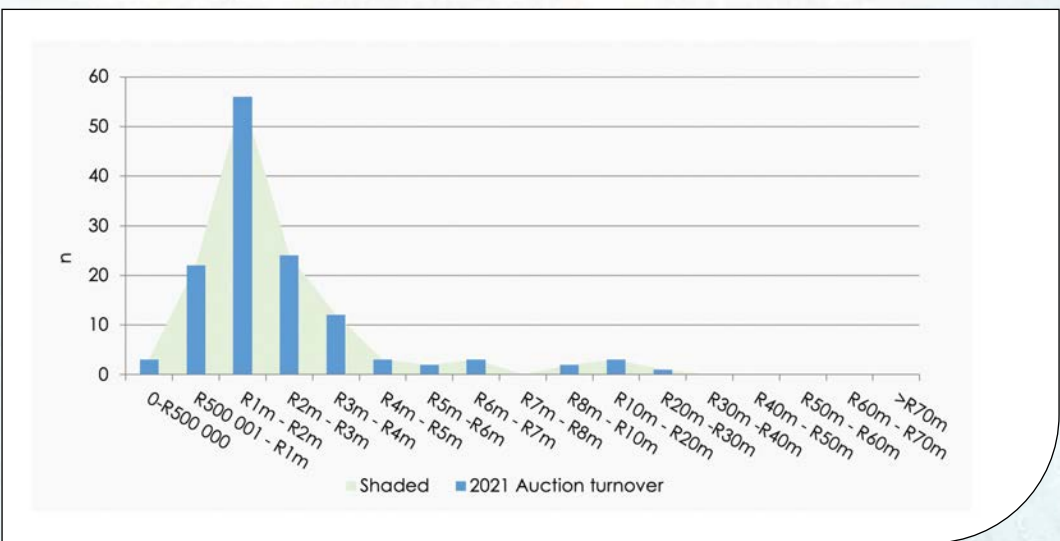
Once again, as always, the game auctioneers who share their auction results on websites and in social media should be applauded for their contribution towards the game ranching industry. This is vital for monitoring performance and structural changes within the wildlife ranching industry. 

Figure 1: Frequency of auction totals per category 2021



How SHEP methodology TRANSFORMED MY FARMING BUSINESS

by Alfred Mokwele, alfredm@elsenburg.com



➤
Mr Shaun Skaarnek.



Shaun Skaarnek grew up in a peaceful little town called Prince Albert in the Central Karoo, in the Western Cape. He is 31 years old and established his piggery in 2017 with only two weaner sows on communal land owned by the local municipality.

As a young emerging farmer, he did not know anything about pig farming. After experiencing continuous failure in the first three years, he now sees those years as a learning phase. Due to perseverance and commitment, Shaun decided to approach the Western Cape Department of Agriculture (WCDoA) for guidance. He and other communal farmers were welcomed and introduced to a new methodology called

Small-Holders Empowerment Promotion (SHEP).

The DoA held its first SHEP workshop in Prince Albert, covering various aspects in pig production, management, and marketing. All local pig farmers were invited. As part of the SHEP workshop, the farmers had to conduct a market survey at an established abattoir and butchery called Buffelrivier, outside Laingsburg. They were required to collect information on market prices and requirements. They were also required to witness the pig slaughtering process, but unfortunately only a goat carcass that was hanging from a scale was available at the time, displaying the carcass weight. The



Pig farming site inspection with farmers and extension officers.

abattoir personnel thoroughly explained and illustrated the meat classification and slaughtering process – which is applicable to all types of small stock – to the farmers. Shaun had to put his imagination to work while the personnel explained.

The theoretical part of the workshop clearly explained the marketing aspect, breeding, housekeeping, nutrition, welfare, illnesses, and biosecurity. The training facilitators (extension practitioners) and farmers visited the pig farming site and discussion and advice were shared among the communal farmers. The most intriguing part for Shaun was the pig nutrition training. When he first started as a pig farmer, he often collected kitchen waste from neighbours and restaurants to feed his animals. He was advised by other conservative farmers that pigs eat kitchen waste, which is correct, but he had noticed that his pigs were not growing like his neighbours' pigs. He became curious and started asking questions. During the pig nutrition training, farmers were introduced to the different types of raw feeds with animal proteins like fish meal and other plant proteins like soya and canola. Every farmer was given



Market survey – Buffelrivier abattoir.

a formula to create his/her own feeding ratio, pig creep, grower and finisher, boar and sow, for dry sow and lactating sow mixtures. Shortly after the SHEP workshop, Shaun could not wait to apply his new knowledge to his pig enterprise, which he then called “WE GROW”. Applying the new knowledge was not so simple. He had to calculate his operational costs to grow his weaners into porkers, transport his animals to the Laingsburg abattoir and wait for two weeks before the abattoir paid out. He then realised that this would not be viable, especially with his financial status at the time. In 2020, during the COVID-19 lockdown, he and a group of communal farmers applied for a voucher to procure medication and feeds from the national department. They were granted R50 000 each; of which R15 000 was for medication and R35 000 for feeds. With this magnificent support, he could build a sustainable piggery. He decided to also create job opportunities for the community of Prince Albert.

The question was “How”. With all his knowledge and the R50 000 vouchers at his disposal, he decided to focus on pig





Pig farmers during the SHEP approach workshop.



Handshake after conclusion of sales between buyer and farmer.



Transporting of weaners after conclusion of transaction.

weaner farming. He procured all the feeds and medication that are designed to run a weaner farm, from an agri-retailer, BKB in Beaufort West. He is currently selling weaners at 30 kg to the grower farmers who grow the weaners into porkers and send them off to the abattoir. He has been selling an average of 96 weaners per year since 2020. This enables him to employ and pay one agri-worker who tends to the pigs and infrastructure, ensuring that the pens are clean and the animals are fed daily and stay healthy.

He managed to secure buyers from all over the Central Karoo and Eden district. His marketing strategy to reach out to many clients is to use social media platforms like the Facebook page “WE GROW” and WhatsApp messenger. He cannot really meet the demand currently while still farming on communal land of a limited size, but that encourages him to grow even faster.

The current stock density is set at six sows per unit and he would like to increase to a unit of 60 sows in the next three years. The piglets are weaned on day 28 and are grown to 30 kg, ready for grower farmers to collect. This process takes about two-and-a-half months to complete. On day three, the piglets are given iron for optimal health and growth. BAYER Byboost Lamb & Kid is used, available at BKB and Klein Karoo agri-retailers. It is an expensive product

but produces excellent results. Weaners are also introduced to creep feed on day three. On day 28, the weaning of piglets and deworming are done simultaneously. At two-and-a-half months or 30 kg, the weaners are sold to grower farmers at R600 each. The boar is then introduced to the sow five days after the piglets have been weaned. The mating phase lasts for three days to allow adequate insemination to guarantee pregnancy. It takes about 115 days for the sow to farrow. It is important to deworm sows two to three weeks before farrow, to prevent transmission of worms to the litter. Shaun prefers not to keep boars, but instead to lease boars with good genetic characteristics and performance from the neighbouring farmers to inseminate his sows. He believes it is cost-effective to not keep a boar in his stock.

The SHEP approach changed his farming mind-set from a “grow and sell” to a “grow to sell” philosophy. He is confident that his business can sustain itself and be profitable. Theft and vandalism are challenges, but like any other business, there are always losses and farmers must remain focused and committed.

He would like to express his gratitude to the WCDa, especially Mr Alfred Mokwele for the advice, mentoring, and financial support he received for his farming business. **AP**

SmartAgri: Harnessing climate-resilient on-farm technologies and genetic material

by Prof Stephanie Midgley, stephaniem@elsenburg.com

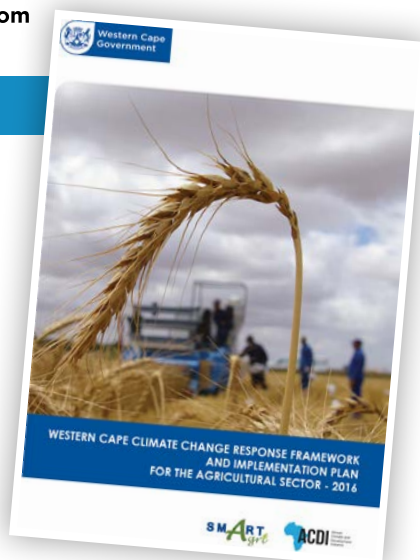


The Western Cape climate change response framework and implementation plan for the agricultural sector (SmartAgri plan) provides a roadmap for agriculture that is low-carbon and resilient to climate change. In this series in *AgriProbe*, the SmartAgri plan is unpacked into its core elements, structured around four strategic focus areas (SFAs). Some of the active projects led by the various programmes of the Western Cape Department of Agriculture (WCDoA) and additional priorities will be highlighted. This is the second article in the series (refer to *AgriProbe* Vol 18, 3 for the first article).

This article highlights the fourth objective of SFA1:

Develop and promote access to climate-smart technology and genetic material

Climate-resilient innovations in crops and livestock are developed and made accessible to farmers.

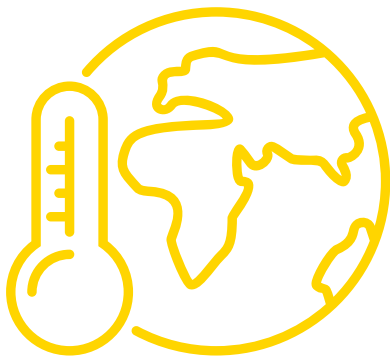


Activity 1: Stimulate and incentivise local technology innovation and on-farm testing for climate resilience at different operational scales.

Local development and on-farm testing of low-technology affordable production technologies and equipment for enhanced climate resilience is a high priority. Technologies that reduce climate stress like innovative irrigation or shading solutions, hold great potential in providing climate resilience. This includes the use of genetic potential and adaptability of crop cultivars and livestock breeds in the local climatic



context. There is a renewed interest in using and developing genetic resources for climatic compatibility and resilience to weather extremes that are increasing in frequency and intensity. Heat extremes and dry spells/drought are typical examples. Crop and animal production researchers in the Research and Technology Development Services (RTDS) programme of the WCDoA have taken on this challenge. For instance, one study is assessing the sheep breeds that are available genetic resources in South Africa for their ability to withstand heat stress.



Activity 2: Update suitability maps (indicating what crops can be grown where) to reflect current shifts and possible future new production areas for legacy and new crops.

As the climate shifts over time across the province, so will the areas most suited to specific crop species and cultivars. The current crop suitability maps must be updated using the most up-to-date scientific and local expert knowledge on crop-climate suitability interactions, and the most recent climate science. State-of-the-art spatial (GIS) databases can be used to firstly overlay the future climate projections spatially on the suitability maps of current (legacy)

crops. This indicates areas that will either remain suitable or become less suitable than in the past. Secondly, information can be gleaned about areas that in future could become suitable for other types of crops, for example sub-tropical or arid-climate species. This research is planned as part of the RTDS programme and will include the need to access or develop crop and climate models.

Activity 3: Invest in current climate-resilient crops with potential to scale up and scale out.

Currently available climate-resilient crops include indigenous teas and flowers, olives, figs, and other niche crops like prickly pear and aloe. Some of these crops are likely to become increasingly important in warmer and drier agricultural regions across the province, most of which also have a high job creation potential. However, many of these smaller crops do not have an established value chain and associated infrastructure,



and their markets and financial models are not well developed. Industry support structures (commodity organisations) for smaller climate-smart crop industries are needed to help unlock the potential. Over the past eight years, the WCDoA has funded industry-prioritised and market-oriented research and technology transfer for such crops. This was done through the Alternative Crops Fund, with a current total investment of over R13 million.

Activity 4: Identify and invest in future new crops in suitable production areas.

As noted above, crop suitability mapping can identify new crops that will become suited to various agro-climatic regions across the province. Research and development and the identification of technology needs, together with on-farm pilot trial plantings in areas showing future potential, are needed to assess the real potential of such crops. The development of quality standards, marketing channels, and financial models

can take several years. They must also be investigated from an early stage so that farmers can hit the ground running once the production of the new crop is scaled up to full commercial level. Agricultural researchers in the WCDoA, at tertiary institutions, and research institutions, can all contribute to this opportunity.

Activity 5: Provide advice and support for access to locally suited climate-resilient crop and livestock cultivars/breeds.

This activity strengthens the transfer of research results, new technologies, and practical advice relating to locally suited climate-resilient cultivars and breeds, to those who advise and support farmers. The best-placed entities to transfer the latest climate-smart technologies and practices to subsistence, smallholder and commercial farmers are:

- the extension and advisory services unit in the DoA's Agricultural Producer Support and Development (APSD) programme;
- commodity organisations;
- farmer organisations; and
- private sector advisors and consultants.

In particular, farmers must be able to access the best suited zone-specific climate-resilient cultivars and breeds and be advised and supported on successful and profitable production strategies.

In the third article we will focus on:

- the protection of agri-worker well-being;
- climate-resilient and low-carbon agricultural value chains; and
- the need to develop and protect agricultural markets in a shifting climate. **AP**

For more information on the SmartAgri plan, scan the quick response (QR) code





Spreading drone training technology into the agricultural sector



by Shelton Kaba Mandondo, sheltonm@elsenburg.com

The Western Cape Department of Agriculture (WCDoA) has embraced drone technology training as a useful accessory to reposition the sector for sustainable growth in the Fourth Industrial Revolution (4IR) and COVID-19 pandemic. As the famous author Sir Thomas Browne once said, “charity begins at home” – therefore this process started

with the youth and officials at Elsenburg. There are two phases: to firstly understand the basic principles of drone technology, and secondly, to partake in the intensive process of obtaining a drone remote pilot license (RPL). This RPL is an advanced drone training course for a license recognised by the South African Civil Aviation Authority



to fly a drone for commercial purposes. The first intake of 12 participants graduated in November 2020 and the second intake of 18 students graduated in May 2021.

One important lesson drawn from the process is that WCDoA drone RPL graduates have a competitive advantage in the sector labour market. They are geared to provide the agricultural sector with a high-technology makeover, with capabilities to use drones for planning and strategy development based on real-time data gathering and processing.

On 5 May 2021, the premier of the Western Cape, Honourable Alan Winde, and the minister of agriculture in the Western Cape, Dr Ivan Meyer, handed over the drone pilot "wings" at the graduation ceremony at Elsenburg College. This ceremony generated enormous interest from agricultural circles. The department has received requests by farmers and agri-workers to support them to operate drones legally at their businesses and workplaces. The sector considers drones as the missing instrument to fill the gap of human error and inefficiencies brought about by traditional farming methods. It is believed that the era of guesswork or ambiguity is over, and the time is ripe for focusing on accurate and reliable information when making business decisions. Drones, once legally operated in the sector, can

become the key instruments to respond to technological change brought about by 4IR and biological disruptions like COVID-19. This can bring about the agri-renaissance in the Western Cape as the desired end state of 4IR.

The WCDoA strongly believes that when charity begins at home it must not end there. The success of the drone RPL training has prompted the department to spread the training into the sector, targeting farmers and agri-workers in the 2021/22 financial year. For this reason, a third RPL recruitment process is under way. It commenced with a Drone Open Day on 21 September 2021 at Elsenburg. About 100 sector stakeholders attended an induction workshop on the RPL and what the course content will be addressing. They were also given an opportunity to apply for enrolment. The post-workshop process will include a thorough selection process for suitable candidates and intensive full RPL training for the selected farmers and agri-workers. The department considers this intake as an opportunity not to be missed. Farms and agri-businesses that recruit RPL graduates stand a better chance of saving time, improving crop yields, and making land management decisions that improve the long-term sustainability of the sector. **AP**



OUTDSHOORN ANIMAL DAY

Serving our community

by Dr Catherine-Anne Fox, cathf@elsenburg.com

The annual Oudtshoorn Animal Day was held on 18 September 2021 at the state vet office in Oudtshoorn. This public event was held by the community for the benefit of the community and its animals, highlighting what collaboration between governmental and non-governmental bodies can achieve.

Various animal welfare groups attended, including Animal Care Team SA, People's Dispensary for Sick Animals (from George), Society for the Prevention of Cruelty to Animals (from George), Animals in Need, Oudtshoorn Dogs in Need, Die Herberg vir Diere and others, even from as far as Prince Albert. Teamwork with animal-related stakeholders created a charming, fun-filled day, which was much needed by all in these trying times.

Rising to the continuing COVID-19 challenges, the event was split into two events on either side of the road, with Klein Karoo Seed Production kindly offering the use of their property. Local businesses also joined in the spirit of the day with Alert Patrol providing a security guard and Klein Karoo Event Medics providing an on-site paramedic.

Responsible pet ownership starts with the education of school-aged children and thus the local eco school, Primary School Laurus, took part with a dog and cat artwork competition that served as an inviting outdoor display. The Western Cape Minister of Agriculture, Dr Ivan Meyer, kindly judged the animal art competition and the children received a wonderful array of prizes. The animal magic show was presented by local magician Tony van Sittert and ventriloquist Oom Jannie de Bruyn who enchanted all the children with their tricks.

Rabies awareness has become more important with the recent spate of cases in the Cape Metro and the state veterinarian in Oudtshoorn undertook to improve local awareness of animal welfare and the dangers of rabies. Public awareness was increased with over 3 000 pamphlets distributed to publicise the vaccination event locally and the rest was done by social media. Local newspapers and radio stations also covered the event. Locals brought 502 dogs and cats to receive their government-sponsored rabies vaccinations, rabies information pamphlets, and pet vaccination cards.

Various animal-related businesses donated prizes for the schoolchildren and Animal Care Team raffle, including MSD, Boehringer-Ingelheim, and various local private vet practices. Dog food, pet toys, dog clothing and dog treats were available to raise funds for local animal welfare and knitted animals were available for the children. This year a local nail artist provided paw print nail art to pet owners as a fun activity. For the pets, besides getting their free rabies vaccination, dog dipping, dog nail clipping, and a “pet-and-me” selfie photo parlour were available. The animal welfare groups and local small businesses sold refreshments and food to the visiting public to raise funds for animal welfare and to create awareness of their important function in society.



What the public had to say:

- “Great job done, well organised, great music. I felt welcome and everyone was so helpful” (Amanda Barendse).
- “Baie dankie almal, so behulpzaam en vriendelik, baie geniet en baie nuwe mense ontmoet” (Isabella Rossouw).
- “A great day indeed, so many dogs, so much fun!” (Chrisie de Villiers).
- “Thank you so much for a lovely day, we met awesome people and made a lot of new furry friends” (Monique).
- “Wat wonderlik was, is dat ek so wonderlik behandel is – nie net my hond nie, maar my ook belangrik laat voel het. Net liefde.” (Riekie van den Raad).



This public participatory approach added value to the state veterinary rabies vaccination services and allowed the service options to expand to accommodate the needs of the pet-owning public in a positive way. The variety of services provided created a general spirit of benevolence and the cherishing of animals in our community. Collaboration with all aspects of the community made this event possible for the greater good of animals and an all-round feel-good event. **AP**



1. Minister of Agriculture Ivan Meyer with Mr Louis Struwig, Garden Route SPCA.
2. The children's magic show.
3. A view of some of the stalls.

New climate change flyer for agri-workers in the Western Cape

by Prof. Stephanie Midgley, stephaniem@elsenburg.com

In some parts of the Western Cape, floods, severe drought, and other extreme weather events are causing farms to reach the limits of their resilience, and farming communities are suffering. Such events are being made worse by climate change. The impact of climate change on crop and livestock production has long been studied. However, the impact on agri-workers, and determining which groups of agri-workers are most vulnerable, have not received sufficient attention. Ignoring this aspect not only undermines the livelihood opportunities and well-being of agri-workers and rural communities. It also poses problems of injustice and inequitable access to information and knowledge, and could ultimately seriously damage the future prospects of agriculture. Ultimately, the sector must ensure that agri-workers are not left behind as the world changes.

The SmartAgri Plan (the Western Cape Climate Change Response Framework and Implementation Plan for the Agricultural Sector, 2016) clearly spells out priority actions to support agri-workers. Refer to www.greenagri.org.za for the plan and



related documentation. For example, agri-workers' occupational health and safety and environmental quality must be protected. Agri-workers and their employers must be made aware of climate change. Agri-workers need to be linked with entrepreneurial opportunities like:

- small scale agri-processing;
- sustainable waste processing;
- production of low-carbon farming inputs; and
- renewable energy technologies.

Another part of the plan proposes training and skills development for climate-smart farming. Skills development is needed at all levels, from primary and secondary school

children to young adults and working people. For this purpose, user-friendly information products about climate change and agriculture must be made available, tailored to different beneficiaries, and to various agroclimatic regions and their production systems.

In early 2021, the Western Cape Minister of Agriculture Dr Ivan Meyer highlighted his prioritisation of promoting awareness for agri-workers, and the development of a climate-smart, informed workforce. As part of this action, a new flyer, specifically aimed at agri-workers and their communities about climate change and agriculture, was released and is available in English,

Afrikaans, and Xhosa. The two-sided flyer first provides background information on what climate change is, what is causing it, and how it is affecting farming and agri-workers. It then outlines five ways in which agri-workers can protect themselves and their families, become water- and energy-wise, and inform themselves on the issue. The flyer will be distributed widely over the coming months, using programmes within the Department of Agriculture (e.g. Agricultural Producer Support and Development, Rural Development, and LandCare), as well as targeted events for agri-workers in collaboration with the private sector. **AP**

To download the PDF of the flyer, please go to:



English



Afrikaans



Xhosa



For more information, contact Prof. Stephanie Midgley at stephaniem@elsenburg.com.

Western Cape provincial biannual risk assessment

by Jody Wentzel, jodyw@elsenburg.com

Government departments have often been accused of not being responsive to the needs of their stakeholders, and the prevailing drought has hit Western Cape farmers hard. The Western Cape Department of Agriculture (WCDoA) needed a mechanism to respond effectively and efficiently to the needs of farmers during the prolonged drought. To avoid a food security crisis in the province, the WCDoA employed its Disaster Risk Reduction programme. The department's provincial risk assessment process includes the following:

- Identifying areas that need support
 - Determining the extent of support needed
 - Determining which innovations and interventions are required
 - Evaluating the veld conditions across the province
- Since 2018, the department has been evaluating the veld conditions across the Western Cape Province. Based on the outcomes of these veld assessments, farmers located in areas where the veld had improved or recovered sufficiently, were removed from drought support. This veld assessment is a crucial part of the long-term dataset and is a good indicator of a slow-onset drought.

Jody Wentzel with Tankwa Karoo farmer. No available veld for livestock grazing.



Leeu-Gamka farmer has resorted to feed lot as veld resources are completely depleted.



Whereas the veld assessment is a useful tool to identify veld conditions, we needed to engage with key stakeholders to hear how they were coping with the prolonged drought. The new farmer-centred approach was born by combining the outcomes of the veld assessments with that of our stakeholder engagements. This new provincial risk assessment process allowed the department to respond proactively to the needs of drought-stricken farmers. We identified those farmers most likely to be negatively affected by the drought. Area-specific projects to reduce the impacts of drought included:

- the construction of fences to allow for rotational grazing;
- stock-watering points to allow livestock grazing throughout the landscape;
- invasive alien plant clearing;
- the drilling and equipping of boreholes;
- the seed project to support farmers with seed to build up fodder banks; and
- drought fodder support since 2015.

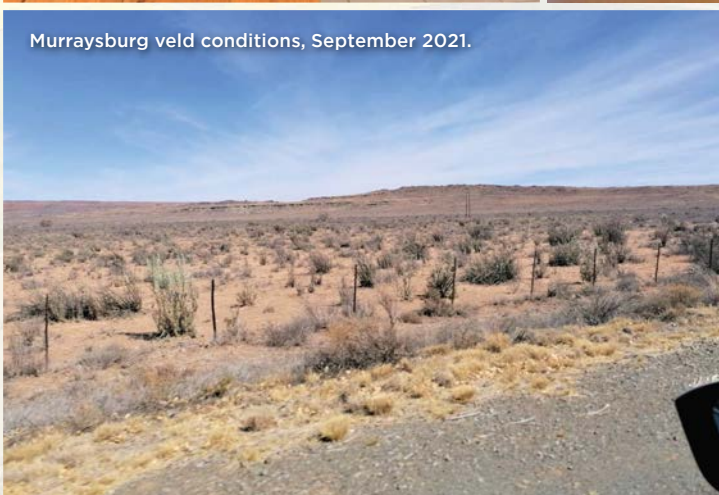
Additionally, this new process allows for a connectedness and understanding of the impact of the prolonged drought on our farmers, their agri-workers, and communities. **AP**



Jody Wentzel engaging with the Leeu-Gamka farmers as part of the stakeholder engagement.



Stakeholder engagement with Murraysburg commercial farmers.



Murraysburg veld conditions, September 2021.



TRAINING ON climate-smart soil and land-use management

by Rudolph Röscher, rudolphr@elsenburg.com

In August 2021, the LandCare district manager, Rudolph Röscher, provided training to candidate engineering technicians and youth employed by the department as part of the Young Professional Programme. The initiative is linked to Objective 1.1 of the SmartAgri plan to “promote climate-smart soil and land-use management practices”.

The full day training session focused on the roles and responsibilities of the department when commenting on any new agricultural development initiatives involving an environmental impact assessment (EIA). The National Environmental Management Act (NEMA) requires an EIA, and the Conservation of Agricultural Resources Act (CARA) regulations may also require it. During this application process the official has the unique opportunity before any development happens to give guidance and set rules on how the land can be farmed sustainably for future generations. This is an opportunity to:

- reap the economic benefits of job creation;
- produce food and grow the export market;
- improve soil health;
- support biodiversity; and
- maximise the effective use of valuable water resources.

The Sustainable Resource Use and Management programme of the Western Cape Department of Agriculture (WCDoA) provides agricultural support services to land users to ensure sustainable development and management of natural agricultural resources. The strategic plan of the WCDoA highlights the natural resource constraints and risks to agriculture. It gives guidance on how to address these constraints and risks, with the focus on climate change, water scarcity and land degradation. Following a theory-of-change process, the department’s role has been identified in the following six streams:

1. Planning
2. Awareness
3. Capacity building and advocacy
4. Provision of agricultural expertise
5. Convening, coordination, and intergovernmental relations (IGR) facilitation
6. Implementation of specialised agricultural services

The commenting opportunity on all EIA/CARA applications enables the practising of all six of these streams. It requires holistic planning to use the resources in a sustainable way and raise the level of awareness of farmers on how their actions can affect



Fadwa Mohammed – “The day proved that integration plays a vital role in ensuring that the best agricultural practices are implemented.”

natural resources. This is done by providing professional service and expert input, involving various partners like Cape Nature, the Catchment Management Association and the Department of Environmental Affairs and Development Planning to ensure effective implementation of sustainable farming practices.

During the morning session, the theory of the NEMA and the CARA acts were explained. Marizanne McGregor, an independent environmental assessment practitioner, related an actual case. A BEE company applied to develop more than 200 ha of new agricultural land between Worcester and Robertson. It also planned to upgrade two existing dams that would receive water from the Breede River via a new 4,7 km pipeline. The “students” then had to do their own desktop studies by using CapeFarmMapper (www.gis.elsenburg.com/apps/cfm/). They had to think about possible critical questions that they needed to prepare before visiting the farm with the landowner. These questions related to:

- erosion;
- water logging;

- salinisation;
- surface run-off;
- conservation agricultural practices;
- types of soil;
- proximity of possible critical biodiversity areas;
- ecological support areas; and
- rivers and wetlands that would be sensitive to new developments.

After the students had prepared their questions and created the necessary maps, they used new technology by importing the data onto their smartphones via the “GPX Viewer” app. Once on the farm, they were able to orientate themselves, evaluate current conditions regarding resource degradation risks, and had the opportunity to interview the landowner with well-prepared questions. The day was a big success and the young professionals were excited about their exposure and the transfer of knowledge from theory to practice. Everything was linked to the SmartAgri plan of the Western Cape government. (www.greenagri.org.za/smartagri-2/smartagri-plan/) 

Soil profile evaluation.



Young professionals in training.



ROOIBOS BAAN DIE WEG

deur dr. Dirk Troskie, dirkt@elsenburg.com



'n Eerste vir Afrika. Dit is die unieke eer wat “Rooibos”/“Red Bush” op 31 Mei 2021 te beurt geval het. Dit het die eerste produk van Afrika geword wat met die gesogte status van “PDO” in die Europese Unie (EU) se register van *Geographical Indications* (GI) opgeneem is. Waarom is dit 'n rede tot vreugde? Wat beteken dit vir die bedryf en sektor en wat was die proses wat tot hierdie prestasie gelei het?

'n GI kan in Afrikaans vertaal word as 'n “produk van oorsprong”, wat beteken dat die produk se unieke karakter gekoppel word aan die geografiese area waar dit geproduseer word. In Suid-Afrika is ons heel vertrouwd met die “Wyn van Oorsprong” (WvO) -stelsel. Wanneer 'n 2019 Shiraz van Stellenbosch WvO se prop klap, herroep dit sorgvrye studentedae in eike-belynde strate met berge en wingerde

in die agtergrond. Op 'n soortgelyke wyse roep Karoolam, Weskus-snoek, Boland-waterblommetjies en Swartland-koring spesifieke beelde, geure en smake op. In die geval van rooibos, is daar natuurlik 'n onlosmaaklike beeld van ruwe berge en gawe mense.

Die EU tref 'n onderskeid tussen 'n “protected designation of origin” (PDO) en 'n “protected geographical indication” (PGI). In die geval van die gesogte PDO, moet alle stappe in die produksieproses in die afgebakende geografiese area plaasvind. Net een van die stappe van 'n PGI hoef egter in die area te wees. Indien 'n “Klein Karoo-kaas” PDO-geregistreer sou word, beteken dit dat die melkkoeie in die Klein Karoo gebore moet word, daar wei, gemelk en die kaas daar gemaak moet word. Indien dit egter 'n PGI was, sou die

melk vanaf die Tsitsikamma kon wees, solank die kaas in die Klein Karoo gemaak word. Die EU erken dus dat rooibos so uniek is dat dit slegs in die Wes- en Noord-Kaap in Suid-Afrika gekweek en gedroog mag word en nêrens anders in die wêreld nie. En dit terwyl dit steeds “Rooibos”/“Red Bush” in hulle mark genoem word.



Die Wes-Kaapse Departement van Landbou (WKDvL) het reeds in die vorige eeu begin om ondersoek in te stel na die moontlikheid om “waardes” te gebruik as ’n meganisme tot waarde-toevoeging. Die aanvanklike provinsiale konsepwetgewing wat tydens die draai van die eeu gepubliseer is, moes laat vaar word nadat die grondwetlike mandaat van die provinsie bevraagteken is. Die “rooibossage” in 2001 het die waarde van die registrasie van GI-beskerming onderstreep. ’n Amerikaanse maatskappy het ’n eksklusiewe rooiboshandelsmerk in die VSA geregistreer, en die bedryf genoep om die SA Rooibos Raad (SARR) te stig. Met die ondersteuning van die SARR het navorsing gevolg oor die moontlikheid, en eienskappe, van ’n Rooibos GI. Die Rooibos GI het egter eers werklikheid geword

nadat die GI Protokol tot die Ekonomiese Samewerkingsooreenkoms (ESO) tussen die EU en suidelike Afrika-state geteken is. Rooibos het beskerming in die EU verkry saam met heuningbos, “Karoo meat of origin”, en 102 wyne. Die rooibosbedryf het die volgende dapper stap geneem en in Augustus 2018 direk om verdere beskerming by die EU aansoek gedoen. Met die ondersteuning van die WKDvL is die aansoekdokumente opgestel, met die EU Kommissie gekonsulteer en uiteindelik in die EU Joernaal gepubliseer. Dit beteken dat:

- rooibos die unieke reg tot PDO-status verkry;
- slegs rooibos van Suid-Afrika in die EU bemark mag word;
- enige plaaslike rooibosprodusent die wyd-erkende PDO-kenteken alom mag gebruik; en
- dit makliker word om oortredings van die “Rooibos”/“Red Bush”-naam enige plek in die res van die wêreld aan te vat.

Nie eens ons befaamde plaaslike wyne het tot dusver hierdie status nie. Dit is interessant dat die bedryf ’n onmiddellike toename in internasionale belangstelling na rooibos ervaar het.

Duidelik is rooibos ’n baanbreker wat die weg gebaan het vir ’n hele reeks ander volksbesitprodukte. Vergeet daarvan om minderwaardig te voel oor sjampanje, port en sjerrie. Dit is nou die tyd vir produsente van lam, granate, vye, heuningbos, boegoe, biltong of rosyntjies van die Karoo, Rûens, Gariep of Hantam (sulke mooi name) om standpunt in te neem. Die wêreld moet weet dat ons unieke produkte in geen ander plek onder die son gekweek kan word en steeds besonders kan wees nie. Selfs al is die produksie aan die hand van ’n heimweegevulde verloopte Suid-Afrikaner ... **AP**



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**The economic contribution of the
macademia industry in South Africa**

**The economic contribution of South
Africa's pomegranate industry**

The economic contribution of the macademia industry in South Africa

by Ayabonga Sibulali, AyabongaS@elsenburg.com

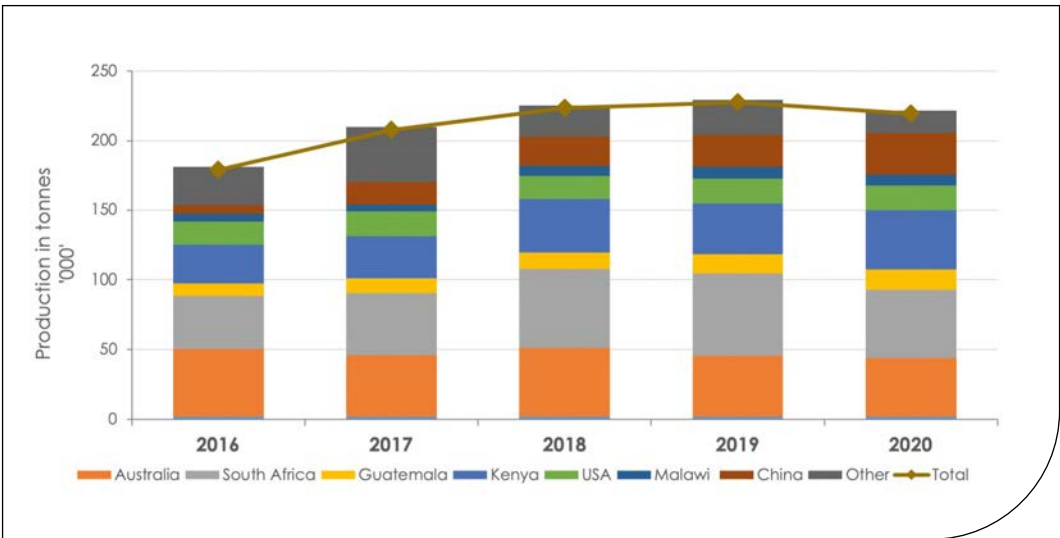
1. Introduction

The macademia nut industry is among the fastest-growing agricultural industries in South Africa. Macademia trees are produced for their edible kernel (nuts). The macadamias are consumed in many ways including as a snack (e.g. coffee-glazed macademia, honey-roasted macademia), bakery and confectionery (e.g. muffins, chocolates), and other uses (e.g. cosmetics, beverages and oils) (INC, 2018). In line with South Africa's policies that promote high-value, labour-intensive, and export-led growth, this sector has the potential to contribute positively

to the economy. In 2020, the macademia value chain created 27 000 jobs, with a full-time equivalence of one worker per hectare (SAMAC, 2021). For a detailed analysis of the macademia industry, the following sections will present global trends, major markets, South Africa's industry performance, and potential markets.

Figure 1 represents the world macademia nut production and the growth over five years, increasing from a minimum of 178 937 to 224 411 tonnes between 2016 and 2020 (SAMAC, 2021).

Figure 1: World macademia nut production (tonnes) (2016–2020)



Source: SAMAC, 2021

The major world producers of macadamias for the past five years include Australia, South Africa, Guatemala, Kenya, the United States of America, and China (see Figure 1). South Africa's macadamia nut production was at 48 295 tonnes (under 50 133 ha) in 2020, a decline of 17, 7% from 2019 (SAMAC, 2021). It is forecast to grow by 18,2% (to 57 834) in 2021 (SAMAC, 2021), whereas the world macadamia nut market is set to grow by 6,6%. Over the past ten years, the world increase towards healthy eating has led to the growth in the macadamia nut industry, improving the industry's production by 24% relative to the previous decade (Kalaba, 2019; Venter, 2019; Wood, 2020). However, this product is considered a luxury commodity in many regions.

Macadamia nuts remain a small sub-sector of world nut production, accounting only for 1,28% of the total global market share (ABSA, 2019). Figure 2 shows world macadamia nut exports from 2007 to 2020. World macadamia exports of shelled nuts and nuts-in-shell (NIS) have shown growth from 37 000 tonnes in 2007 to 101 000

tonnes in 2020, and ultimately to a value of R13 billion in 2020 (ITC, 2021).

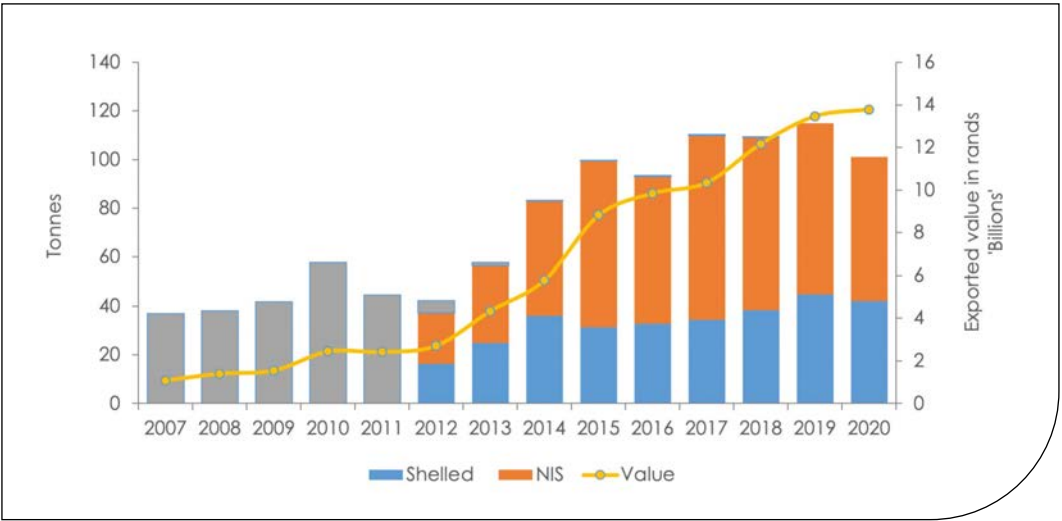
In 2020, South Africa remained the leading exporter of macadamias in the world, accounting for 29 604 tonnes, followed by Australia at 26 846 tonnes and Hong Kong at 8 283 tonnes in 2020 (see Table 1).The South Africa's macadamia nut exports in volume terms (tonnes) showed a growth rate decline of -0.78% over the past five years (2015–2020).

China (28 140 tonnes), Vietnam (22 238 tonnes), and Hong Kong (12 025 tonnes) remained the world major importers of macadamias in 2020 (see Table 1). The five-year growth rate of imports in China should signal the importance of this market to South African exporters and producers of macadamia nuts.

2. South Africa's market performance in the macadamia nut industry

South Africa's macadamia nut production is dominant in Limpopo (LIM), Mpumalanga (MP) and KwaZulu-Natal (KZN). The total

Figure 2: World macadamia nut exports volumes and value

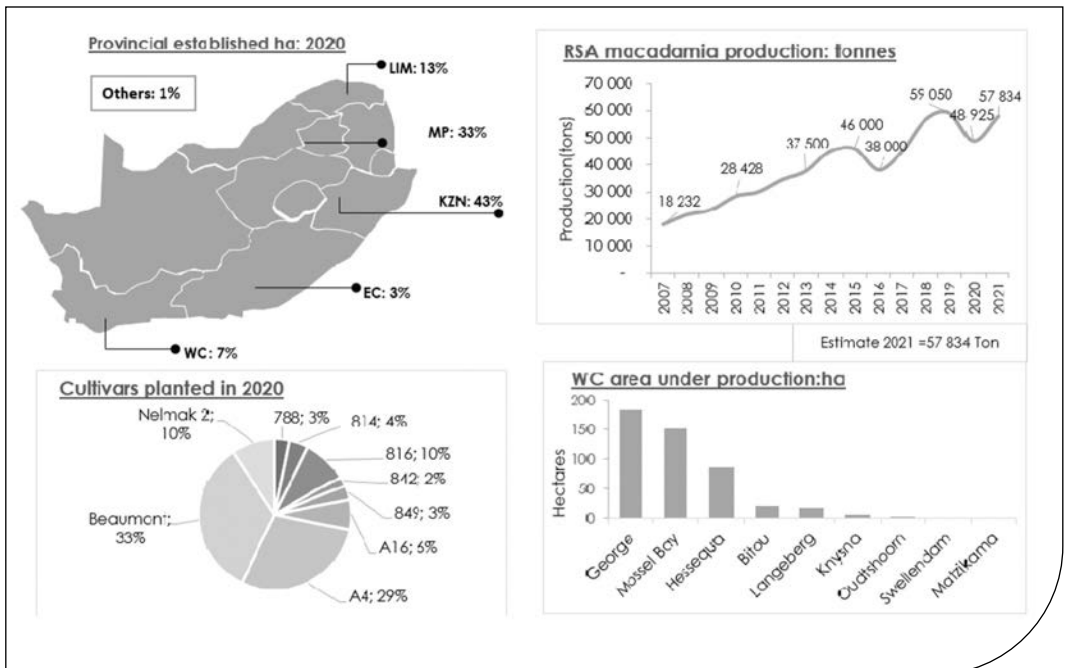


Source: ITC, 2021

Rank	Exporters	Tons: 2020	5-Year Growth (%)	Importers	Tons: 2020	5- Year Growth (%)
1	South Africa	29 604	-0,78	China	28 140	5,39
2	Australia	26 846	1,23	Viet Nam	22 238	0,00
3	Hong Kong	8 283	-10,00	Hong Kong	12 025	-10,58
4	Guatemala	6 629	16,24	USA	8 558	-7,53
5	Zimbabwe	4 684	7,92	Germany	3 774	3,41
6	Kenya	4 600	2,06	Kyrgyzstan	3 411	0,00
7	China	3 046	4,28	Thailand	3 290	64,04
8	Uganda	2 975	97,10	Japan	2 572	2,58
9	Brazil	2 274	46,41	Netherlands	2 271	-1,55
10	USA	1 836	-24,77	South Africa	2 245	-4,92
	Other	10 277	3,47	Others	10 496	-3,31

Source: ITC, 2021

Figure 3: Breakdown of provincial established hectares in South Africa



Source: SAMAC, 2020; StatsSA, 2020

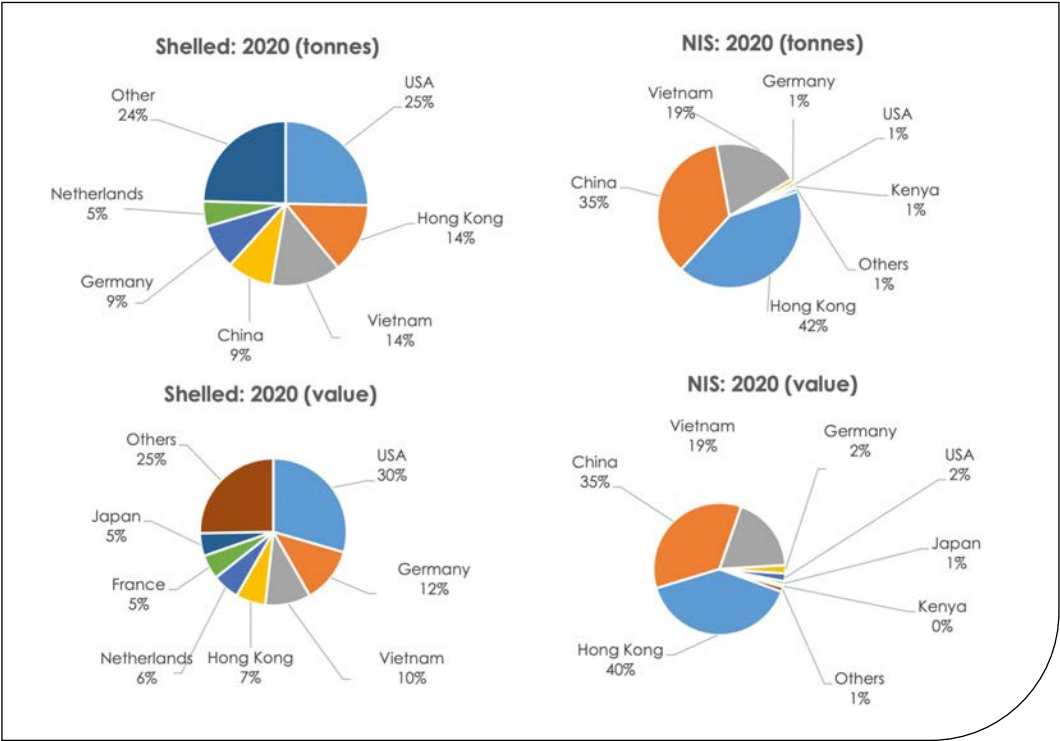
area under macadamia nut production in South Africa is currently 50 133 ha with newly established hectares in KZN (43%), MP (33%), LIM (13%), and the WC (7%) (SAMAC, 2021; StatsSA, 2020).

Beaumont is the dominant cultivar grown in South Africa, followed by the cultivars A4 and 816 in 2020 (see Figure 3). The Western Cape established 373 ha of macadamia nuts in 2020, with a total area of more than 500 ha under production. When taking 2017 as a benchmark year at 202 ha (270 tonnes), this would translate to 264 jobs created on Western Cape macadamia nut farms (Sibulali, 2020; StatsSA, 2020). About 70% of the Western Cape’s macadamia nut production takes place in the George and Mossel Bay regions (see Figure 3).

About 98% of South Africa’s macadamia nuts are exported to the global market. South African macadamia nuts have shown a pronounced exponential growth over the past decade, leading the country to export 29 602 tonnes of its production in 2020 (ITC, 2021; SAMAC, 2021). South Africa showed a pronounced growth of R345 million in 2007 to R4,5 billion exported in 2020.

Figure 4 lists the major markets of the South African macadamia exports. In 2020, 25% of South Africa’s shelled macadamia exports (volume) went to the USA, followed by Hong Kong (14%) and Vietnam (14%) among the top importers (ITC, 2021). On the other hand, South African NIS macadamia exports went to Hong Kong (40%), China (36%), and Vietnam (19%), accounting for

Figure 4: South Africa’s top export markets in volume and value terms: 2020



Source: ITC, 2020

7 214 tonnes, 6 046 tonnes and 3 303 tonnes, respectively. To take advantage of different export markets and to meet processing needs, the South African macadamia nut industry requires more cracking facilities.

3. How competitive is the SA macadamia nut industry in the global market?

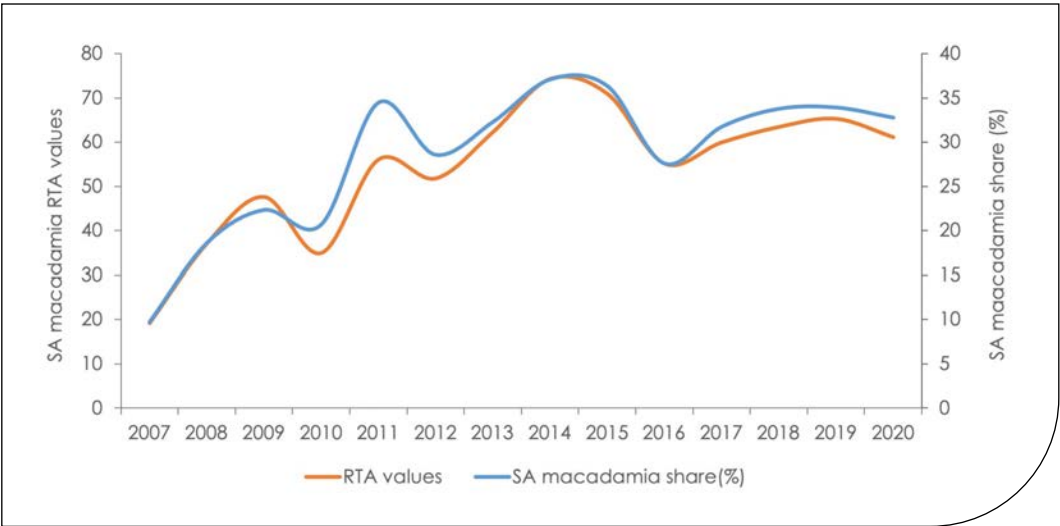
To measure the competitiveness performance of the South African macadamia nut industry, a composite index, Relative Trade Index (RTA), was used in Figure 6.

Barr (2019) refers to the RTA index as a comprehensive analysis of competitive trade analysis determined by exports and imports at market prices. An RTA value above 1 indicates a competitive advantage, whereas a value less than 1 justifies an absence of competitiveness (Forsberg & Hartmann, 1997). From Figure 5, the South African RTA value of macadamia nuts recorded the highest value in 2014 and showing a sharp decline in 2016.

4. Attractive export markets for South African macadamia nut industry

Searching potential markets for South African macadamia exports is crucial. In doing so, the Market Attractive Index (MAI) was developed to identify these markets (Sibulali, 2020). This index is the result of indicators such as gross domestic product (GDP), population, exports, and tariffs. Using the MAI value between 0 and 100, the higher MAI index signals attractive markets for South Africa. Using the specific macadamia nuts Harmonized System (HS) codes, the MAI of the two macadamia nuts products were analysed. The top three attractive markets for shelled macadamia nuts in 2019 (HS: 080262) included Kuwait, Saudi Arabia, and the USA. On the other hand, the most attractive markets for NIS macadamia nuts (HS: 080261) include Hong Kong, Malaysia, and China in the same period. Nonetheless, South Africa has lost shelled macadamia export market shares in Hong Kong and

Figure 5: The RTA values and SA macadamia share (%)



Source: ITC, 2021

Malaysia from 2015 to 2019, with declines of 8% and 100% respectively.

5. Discussion and recommendations

Around the world there is a strong demand for macadamias, because of growing production over the past few years, reaching 224 411 tonnes in 2020. South Africa (22%), Kenya (19%) and Australia (19%) remained the leading world producers in 2020. The major importers of South Africa's macadamia nuts in terms of value and volume include Hong Kong, China, the USA, and Vietnam. The current expansion of new plantings in the Western Cape shows a potential to create jobs in the province in future. For the macadamia nut industry

in South Africa to remain successful, it needs to maintain a competitive edge on the global stage. Optimisation of value-adding activities and searching for new markets and improving access to them, are crucial. Given the world demand for macadamia nuts, the Western Cape has the potential to increase its investment flows into production to supply markets such as the USA, Germany, and Japan with shelled macadamia nuts, whereas potential markets for NIS macadamias are the UK, Malaysia, and the United Arab Emirates, among others. Finally, more emphasis should be placed on innovative research and consumer education about the health aspects of macadamias, for the industry to take advantage of world growth opportunities.

References

- ABSA. 2019. Agricultural Outlook: Summer Edition. Johannesburg: Absa AgriBusiness Africa.
- Barr, A. 2019. Analysis of the factors impacting the competitive performance of the South African wine industry value chain. Stellenbosch, South Africa: Stellenbosch University.
- Frohberg, K. & Hartmann, M. 1997. Comparing Measures of Competitiveness (No. 2). Institute of Agricultural Development in Central and Eastern Europe.
- INC. 2018. Macadamia Technical Information. Spain: INC International Nut and Dried Fruit Council.
- ITC. 2021. International Trade Centre. Retrieved from Trade Map: Trade Statistics for international business Development. Retrieved from International Trade Centre. Online: trademap.org
- Kalaba, M. 2019. Local nut production continues to increase – South Africa. South Africa: Bureau for Food and Agricultural Policy.
- SAMAC. 2021. Statistics on the South African Macadamia Industry. South Africa: South African Macadamia Industry Council.
- Sibulali, A. 2020. Market Intelligence Report: Macadamia Nuts Industry. South Africa, Western Cape Department of Agriculture.
- Sikuka, W. 2020. Positive Outlook for South African Tree Nut Production and Trade. South Africa: United States Department of Agriculture.
- StatsSA. 2020. Census of Commercial Agriculture, 2017; Western Cape: Financial and Production Statistics. Pretoria, South Africa: Statistics South Africa.
- USDA. 2020. Positive Outlook for South African Tree Nut Production and Trade. Pretoria, South Africa: United States Department of Agriculture.
- Venter, C. 2019. Local nut production continues to grow. Pretoria, South Africa: FarmBiz.
- Wood, L. 2020. Worldwide Macadamia Market (2020 to 2025) – Growth Trends and Forecasts. Dublin: Business Wire.

The economic contribution of South Africa's pomegranate industry

Report by Louw Pienaar; article by Vanessa Barends-Jones, vanessab@elsenburg.com

One of the world's oldest known fruits is the pomegranate (*Punica granatum*). Pomegranate is known as a delicacy and a healthy food source, and it has medicinal properties (Stover & Mercure, 2007). The fruit grows on a shrub or small tree and belongs to the Punicaceae family, which grows in many tropical and subtropical countries, especially the Mediterranean regions (Varasteh *et al.*, 2009). In the tropics, the pomegranate is grown as an evergreen plant compared to the temperate zones, where it is grown as a deciduous fruit. This fruit has a thick reddish skin on the outside with hundreds of small red edible seeds or arils on the inside (CBI, 2020).

The South African pomegranate industry has shown remarkable growth over the past decade with respect to area planted and the gross value of production. This industry has also developed into an expanding, well-organised export industry, which has led to many jobs being created on-farm, in the packhouse, and in various agri-processing facilities (Pienaar, 2021). The pomegranate fruit shows great potential for economic growth (growing demand) and can be an

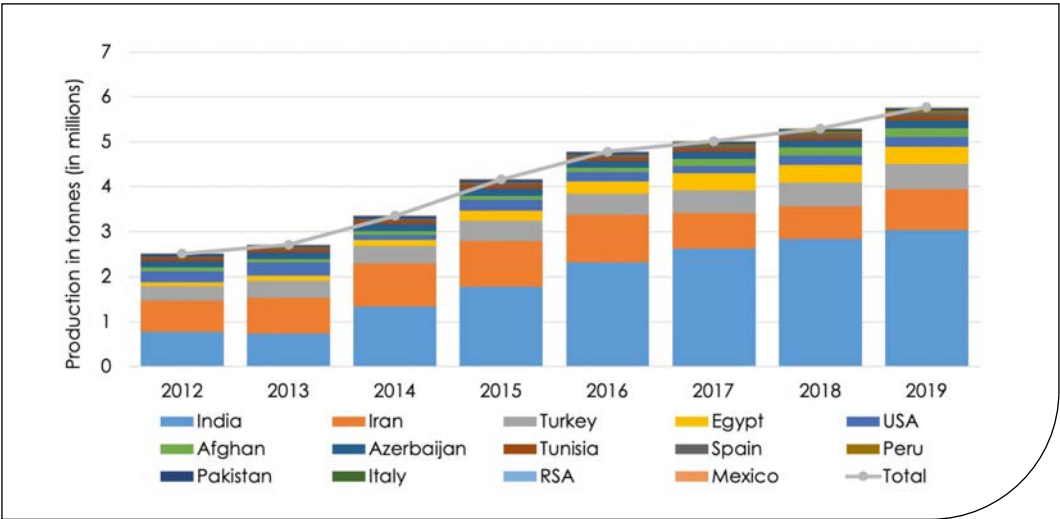
alternative for fruit farmers who are faced with climate change challenges (Pienaar, 2021).

From a global viewpoint, the analysis of pomegranate supply is made difficult due to the lack of readily available, consistent, and updated information on the areas planted and the production volumes of the leading producing countries (Ergun, 2012). Another difficulty for pomegranates is that no unique Harmonised Code¹ (HS code) exists for this fruit. Pomegranates are grouped with various other fruit under the HS code, HS: 081090, called "other fresh fruit – Other".² The author of this report used various statistical agencies, news reports, and producer or export associations to analyse world production and trade data. The author also looked at detailed tariff lines, which are determined by each country independently for trade data. The data shows only Antarctica as not growing pomegranates, and although it is grown worldwide, only a small number of countries produce it on a commercial level (Ergun, 2012). According to various sources (see full report), the global area planted for pomegranates is around

¹ HS code is used to trace global trade patterns.

² Including fruits such as tamarinds, pomegranates, rambutan, lychees, passion fruit, dragon fruit, longans, jack fruit, and similar.

Figure 1: Leading pomegranate-producing countries, 2012–2019



Source: Compilation of various sources (see full report)

835 950 ha, which produces 8,1 million tonnes of fruit (9,69 tonnes per hectare on average). Figure 1 shows the trend of volume produced between 2012 and 2019 for the 14 leading pomegranate-producing countries. The total pomegranate production for these 14 countries has grown from 2,5 million tonnes in 2012 to 5,8 million tonnes in 2019. The average annual growth for this period is 12,6%.

Figure 1 shows India as the world's largest pomegranate producer with 3 million tonnes for the 2019 period, followed by Iran (915 000 tonnes) and Turkey (559 171 tonnes). The global pomegranate production increase was driven by the annual production growth in India (21,6%) and Egypt (22,6%). South Africa is one of the smallest commercially producing countries, with 12 894 tonnes in 2019. Although it is one of the smaller producers, South Africa still ranks among the major players that are

in the southern hemisphere.³

Figure 2 shows the leading pomegranate-exporting countries regarding volume exported between 2012 and 2019.⁴ Regarding exports, the picture slightly differs from Figure 1. In Figure 2, Turkey is the biggest exporter of pomegranates (155 189 tonnes), followed by Egypt (127 447 tonnes) and India (67 891 tons).

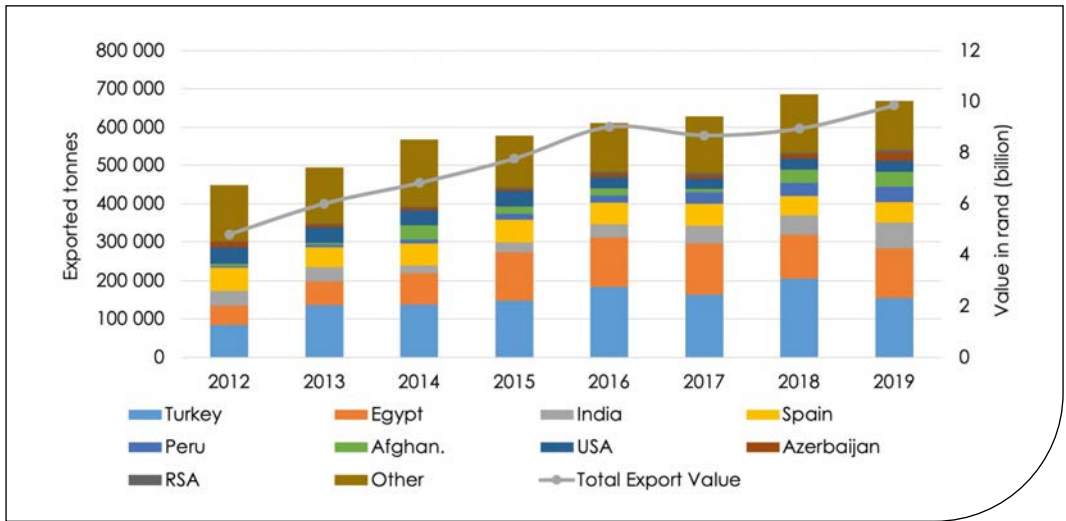
World exports grew from 450 000 tonnes in 2012 to around 668 000 tonnes in 2019. Peru and Afghanistan are showing strong growth. The value of exports has grown by 11% per annum in nominal terms. In 2019 the value of exports amounted to R9,85 billion compared to R7,8 billion in 2012 (ITC, 2020). The average price for exported pomegranates reached R14 736/t in 2019 compared to R10 760/t in 2012.

Pomegranates are perishable fruit. Markets for these fruits are influenced by the availability of the product. The seasonality

³ Peru, Chile, Argentina, and Australia.

⁴ This excluded major exporting countries such as the Netherlands, Germany, and France, which export important goods from elsewhere throughout Europe.

Figure 2: Leading pomegranate-exporting countries, 2012–2019



Source: Compilation of various sources (see full report)

of pomegranates available from the various major producing countries can be seen in Table 1. The dark green blocks indicate the harvest months for pomegranates.

Pomegranate availability of around four to five months or shorter is the norm, but new varieties and production practices can extend the growing season. In Table 2, India is shown to produce pomegranates for six months of the year due to its ideal climate. South Africa and the rest of the southern hemisphere have an advantage in supplying the global market when the other major suppliers are past their production stage. Harvesting in the southern hemisphere takes place between March and July. The northern hemisphere supplies the largest part of world production, and they harvest between January and February, and between October and December.

The South African pomegranate industry started commercialisation in the early 2000s. It started when a few plants were imported from Israel and planted in the Western Cape. At first, disease problems stunted the early growth of the industry, but by

2005 the volumes started to pick up (Louw, 2019). The Pomegranate Association of South Africa (POMASA) is the pomegranate industry body established in 2019 to address industry-specific matters for the benefit of its members (POMASA, 2020). In South Africa commercial production of pomegranates reached an estimated 14 835 tonnes in 2019, which were produced on just over 1 000 ha (POMASA, 2020). Figure 3 shows South Africa's pomegranate production.

Figure 3 shows that the area planted grew from 70 ha in 2007 to 1 032 ha in 2020. It is also expected that many of the existing orchards will reach full bearing soon, and the total production will increase by around 7% per annum by 2025. An average industry-wide yield of 15 tonnes per hectare has been achieved for the 2019 cycle (POMASA, 2020). Yields of 35 to 40 tonnes per hectare have been reported by pomegranate growers, especially when the trees reach full bearing age around five to seven years, depending on the variety. The different variety mixes are also

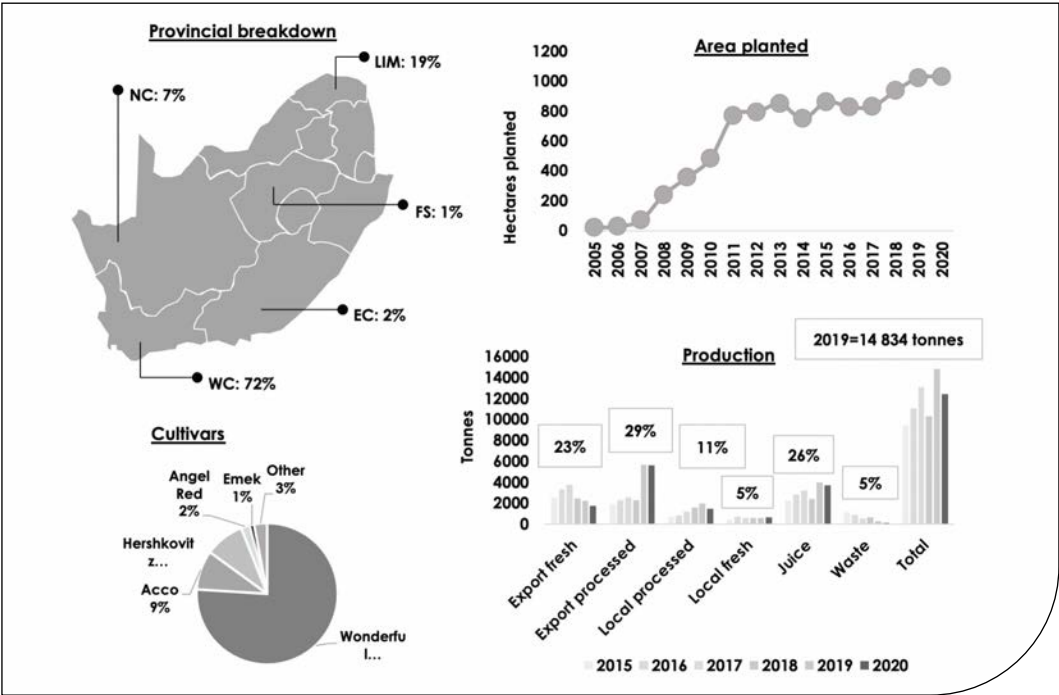
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Table 1: Global availability of pomegranates

Country	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
India												
Iran												
Turkey												
USA												
Afghanistan												
Azerbaijan												
Peru												
Italy												
South Africa												
Israel												
Spain												
Tunisia												
Australia												
Argentina												

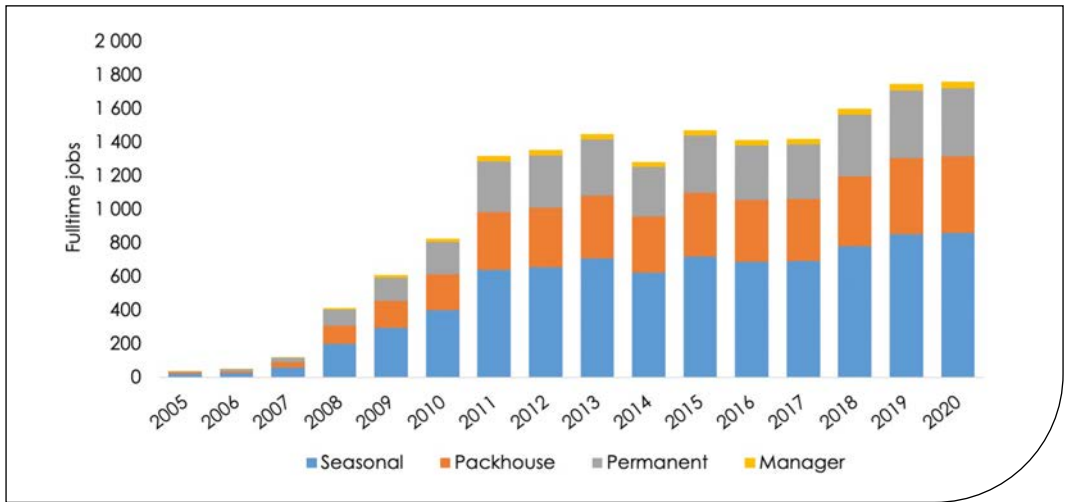
Source: Kahramanogly (2019)

Figure 3: South African pomegranate production



Source: POMASA (2020)

Figure 4: Full-time employment estimates for pomegranates, 2005–2020



Source: Pienaar (2021)

indicated in Figure 3, which indicates 76% of all hectares planted in South Africa were the “Wonderful” variety, followed by “Acco” and “Herskovitz” (both 9%). The provincial breakdown shows that 72% of production occurs in the Western Cape, followed by Limpopo (19%) and the Northern Cape (7%). The South African pomegranate industry is mainly export-driven,⁵ which is also indicated in Figure 3. The local fresh (5%) and local value-added processing markets are relatively small.

Figure 4 focuses on employment created by pomegranate production in South Africa. According to the labour multipliers, 1 700 new full-time jobs were created between 2005 and 2020 in the pomegranate industry.

In 2019, the industry used seasonal pickers, equivalent to 857 full-time workers, whereas 459 were employed in packhouses, 406 were permanent workers, and 41 labourers were employed in management and supervision. The industry paid wages valued at R61,4 million in 2020. It should

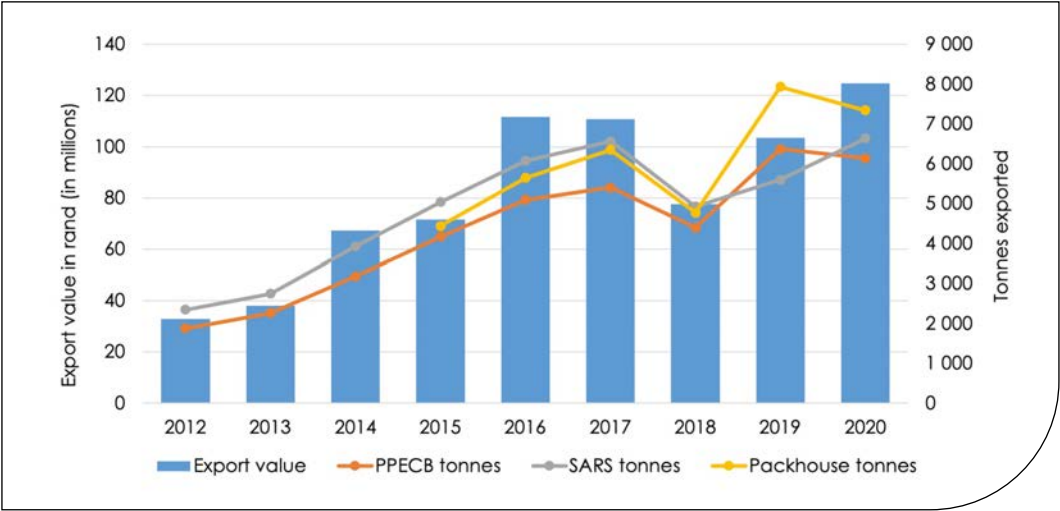
be noted that the industry is also creating jobs downstream, since exporters and agri-processing facilities are also using labour in their respective economic activities. As the industry grows, more employment growth is expected.

Figure 9 shows the export in tonnes from various sources. This shows strong growth for pomegranates over the past few years, reaching R124 million in 2020. The decline in 2018 is due to the drought in the Western Cape, but a strong recovery was made in 2020 due to strong winter rains. The value of pomegranate exports has increased by 18% per annum between 2012 and 2020.

Figure 6 shows the major export destinations for South African pomegranate. The Netherlands and the United Kingdom have been the leading importers of the South African pomegranates with around 68% of the total market share in 2015. The market share for these two countries has been declining as the other importing

⁵ Export fresh (23%) and export processed (29%) makes up 52% of total output that is exported.

Figure 5: South African pomegranate exports by value and volume



Source: Compilation from SARS (2021); PPECB (2020); POMASA (2020)

markets grew. Strong growth in the Middle Eastern markets has developed and in 2020 it had a market share of 50%.

Figure 7 focuses on the Relative Trade Advantage (RTA) and the growth in the world market share between 2012 and 2019. The RTA measures competitiveness. A positive value means that the share of South Africa's pomegranate exports relative to the total share of South African exports, is larger than the same share of imports. The competitive products have positive RTA values (+), the marginally competitive products have values close to zero (0) and uncompetitive ones have negative RTA values (-) (Kleynhans *et al.*, 2016). The share of the industry's pomegranate exports as a percentage of world exports is closely related to the RTA trend, since pomegranate imports are low for the country. South Africa has a large and positive RTA value that has increased since 2012 with some declining years in between. The drop in 2018 is due to the drought in the Western Cape, which impacted the volumes and the export values. Recovery can be seen for 2019 and

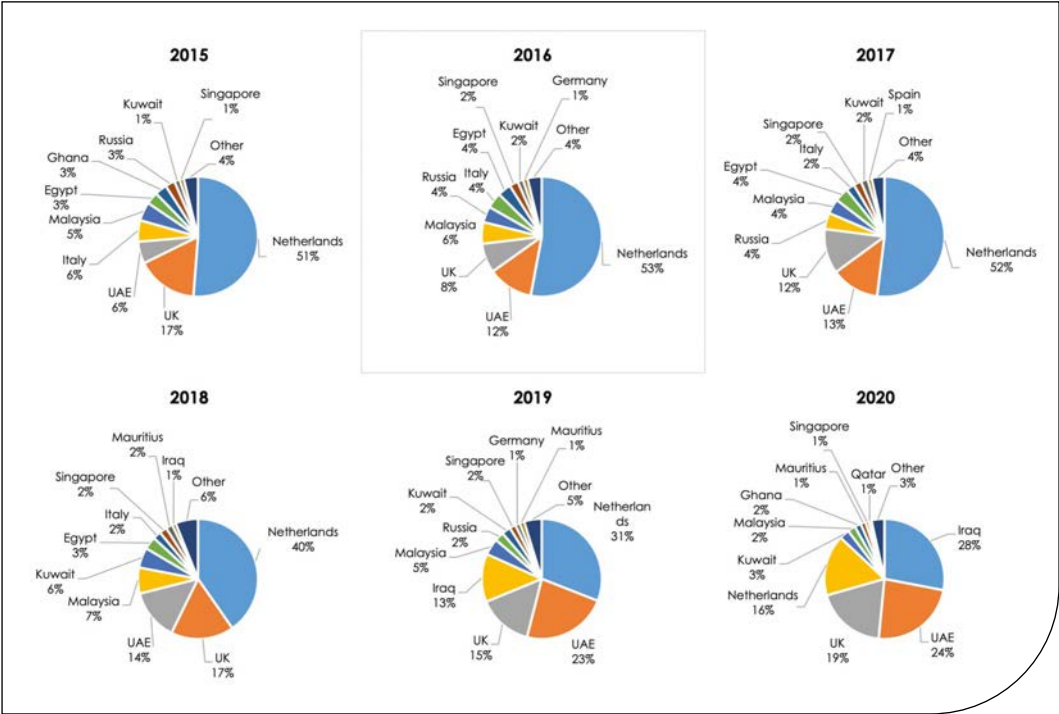
2020. South Africa had a market share of 10,5% in 2019, and like the RTA trend, has been increasing overall since 2012. These two metrics suggest that the industry is performing well in export markets and is growing competitively over time.

Figure 8 is a diagram of the South African pomegranate industry value chain. It was developed based on producers' surveys, packhouse and industry information, and discussions with a selected number of exporters, retailers, and processing businesses. To summarise the diagram, the entire pomegranate value chain is valued at a gross income of R157 million and employs close to 2 000 full-time workers throughout the whole value chain.

The continued improvement in the post-harvest efficiency and yield growth on-farm could drive further economic growth and create more jobs. There are also opportunities to invest in cosmetics and pharmaceutical products as additional streams of income.

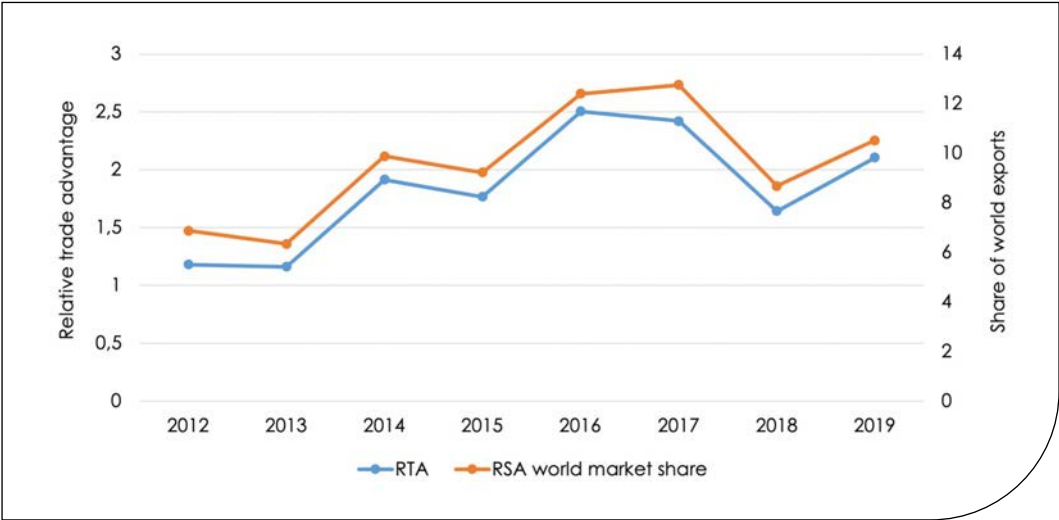
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Figure 6: South African pomegranate major destinations



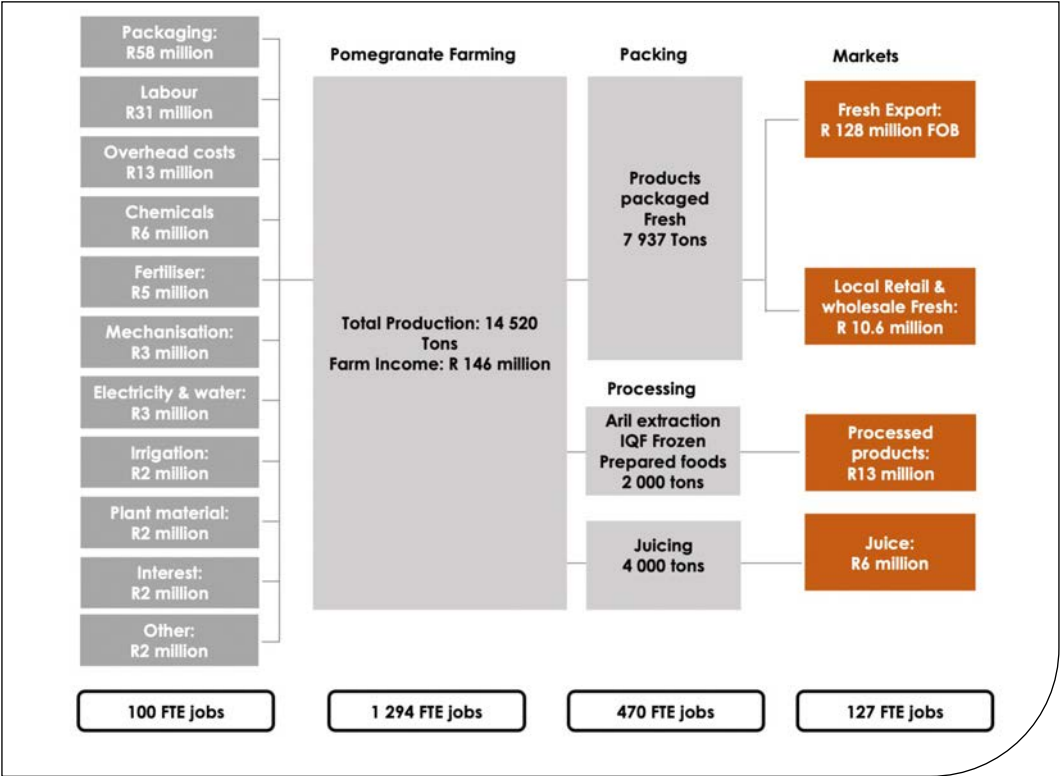
Source: PPECB (2021)

Figure 7: Competitiveness of South African pomegranate exports



Source: ITC (2020)

Figure 8: Pomegranate value chain in South Africa, 2019



Source: Various sources (see full report)

References

- CBI. 2020. Exporting fresh pomegranates to Europe. The Hague: Centre for the Promotion of Imports. <https://www.cbi.eu/market-information/fresh-fruit-vegetables/pomegranates/europe>
- Ergun, M. 2012. Pomegranates. (In Siddiq, M., ed. Tropical & Subtropical Fruits: Postharvest physiology processing and packaging. 1st ed. John Wiley & Sons Inc. p.529-548).
- ITC. 2020. Trademap. Geneva: International Trade Centre.
- Kahramanoglu, I. 2019. Trends in pomegranate sector: Production, postharvest handling, and marketing. *International Journal of Agriculture, Forestry and Life Science*, 3(2):239-246.
- Kleynhans, E., Van der Merwe, J., Van Schalkwyk, H. & Cloete, P. 2016. The competitive status of the South African wheat industry. *Journal of Economic and Financial Science*, 9(3):651-666.
- Pienaar, L. 2021. The Economic Contribution of South Africa's Pomegranate Industry. Elsenvurg: WCDOA.
- POMASA. 2020. Pomegranate Industry Overview. Paarl: Hortgro Pomegranate South Africa.
- PPECB. 2021. *Export Statistics of perishable products*. Cape Town: Perishable Products Export Control Board.
- SARS. 2021. Trade Statistics Toolkit. Pretoria: South African Revenue Service.
- Stover, E. & Mercure, E. 2007. The pomegranate: new look at the fruit of paradise. *Hortscience*, 42(5):1088-1092.
- Louw, M. 2019. Pomegranate production in South Africa. <https://southafrica.co.za/pomegranate-production-south-africa.html>. Date of access: 9 February 2021.
- Varasteh, F., Arzani, K., Zamani, Z. & Mohseni, A. 2021. Evaluation of the most important fruit characteristics of some commercial pomegranate cultivars grown in Iran. *Acta horticulture*, 818:103-108. **AP**

Name Changes

There have been some changes to the names of four (4) of the departmental programmes. Please see these changes, in all three languages, below:

Structured Agricultural Education and Training

- New**
- » Agricultural Education and Training
 - » Landbou-onderwys en -opleiding
 - » Imfundo kweZolimo noQeqesho



Farmer Support and Development

- New**
- » Agricultural Producer Support and Development
 - » Ondersteuning en Ontwikkeling van Landbouprodusente
 - » Uphuhliso nokuXhaswa koMvelisi kweZolimo



Sustainable Resource Management

- New**
- » Sustainable Resource Use and Management
 - » Volhoubare Hulpbrongebruik en Bestuur
 - » Ulawulo Nokusetyenziswa Kwemithombo Yoncedo Ngokuzinzileyo



Research and Technology Development

- New**
- » Research and Technology Development Services
 - » Navorsing en Tegnologie-ontwikkelingsdienste
 - » Iinkonzo zoPhuhliso kuPhando nobuChule



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