Western Cape gearing up for agriparks

R100m investment into skills for youth

R1 billion Halaal food park proposed for Western Cape
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We dedicate this issue of *Agriprobe* to the youth of South Africa, since they are our future.

The Western Cape Provincial Strategic Goal 1 ‘Create opportunities for growth and jobs’, and the Provincial Strategic Goal 2 ‘Improve education outcomes and opportunities for youth development’, focus on the development and job creation for our youth. The department is therefore passionate about youth development and committed to transform and increase our agricultural professionals through our youth development opportunities.

Our youth development at our Elsenburg College is far reaching, with previously disadvantaged youth now graduating annually in various fields of agricultural studies. Our Internship Programme assists students and graduates to receive workplace experience and exposure. Our matric intern candidates on the Premier’s Advancement of Youth Project are given the opportunity to plan for their career, attend revision classes, to rewrite and improve their matric marks and increase their chances of meeting the criteria for further studies.

Students from Grade 8 to Master’s level can get financial and moral support through our bursary/scholarship scheme. Our Young Professional Persons Programme offers Honours and Masters students a holistic personal development opportunity with full mentorship and a global exposure with the possibility of becoming our future agricultural doctors.

This department continues to invest millions of Rands in our youth annually to ensure that they, specifically rural youth and children of our farm workers, are given the opportunity to fulfil their dreams and become our future scientists, economists, engineers and agricultural experts.

On 16 June each year we celebrate Youth Day and in this issue we look back at some of the youth activities that took place at the department during this month, marketing agriculture to the youth by making it sexy and sought after!

Bring-a-Teenage-Girl-to-Work-Day, a first for the department and a great success, saw grade 9 to 12 girls visiting Elsenburg. The day opened their eyes to the careers and opportunities for females in the agricultural world. Lefefe Mjonono wowed the young learners with his motivational speech and his ‘spinach bread’. See article on page 12.

The department held a funky career exhibition at the Boschendal Wine Estate. Over 600 students were bussed in from Simondium to Steenberg. Students interacted with staff, the HOD and the Minister, learning about all the career and development opportunities in agriculture. They were intrigued by the latest technology used and the research conducted by our Young Professionals. See article on page 24.

Rashidah heads up operational support services at the department. Human Capital Development resides under her.
Western Cape proposes Halaal food park

Bronwynne Jooste, Bronwynne.Jooste@westerncape.gov.za

A R1 billion Halaal agri-processing food park is proposed for the Western Cape, as part of the province’s Project Khulisa growth strategy.

Alan Winde, Minister of Economic Opportunities, said the Western Cape government in partnership with the Western Cape Fine Foods Initiative (WCFFI) and the private sector were working to develop the park.

“The global Halaal market is worth $2.3 trillion. The proposed Halaal park will allow the Western Cape to double our share of that fast-growing market. We will focus on the Middle East and North Africa, where around 20% of the world’s Muslim population resides. We seek to increase the value of Halaal exports by $31 billion by 2020. The proposed park is expected to add a further 5 000 new jobs to our economy in the next five years,” Minister Winde said.

“Project Khulisa has identified agri-processing as a key growth sector with the potential to add up to 100 000 jobs and generate R26 billion for the economy under a high-growth scenario. The Halaal park will play an important role in reaching these targets.

“Pre-feasibility studies suggest it could generate up to R5 billion for the local economy each year.”

The park, if approved, could be launched in the next two years.

“There are two sites under consideration for the Halaal park, namely the Cape Town International Airport and a site in the Cape Winelands. The park will be a cluster of manufacturing and service firms in the Halaal industry and a fully Halaal zone. It will present significant opportunities for private sector investment. We also hope to encourage the establishment of a single, globally recognised Halaal certifying body.
Earlier this year, Minister Winde led a delegation to Malaysia, which strengthened trade links between that country and the Western Cape. The WCFFI and the Malaysian Industry Government Group for High Technology have already signed a co-operation agreement to foster partnerships between the Halaal industries of the two countries.

“This agreement will see the Western Cape producers learning from Malaysia’s international best practice.”

Nazeem Sterras, CEO of WCFFI, said there’s a huge focus on the Halaal industry internationally and Halaal industrial parks are a key strategic catalyst for economic growth and access to markets.

“It is not just because of the religious or Sharia compliancy but because people are starting to realise that Halaal certified products already provide all the set standards every human being needs to consider when they consume or use products,” he said.

According to Sterras, these key requirements include whether a product is healthy, nutritious, clean, safe and causes no harm to the environment.

“Halaal certification actually provides all these standards already, as part of what we call a lifestyle value proposition. It ticks all the boxes that people want in a good quality product,” he added.

He said in terms of business, they’ve completed a pre-feasibility study and looked at the products the Western Cape can provide compared to what products are required worldwide, but especially in the Middle East, North Africa and even Sub-Saharan Africa. “We’ve focussed particularly on these regions because of their close proximity and the recent trade agreements signed with Africa,” said Sterras.

According to him the latest figures obtained puts the Middle East and North Africa and sub-Saharan Africa market together at about $155 billion covering four big areas, including food and beverages; tourism; pharmaceuticals and cosmetics, as well as food ingredients and industrial chemicals to a smaller extent.

Minister Winde will submit the Project Khulisa growth proposals to Cabinet for approval.
Youth Day celebrations bring new life to Buffeljags

Emma Patientia, emmerentiap@elsenburg.com

As the coordinators of the Comprehensive Rural Development Programme (CRDP) in the Western Cape, the Western Cape Department of Agriculture, through the Programme: Rural Development, works closely with the Council of Stakeholders (CoS) in Swellendam to ensure that community development in Ward 3 takes place through an integrated and coordinated approach.

In June this year the Swellendam Municipality, with the CoS of Ward 3 and other partners, held a Youth Day event on the Buffeljags Sports Ground.

The theme for the day was “Together moving youth forward” and the aim was to take the youth out of their everyday circumstances and have a day filled with fun and entertainment.

A number of other provincial departments as well as local organisations participated and contributed to the success of this day.

Nolan Theodore, the CoS youth representative, Piet van Zyl, the CoS Health and Welfare representative, and Stalin Govender, the CoS Tourism representative, worked tirelessly with the support of their CoS chairperson, Heather Swart, to make this event a huge success.
Through the participation of a number of departments on the day, including Agriculture, Cultural Affairs and Sports, Health, Education, Correctional Services, Rural Development and Land Reform, as well as other partners such as the Breede Gourits Catchment Management Agency, the water management agency in the Overberg (BGCMA), Swellendam Tourism Organisation and the ATKV, this event was a showcase for excellent collaboration and partnerships for the benefit of a community.

Some of the departments, the BGCMA and the Bontebok National Park had information stalls at the event whilst other organisations, i.e. the Birds of Paradise, sold their famous homemade jams and individuals from the community sold cakes and other delicacies.

Community members and groups participated in sport activities, such as netball and rugby. Other activities included performances by a local vocalist, Adrian Cupido, and hip-hop dancing by Junior Botha and company. The dance group of the Birds of Paradise from Suurbraak also performed on the day and a group of children from the Buffeljags community performed gum-boot dancing.

Although the day started off with a bit of rain, it did not stop the excitement and participation in the events. Community members and the youth agreed the event brought life into the Buffeljags community, as there are not a lot of things to do in this small village. They said events like these are welcomed as they keep the youth entertained and out of trouble and also create an awareness of opportunities out there.
A roaring success

Dr Aileen Pypers, aileenp@elsenburg.com

Sylvester, the lion that escaped from the Karoo National Park in June this year, kept one of the state veterinarians from the Beaufort West State Veterinary office very busy.

Dr Bennie Grobler, who joined the department in 2012, worked tirelessly for 10 days to recapture Sylvester.

Sylvester was born in the park in November 2012. After escaping from the park on 5 June, he spent 24 days outside and travelled 371 km in total.

The furthest he travelled in one day was 39 km and the shortest distance 3 km. During his time outside the park, Sylvester caught 28 sheep, 1 nguni cow and 1 kudu bull.

He was recaptured on 29 June in the Nuweveld mountains near the park, tired and stressed, but uninjured.
Animal Sciences technicians go “Down Under”

Annelie Kruger and Lizette du Toit, both research technicians at the Directorate Animal Sciences, recently visited research farms and facilities of the Western Australian Department of Food and Agriculture (WADFA) to broaden their knowledge on the management of sheep, sheep-handling facilities, ways of recording and collecting data and how subjective and objective characteristics can be assessed and recorded in different sheep flocks.

They visited two research stations, namely Mount Baker and Kataning. These visits allowed them to compare data collection practices at WADFA with those implemented locally to possibly improve and adapt our practices, where needed. They also participated in several industry-related activities and in the process could familiarise themselves with the industry and labour-saving practices in Western Australia.

During the trip, Annelie and Lizette also assisted WADFA technicians to handle, score and record 6-week-old lambs from the Kataning research station. An old Mules operation bench had been converted to use for the scoring of breech wrinkles and other subjective traits.

The lambs were all weighed and vaccinated. The first technician scored the wrinkles, crutch cover, crown-rump length, tail length, dags, urine stain and breech wrinkle score. The next person castrated...
the male lambs and docked the tails of all lambs. The blood from the docked tail was “milked” on specially prepared blood cards for future genotyping.

The lambs were then released using an automated foot control mechanism and landed on a small canvas to prevent them from hurting themselves.

It was noted that the WADFA technicians used electronic scanners to read tags on the lambs. Such an electronic system could reduce the likelihood of mistakes with animal identities at our research farms, as individual identity numbers will be read accurately. The incorrect reading of identity numbers on tags is a major problem under South African conditions.

After scanning, the animal identities appeared on a laptop computer, allowing the addition of other data/scores. The computer was connected to a small printing device, able to print the number (if necessary) so that it can be fixed directly to a sample bottle or bag. This system removes all inaccuracy from the data recording process.

Annelie and Lizette also participated in the weighing and condition scoring of sheep, the collection of faecal samples, breech scoring and dag scoring at the Mount Barker research station.

Here they met Dr John Karlsson, who told them more about the parasite-resistant and parasite-resilient flocks, the history and way of thinking associated with the maintenance of these resource populations. These flocks are considered to be of strategic importance in the Australian research and development plan.

Other research-related activities during the trip included visits to the local wool-testing and meat assessment laboratories. Unfortunately operations at the latter facility have almost ceased due to a lack of funding.

The trip furthermore included several industry-related activities, including the attendance of a livestock auction at the Regional Kataning Sheep Sale Yards, the largest undercover sheep auction complex in the Southern Hemisphere.

Afterwards the technicians went to a ram auction in the Great Southern Merino Sheep Breeders’ Pavilion, where they inspected the rams of local breeders. They also accompanied Dr Karlsson on four field days at different farm sites and visited the Misty Hills Merino Stud Farm belonging to Russell and Heather Meatonvan. Sperm from rams of this fine wool stud could be considered for importation to further improve the wool of the Tygerhoek fine wool resource flock.

The two technicians also visited the Coole farming family, farming with 40 000 sheep on 50:50 ryegrass-clover pastures. Labour-saving devices facilitate husbandry operations on the Coole farm and outside contractors do any additional work not accommodated by family labour.

During these farm and research station visits Annelie and Lizette noted that the Gudair vaccination against Johne’s disease was indicated on the data sheets, but that no further quarantine measurements were in place in Western Australia. In South Africa strict quarantine measurements are still in place, preventing the dissemination of breeding stock. It was also significant that the Mules operation was still applied on the properties they visited, although the Australian Wool Industry undertook to abolish it with time.

Their Australian hosts clearly went through a lot of trouble for accommodating and showing Annelie and Lizette around and also freely shared knowledge and experiences on husbandry practices and labour-saving devices allowing the technicians to recommend similar interventions upon their return to South Africa. The visit was publicised widely and covered well in the local farming press.

Such interactions are considered of mutual benefit to both the local and Australian farming operations. ☑
Teenage girls’ eyes opened to careers in agriculture

Bring-a-Teenage-Girl-to-Work-Day was a youth month initiative by the Western Cape Department of Agriculture, with the aim of exposing young women to the various exciting career opportunities available within agriculture. Staff members were encouraged to bring their grade 9 to 12 daughters, or those of someone they know, to work on the day. It was the first time the event was held.

The girls were treated to an interesting programme, which started with presentations by the HOD, the College and Operational Support Services (OSS), informing them about the courses, bursaries and internships available.

Vanessa Barends, a former graduate of the Young Professional Person (YPP) programme who is now an agricultural economist, inspired the girls with her story of commitment and perseverance, which helped her build a successful career in agriculture.

The programme also included a visit to the dairy

Girls who were under the impression that agriculture is only for older men who spend their days out in the field, were proven wrong when they visited Elsenburg in June this year.
A group of girls with one of the Percheron horses.

and wine cellar, where staff members gave them an overview of some of the careers one can follow in agriculture, e.g. that of an agricultural engineer, veterinarian, winemaker and scientist. They also got a chance to pose with one of Elsenburg’s prize-winning Percheron horses.

A highlight for many was the agri-processing group activity that concluded the day’s activities. Entrepreneur Lefefe Mjonono, who started his own business baking spinach bread, encouraged the girls to dream big and turn their business ideas into thriving enterprises. The girls were placed in groups and presented with six raw agricultural products from which they had to create innovative new products. “Butternut ice cream” emerged as the winner!

The feedback received from the girls afterwards was overwhelmingly positive. Teagan Hendricks, one of the attendees, thanked the department for setting up such an interesting programme. “It helped us decide whether we would like to further our careers in agriculture”, she said. She always wanted to become a doctor, but after hearing about winemaking she’s not so sure anymore. Judging by the excitement on the girls’ faces afterwards, Teagan wasn’t the only one that was steered towards a career in agriculture.

Bring-a-Teenage-Girl-to-Work-Day was a youth month initiative by the Western Cape Department of Agriculture, with the aim of exposing young women to the various exciting career opportunities available within agriculture.

Bring-a-Teenage-Girl-to-Work-Day was a youth month initiative by the Western Cape Department of Agriculture, with the aim of exposing young women to the various exciting career opportunities available within agriculture.
Symposium highlights agri-processing

The Western Cape Department of Agriculture’s 6th annual Extension and Advisory Services Symposium was held at Spier outside Stellenbosch this July. The symposium stretched over three days and the emphasis was on agri-processing.

The opening address and film by Liz Eglinton, the chairperson for Conservation at Work, focused on soil and organic farming as key to sustainability of agriculture. Dr Dirk Troskie positioned agri-processing within global, national, provincial and municipal agendas.

Head of Department Joyene Isaacs highlighted relationships, recognitions, risks, realities and research as key in her welcome. The MEC for Economic Opportunities, Alan Winde, emphasised innovation and the need to exploit opportunities within agriculture.

On day two the focus was on best practices in smallholder and commercial agriculture. A highlight was the presentations by the newly appointed agricultural advisors, Megan Bruinjies, Ben Booyens and Charles Salmon, who were community workers until the end of June 2015.

Manie Grobbelaar highlighted the importance of tracking performances and trends.

Conservation and sustainable agriculture are vital for our survival and must be done in partnership with communities. This was presented by Jan Smith on the projects they do.

Dr Johan Labuschagne highlighted the experience at the research farms and Dr Johann Strauss looked at future possibilities of conservation agriculture.

The excellent and topical issues by Dr Anel Engelbrecht, Vanessa Barends, Taahir Harris and Gareth Williams displayed the development of young professionals.

At the gala evening Prof Linus Opara challenged attendees to harness the power of networks. He emphasised that integration and collaboration underpins the creation of jobs and thus prosperity.

Agri-processing was the focus of the final day. Nicole Wagner highlighted the mainstream best practices for energy efficiency. Prof Robin Meeske presented the economic benefits of various calf-rearing systems.
Clyde Lamberts highlighted that extension officials, farmers and partners are the custodians of the environment. Agricultural activities need to adapt to climate change and Philip Swart emphasised this with a presentation on the blueberry industry.

Leann Cloete-Beets presented the GreenAgri-portal and Dr Carl Muller spoke on crossbreeding in dairy cattle.

For sustainability of agriculture there will need to be a focus on agricultural practices that operate in partnership with nature and with each other.

1. Registration.
2. Delegates at the symposium.
3. Minister Winde delivers his speech.
4. Delegates enjoy a tea break.
5. The award winners proudly display their prizes.
6. Adele Isaacs (left) and Mogale Sebopetsa.
7. From left to right: Darryl Jacobs, Hansie Owies and Mogale Sebopetsa.
8. Erik du Toit (left) and Riana van Rensburg.
The Western Cape Department of Agriculture's research farms hosted an exciting upcycling scarecrow competition in the first quarter of the year. The purpose of the competition was to help enforce the values of the current waste management system on the research farms, encourage the women and children living on the farms to get involved in upcycling, and to provide the Research and Technology Development Services programme with much needed scarecrows for their small grain research trials.

The competition also supports the Western Cape Green Economy Strategic Framework for Climate Smart Agri-production, i.e. sustainable farming practices, balancing farming and conservation needs, resource efficiency and waste minimisation, as all the research farms of the Department of Agriculture have adopted a recycling system.

Prizes were awarded per farm for the best scarecrow made by a child and best scarecrow made by an adult working or living on the farm. All assistance by parents or family had to be disclosed prior to judging. A judging panel was selected on each farm and creativity and use of waste materials were the criteria used to select the winning scarecrows.

Leann Cloete-Beets, leanncb@elsenburg.com

This scarecrow “couple” on the Worcester Research Farm, was the winning entry.
Dr Jaco Pienaar, state veterinarian in Beaufort West, attended the AGM of the Western Cape Red Meat Producers Organisation (RPO) in Laingsburg in June this year, where he also delivered a presentation.

He discussed the current animal disease reports for the country and highlighted the risk of brucellosis spreading quickly into and within the Western Cape. The RPO had issued a report regarding poor service delivery by the state around the control of brucellosis and Dr Pienaar addressed their concerns and reiterated that Veterinary Services is committed to eradicating the disease in the Western Cape.

Other topics discussed included the role of the farmer in reporting diseases as well as providing information to the state, especially the animal health technicians that regularly conduct animal census, reporting tools, the availability of certain vaccines, as well as the principles of biosecurity surrounding the movement of animals.
Jerome Thomas is November 2014 tydens ’n spoggeleentheid by die Woodmill Sentrum op Stellenbosch as die Wes-Kaapse Plaaswerker van die Jaar aangewys. Hierdie kompetisie word jaarliks deur die Wes-Kaapse Departement van Landbou (WKDL) in samewerking met Shoprite aangebied om erkenning te gee aan plaaswerkers vir die belangrike en waardevolle rol wat hulle in die landbousektor speel.

Jerome, ’n boorling van die Stellenbosch-distrik, werk sedert 2000 op Kanonkop Wynlandgoed en is tans Junior Bestuurder.

Tydens sy toespraak by die galageleentheid het hy koel en kalm voorgekom, maar volgens hom was hy agter hierdie fasade ’n warboel van emosies. Jerome verduidelik sy gedagtes was op daardie oomblik by sy vrou, wat weens ander verpligtinge nie die geleentheid kon bywoon nie. Hy vertel hy het sy kalmte deur haar en God gekanaliseer sodat sy emosies hom nie moes oorweldig nie.

Sedert hy die toekenning ontvang het, het Jerome se lewe aansienlik verander. Hy word gereeld uitgenooi om as spreker by geleenthede op te tree om plaaswerkers te motiveer en sy dagboek is reeds vir die res van die jaar vol bespreek.

By die werk het daar ook positie-
we veranderinge ingetree aangesien meer verantwoordelikheidte aan hom toevertrou word. Sy werkgewer, Johan Krige, betrek hom nou ook meer by besluitneming en heg waarde aan sy opinie.

Hoewel daar individue was wat verwag het hy sou verander, beklemtoon Jerome dat hy steeds dieselfde mens is en net ’n titel bygekry het.

Met hierdie gesogte titel en nou ook as lid van die Prestige Plaaswerker Forum (PPF), neem Jerome sy rol as ambassadeur vir plaaswerkers baie ernstig op. Reeds tydens sy eerste vergadering as lid van die PPF het hy Minister Alan Winde ingelig oor kwellende kwessies wat plaaswerkers daagliks raak. “Plaaswerkerbehuising is ’n groot kopseer. Die huise wat plaaswerkers op plese bewoon, behoort nie aan hulle nie. Hulle het nie titelaktes vir die huise nie en gevolglik het plaaswerkers ’n gebrek aan standvastigheid,” sê Jerome. Hy wil van hierdie platform gebruik maak om te verseker plaaswerkerkwessies bly op die agenda en word suksesvol aangespreek.

Om eendag ’n tegniese landbouwskool op Elsenburg vir die kinders van plaaswerkers te sien, is een van Jerome se vele drome.
The Grassland Society of Southern Africa (GSSA) celebrated their 50th annual congress by going back to their roots – The Royal Agricultural Showgrounds in Pietermaritzburg, KwaZulu-Natal.

The congress took place in July and included the popular research skills workshop. The theme of the congress was “Celebrating 50 years of advancing rangeland ecology and pasture management in Southern Africa”.

Six delegates represented the department with two poster and three platform presentations. In addition, Dr Pieter Swanepoel from Stellenbosch University presented both a platform and a poster presentation based on a project funded and executed by Dr Swanepoel while still employed by the department.

During the awards ceremony at the annual gala dinner, Josef van Wyngaard was awarded the prestigious Norman Rethman Planted Pastures Award for the platform presentation entitled “Evaluation of grazing Jersey and Angus/Jersey nurse cows in a multiple suckling calf rearing system”. This award is for the best platform presentation in planted pastures.

Josef is a PhD student stationed at the Outeniqua Research Farm, where his main research focus is on methane emissions from grazing dairy cows. Josef is under supervision of Prof Robin Meeske.

This was the third year in a row that the Norman Rethman Planted Pastures Award was awarded to a researcher stationed at the Outeniqua Research Farm, highlighting the relevance and excellence of the pasture-based research conducted by the research team.
Wolbedryf vereer dr. Buks Olivier

Die Nasionale Wolkwekersvereniging van Suid-Afrika se Silwerram-toekenning as simbool van verdienstelikheid, is onlangs aan dr. Buks Olivier, Wetenskaplike Bestuurder: Direktoraat Vee- en wolkundige Wetenskappe en wolkundige van die departement, tydens die vereniging se nasionale jaarvergadering in Port Elizabeth, toegeken.

Hierdie toekenning word gegee vir jare lange onbaatsugtige en toegewyde diens aan die wolbedryf.

Dr. Olivier was betrokke by verskeie navorsingsprojekte, wat onder meer die vestiging van ‘n genetiese fynwolkudde in Suid-Afrika, asook die toepassing van gemengde metodologie vir die beraming van teelwaardes in die kleinveebedryf, insluit.
The Agricultural Professional Fellows programme is an initiative coordinated by Market Matters Incorporated in partnership with the National Agricultural Marketing Council (NAMC), the Western Cape Department of Agriculture, Agribusiness Development Agency (ADA) KwaZulu-Natal and the Agricultural Economics Association of South Africa (AEASA).

The fellows took a trip to KZN in March this year to visit projects undertaken by the KZN ADA.

The mission of the Agribusiness Development Agency is to create an enabling environment aimed at growing the agricultural sector and improving market access for black commercial farmers and agribusiness entrepreneurs through intensifying land productivity and maximising value adding opportunities. The agency’s strategic goals are to increase income and employment in commercial agriculture by improving agricultural productivity and competitiveness of black commercial
farmers and entrepreneurs.

The fellows visited two of the farms the ADA successfully funded, namely Ma Ande Investment Holdings and Copperfield Farm in the Kokstad area. Both farms are equipped with commercially competitive technology for processing.

Andile Mfingwana started Ma Ande’s operations with five cows. He previously worked in the information technology industry. The farm secured a contract with DairyBelle, but after 12 months DairyBelle closed their processing plant. This forced Andile to take the initiative to establish his own dairy processing facility. The main product produced is maas, which is popular with the local consumers and supplied to school feeding schemes and spaza shops.

Ma Ande also supplies Nestlé with unpasteurised milk. Agri-processing allowed Andile to expand his processing operations and increased his staff component from 6 to 19 people. Ma Ande envisages extending its production line with drinking yoghurt.

Copperfield is operated as a co-operative farm owned by Loyiso Pepeta, a former CFO, Pepeta, a former social worker, and Makaula, a former teacher. Copperfield farm was initially a beef farm, but is currently processing milk supplied by neighbouring dairy farmers. They’re currently supplying to commercial markets and, as with Ma Ande holdings, providing maas to school feeding schemes and local shops. Their future business prospects include extending the milk processing line to produce yoghurt and drinking yoghurt.

Copperfield farms envision increasing their livestock numbers by establishing pastures and dams.

It’s important to note that these farms are close to each other and that these entrepreneurs support each other with resources and advice. These farms also have additional farming activities to supplement their income.

Lessons learned
With the correct guidance, mentorship and financial support emerging black farmers can become successful commercial farmers. This is depicted in the successful funding models implemented by ADA. “As Fellows we believe black empowerment is crucial for the transformation of the agricultural sector.”

“The Agricultural Professional Fellows took a trip to KZN in March this year to visit projects undertaken by the KZN ADA. “It always seems impossible until it’s done.” — Nelson Mandela”

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Exhibition highlights careers in agriculture

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Around 600 high school learners from across the province attended the department’s Youth Month career exhibition in June. The expo showcased the agricultural sector’s various career options and was hosted in partnership with the Boschendal Wine Estate.

Apart from the various programmes within the department and College, some of the other exhibitors included the Provincial Departments of Economic Development and Tourism and Education, the Cape Peninsula University of Technology and Stellenbosch University. Learners, who ranged from grade nine to matric, came from schools in Paarl, Stellenbosch, Franschhoek and the Cape Town metro.

Minister Alan Winde addressed the young people on the second day of the event. He highlighted the importance of the agricultural sector.

“Agriculture is involved in almost everything we do. When you had breakfast this morning, agriculture was involved. Some of the clothes you wear, have links to agriculture. Even our venue today is on a farm, which makes great products and sells them to the world.”

He said there is a misconception that the only job in agriculture is being a farmer or a farmworker. These jobs are very important, but our economy also needs other agricultural specialists, such as agri-processing specialists, agricultural scientists and agricultural engineers.

Ciara Engel, a grade nine learner from South Peninsula High School, said the exhibition had opened her eyes to a new side of agriculture. “Many people only think of farms when they hear about agriculture. One of the reasons I came here today is to learn more about agriculture.”

Minister Winde encouraged the young people to consider a career in agriculture, and to apply for the bursaries available.
First AgriHero announced

Bronwynne Jooste,
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Lien Visage, the winner of the Witzenberg regional 2015 Farmworker Competition of the Year, an initiative celebrating excellence in the Western Cape’s agricultural sector, is a woman on a mission.

This AgriHero, who works at Donkerbos near Rietfontein, was honoured at a ceremony at the Kaleo Manor Guest Farm in Op-die-Berg outside Ceres in the Koue Bokkeveld in August. She had an inspiring message for people working in the agricultural sector.

“I am proud to be representing farm workers and the agricultural sector. Nelson Mandela often said we are never too old to learn. And I would like to draw on that and tell farm workers there are opportunities all around us. Get involved in activities, whether it’s a Women’s Day event or planning a camp. With the right support from those around you, you can push forward and get to where you want to be in life.”

A community development worker, Lien plays an active role in encouraging residents. She is involved with the local crèche and aftercare on the farm and also a shareholder of the Donkerbos Estate land reform project.

Lien will compete alongside the winners of the other regional competitions, which took place across the province during August.

As part of the selection process, entrants are interviewed by a panel of agricultural experts on a range of issues, including transformation and their vision for the future of the sector. Winners are chosen in 11 categories, including best irrigation specialist, agri-processing specialist and technical operator. Regional winners and runners up receive cash prizes and shopping vouchers from Shoprite.

The 2015 Farmworker of the Year will be announced at a gala function in November at the Nederburg Wine Estate in Paarl. The province’s top agri-professional will receive a cash prize and an overseas trip.

The Farmworker Competition is co-sponsored by the Western Cape Department of Agriculture and Shoprite, Africa’s largest retailer. Over 6 000 agriculture employees have entered the competition since 2002.

Alan Winde, Minister of Economic Opportunities, commended Lien: “Lien is working hard to inspire residents in her area and is making a real difference. I wish her well for the rest of the competition. South Africa has earned a reputation for delivering high-quality produce, which is enjoyed both here and in overseas markets. The Western Cape’s agri-professionals are valuable players in driving this industry and ensuring we maintain this brand."

You can follow the competition on Twitter: #AgriHeroes2015
The Western Cape government’s economic cluster is investing over R100 million into skills development initiatives for young people.

Vanessa Barends from Bredasdorp is a participant in one of the Western Cape government’s skills development initiatives. After matriculating from Napier High School in 2005, Vanessa started an internship with the Provincial Department of Agriculture. She then obtained a bursary to study...
a Business Science degree in Agricultural Economics at Stellenbosch University. Once she completed her degree, Vanessa enrolled in the department’s Young Professional Persons Programme (YPPP). This programme is aimed at supporting black post-graduate students to develop their careers, with a focus on women. Participants are mentored and receive in-service training.

Vanessa is currently completing her master’s degree. Her dissertation focuses on the carbon footprint of farming activities.

“I’m working on a calculator that will help small- and medium-sized farming operations determine their impact on the environment with regards to their carbon footprint.

“We’ll start with the department’s own research farms to prepare them for 2020, when carbon tax will be implemented for the agricultural sector,” said Vanessa. She hopes to become a leading agricultural economist.

Minister Winde said Vanessa’s successes should be celebrated, adding that the young economist served as a role model for her peers.

“Vanessa and other young people like her are the future of our agricultural sector. These young people are becoming the heroes of our economy.

“We have to ensure our young people are equipped with the right skills to take advantage of the opportunities in our economy. They will be the ones who take our economy forward.

“Key to the success of all of our programmes is enthusiastic and hard-working youth who want to build better lives for themselves. To grow our economy, we need to work better, together,” said Alan.

The Western Cape government’s skills projects in the two departments include:

• The Work and Skills programme, which offers young people the on-the-job experience they need to further their careers. Around R10 million is allocated to this initiative annually and about 1 000 young people participate in the programme.

• The CapaCiti 1000 programme, a partnership between the Department of Economic Development and Tourism, the City of Cape Town, the private sector, tertiary institutions, the relevant SETA’s and the Development Bank of South Africa. The programme provides training for youth in the ICT sectors.

• The Artisan Development Programme, which receives just over R5 million annually. This project ensures that young people receive the in-service training they need to write the National Trade Test and become fully qualified artisans. Since its launch in 2013, 200 young people have entered the programme. Thirty-eight have become fully qualified artisans.

• The Agricultural Partnership for Rural Youth Development, which partners with tertiary institutions and the private sector. It gives young people, mainly the children of people working on farms, access to internships and bursaries for high school and tertiary studies. Just under R6 million is allocated to this project.

For more information on the Department of Agriculture’s skills development projects, contact info@elsenburg.com.
The Western Cape’s top female entrepreneurs in the agricultural sector were crowned when the winners of the Western Cape leg of the Female Entrepreneur Awards were announced in August.

The competition is a partnership between the National Department of Agriculture, Forestry and Fisheries and the provincial departments of Agriculture.

Now in its 16th year, it seeks to honour the sector’s leading women.

Alan Winde, Minister of Economic Opportunities, congratulated the winners: “It’s fitting that in Women’s Month, we are able to celebrate the women who are making a significant impact in our agricultural sector. All of the entrants are making a valuable contribution to food security, job creation and economic growth.

“It’s particularly important to celebrate women in this sector, which is generally seen as male-dominated. I am so pleased to honour their achievements.

“The Western Cape Department of Ag-

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Back from left to right: Eugene Simons (Smallholder), Jessica Bonin (Processing) and Ingrid de Waal (Commercial). Front from left to right: Maria Persens (Best Worker), Tenjiwe Kaba (Subsistence) and Geraldine Theunissen (Ministerial Award).
ulture is committed to developing women in the sector. It’s our goal to move more women from subsistence farming to smallholder farming to the point where they’re able to export their produce.”

Minister Winde said past winners were continuing to grow their enterprises. “Last year’s regional winner, Ilse Ruthford, who went on to win the national agri-processing award, heads up the financial management of a wine storage facility, which services over 40 producers. I was delighted to hear she’s launching her own wine label. These are the kinds of stories we need to showcase.”

Since its launch in 1999, more than 300 women have entered the competition. Of these, seven have gone on to clinch the national award.

Here are all the winners:

**Best Female Worker**
*Maria Persens – De Fynne Nursery, Klapmuts*
Maria has worked in a range of areas at the nursery for the past eight years. Her key role is working with the research plant material De Fynne grows for research institutions. De Fynne Nursery is a wholesale plant growing nursery and plum production farm.

**Best Subsistence Producer**
*Moyo We Khaya Community Garden, Khayelitsha*
This community garden is tended by women farming with vegetables, led by Tenjiwe Kaba. The group stood out for the excellent service they deliver to the community and for the inspiration they provide for other residents.

**Top Entrepreneur Smallholder**
*Eugene Simons, Algina Wholesale nursery, Firgrove*
Eugene started a small business in 2009, producing seedlings for family and friends. Currently she produces nearly 7 million seedlings per year and has secured contracts with farmers.

**Top Entrepreneur Processing**
*Jessica Bonin, Lady Bonin’s Tea, Cape Town*
Jessica started the business in 2011 with a mobile tea caravan selling take-away tea. Today Lady Bonin’s is an international brand. The teas are hand blended with organic ingredients, using in-house recipes developed by Jessica. She specialises in wild grown, biodynamic and organic rooibos, honeybush and buchu tea.

**Top Entrepreneur Commercial (Provincial Nominee)**
*Ingrid de Waal, Canette Vallei, Stellenbosch*
Ingrid is the only female lavender producer in the Western Cape. She produces lavender essential oil, lavender cut flowers, dried flowers and handmade soap. She is also the only person in South Africa to produce raw lavender honey. Ingrid also cooks and sells traditional “Kaapse Moskonfyt”.

**Ministerial Award (Youth)**
*Geraldine Theunissen – Wildekrans Wine Estate, Bot River Valley*
Geraldine is one of a few female tractor drivers in the Western Cape. She heads an all-male team on the Wildekrans Wine Estate in the Bot River Valley. The farm has various production activities, such as wine, deciduous fruit, olives, pome fruit and sheep.

The national competition took place in Durban in August. Provincial winners from across South Africa competed for the national awards, including the overall National Female Entrepreneur award. **Tenjiwe Kaba** was crowned as the national winner in the Best Subsistence Producer category. 📖
New report reveals food price burden on households

Bronwynne Jooste, Bronwynne.Jooste@westerncape.gov.za

A new sector report shows it is necessary to focus on growing the production of agri-processed goods if we want to decrease South Africa’s R21 billion trade deficit in this area.

Alan Winde, Minister of Economic Opportunities, said the figures contained in the 2015 Bureau for Food and Agricultural Policy (BFAP) Baseline (released at the end of July 2015) emphasised the need to prioritise the agri-processing sector.

“When researchers studied the National Department of Agriculture, Forestry and Fisheries figures of the average import versus export values between 2006 and 2010, they noted a major deficit. South Africa traditionally uses foreign suppliers to process our own produce, which adds a cost to the final product for local consumers.

“Part of our strategy to grow the agri-processing sector is looking at how we can reduce imports, where possible, by promoting local products. With the cost of healthy eating increasing, opting for local produce will give consumers welcome relief,” said Minister Winde.

The Western Cape Department of Agriculture has developed an agri-processing index, which ranks the best products in terms of employment potential and performance in local and global markets.
Part of our strategy to grow the agri-processing sector is looking at how we can reduce imports, where possible, by promoting local products.

“Project Khulisa has identified agri-processing as a key growth sector, presenting a significant opportunity to increase jobs in rural areas.

“Under a high-growth scenario, this sector could add up to 100 000 jobs to the local economy over the next five years.”

Minister Winde said the BFAP Baseline 2015 was an excellent tool for both the private and public sector. “The report clearly shows the importance of trade with the rest of Africa. In 2014, South Africa’s exports of agricultural products were worth R104 billion. African markets are a key driver of this growth. Over the past 13 years, our exports to Africa grew by 14%, compared to the EU, which saw an 8% increase.

“This study allows us to map patterns like these and assess whether our programmes are responsive to global trends. I would like to encourage the private sector to consider this report in making their own plans.”

This year the report also illustrated the impact of the hike in electricity costs on households’ food choices.

“Researchers looked at the results of focus groups held by the Pietermaritzburg Agency for Community Social Action, which revealed that electricity cost increases were changing the eating habits of residents in lower income households. More consumers were moving away from maize meal to rice, because rice has a shorter cooking time. Maize meal is fortified and has greater nutritional value compared to rice. In addition, the price of rice is likely to increase as the rand depreciates, which will put additional pressure on lower income families,” said Alan.

The BFAP Baseline 2015 provides projections for key sectors, including meat, milk and dairy products, wine, sugar and grains.

Trends in the report include:
• In South Africa the cost of healthy eating is climbing faster than inflation. Between January 2011 and April 2015, the cost of a healthy eating plan for a family of four rose by 36%;
• Household income is rising, but so are debt levels. The average household income increased from R6 928 in 2009 to R10 525 in 2014;
• The highest ever real net farm income was recorded in 2014;
• The number of credit accounts increased by 18.5% over the same period. At the same time, the number of rejected credit applications rose to 53.5% in 2014, compared to 43.9% in 2009;
• Keeping in line with global trends, urbanisation is on the rise. The rural population size increased by 9% between 2007 and 2014, while the urban population grew by 29% over the same time. 😕

Go to www.bfap.co.za/documents/baselines/BFAP_Baseline_2015.pdf for the full report or scan this QR code.
Since the adoption of the National Development Plan (NDP) in late 2011, the South African government has placed a renewed focus on the importance of the rural economy and the importance of the agricultural sector. The NDP specifically highlights the whole value chain and the role of agri-processing in this chain.

The Western Cape government’s Provincial Strategic Plan underpinned by five Provincial Strategic Goals (PSGs) is aligned to the NDP. Under PSG 1, “Create opportunities for growth and jobs”, Alan Winde, Minister of Economic Opportunities, during October 2014 launched Project Khulisa, which in isiXhosa means “to grow”. Agri-processing was identified as one of three sectors having great potential for creating up to 100 000 job opportunities in the Western Cape over the next three to five years. Interestingly enough, during engagements with the provincial government a number of municipalities in the Western Cape have recently identified agri-processing as an area with lots of opportunities.

During the State of the Nation address in February, the President announced the implementation of agriparks. The Department of Rural Development and Land Reform (DRDLR) was tasked to roll out this programme.

Agriparks were originally intended in only 27 of the districts, excluding the Western Cape. However, during the minister’s budget speech in May, he announced that all 44 district municipalities in the country, including those in the Western Cape, will form part of the programme.

But what does the term agripark mean? According to the definition of DRDLR, an agripark is a networked innovation system of agri-production, processing, logistics, marketing, training and extension services, located in district municipalities. As a network, it enables a market-driven combination and integration of various agricultural activities and rural transformation services.

The agripark concept is further described as comprising of three components:

1) **Farmer Production Support Unit (FPSU)**. The FPSU is a rural outreach unit connected with an agri-hub. The FPSU does primary collection, some storage, some processing for the local market, and extension services, including mechanisation.
According to the definition of DRDLR, an agripark is a networked innovation system of agri-production, processing, logistics, marketing, training and extension services, located in district municipalities.

2) Agri-hub Unit (AHU). The AH is a production, equipment hire, processing, packaging, logistics and training (demonstration) unit.

3) Rural Urban Market Centre Unit (RUMC). The RUMC has three main purposes: linking and contracting rural, urban and international markets through contracts; acts as a holding-facility, releasing produce to urban markets based on seasonal trends; and provides market intelligence and information feedback to the AH and FPSU, using the latest information and communication technologies.

Subsequent to the minister’s announcement that the Western Cape will form part of this programme, the Department of Agriculture has arranged and hosted a multi-stakeholder workshop at Elsenburg in June. All the municipalities in the Western Cape were invited to this workshop. The first step in the roll out of this programme was to identify and agree upon one location per district where these agriparks will be established and developed.

The DRDLR in cooperation with the Department of Agriculture is currently in the process of facilitating the process in the selection of the most suitable location for each district agripark. Detailed agripark proposals and business plans will then need to be developed by district task teams. The DRDLR has prioritised this programme nationally and tight timelines for the establishment of the agriparks were set.

This programme promises not only to make a huge difference to the social conditions of our rural communities, but will also add value and grow the agricultural sector and economy of the Western Cape.
Soil tillage – an option to address soil related management strategies under conservation agriculture in the Western Cape

Conservation agriculture (CA) is a very important farm management strategy in the traditional grain producing areas of the Western Cape. The Food and Agricultural Organisation of the United Nations (FAO) regards tillage as one of three key principles of CA. In practice this means soil disturbance must be reduced to the absolute minimum needed to ensure efficient seed-soil contact after seeding, maintain minerals in the soil, reducing erosion and prevention of excessive water loss through evaporation.

No-till has numerous benefits, including improved soil aggregate stability (Kasper et al. 2009), increased water infiltration rate
(Katsvairo et al. 2002), soil residue cover (Bescansa et al. 2006), soil C content (Taylor et al. 2012) and microbial activity (Taylor et al. 2012).

According to West and Post (2002) and Quincke et al. (2007), no-till normally results in increased organic matter and improved aggregate stability in the top 5cm of the soil profile. These benefits are normally not found in the deeper soil layers.

As a result of adoption of CA at farm level, secondary challenges, such as nutrient and pH stratification (Bescansa et al. 2006, García et al. 2007, Umiker et al. 2009), may develop. Chan et al. (2003) and Poirier et al. (2009) also found the effect of increases in soil organic carbon stocks on converting from conventional-till to no-till was restricted to the uppermost layer of the soil profile. Taylor et al. (2012) found that penetrometer resistance (bulk density) tended to increase under no-till in the 5-35cm soil layer in a clay loam in KZN.

Cavalieri et al. (2009) found that 14 years of practicing no-till on a sandy clay soil, bulk density was higher, total porosity and macro porosity lower in the 20-30cm depth compared to 0-20 and 30-40cm. This could serve as proof that a plough pan developed under conventional-till and negatively influenced some soil physical properties even 14 years after no-till was introduced. The abovementioned situation might cause slower water infiltration rates, which in turn may lead to less effective rainfall storage capacity and possible more water losses through runoff (Hoffman 2013 cited by Swiegelaar 2013).

Katsvairo et al. (2002) reported higher water infiltration rates when moldboard tillage was compared to chisel tillage in maize-soybean systems in silt loam soils. Varvel et al. (2011) however, reported opposite results in a temperate region. The crop residues may also serve as habitat for pests and diseases that might negatively influence seedling survival and crop performance. The increase in residue cover, especially where no baling takes place or livestock is allowed to graze stubble or fodder, may also interfere with the planting process when tine-planters are used.

Western Cape farmers are encouraged to switch to CA. Results obtained from long-term soil quality trials (tillage and systems) at the Langgewens and Tygerhoek Research Farms proved the benefits of reducing tillage operations, inclusion of diverse crops in a rotation system and maintaining as much stubble as possible on the soil surface. As the effect of reduced tillage and maximum stubble retention becomes more prevalent, secondary effects, positive or negative, may develop at soil surface level or in the upper layers of the soil profile.

Achieving and maintaining 100% soil coverage by crop residues may suppress or prevent weed germination and establishment. However, under the climatic conditions of the grain producing areas of the Western Cape, building up of residues to 100% coverage may take several years.

Popular belief is also that any major distribution of the root profile, deep tine or inversion of topsoil, will automatically reverse the benefits (at least partially) that developed during the years under CA. The question might, however, be asked whether a once-off deep tine tillage or soil inversion could, in the short term, address the possible soil conditions mentioned above and reduce the time to reap the full potential of CA. No scientifically tested data from the Western Cape is available to assist the producer to make an informed decision on tillage management under CA. It is anticipated that similar questions regarding...
stubble management and tillage will arise as more producers switch to conservation agriculture.

A study undertaken by scientists from the Western Cape Department of Agriculture (WCDA) and the Stellenbosch University will clarify if a one-time (single) tillage will cause more damage to the soil physical properties and crop performance than the anticipated short-term advantages to crop productivity. Data obtained from this study will ensure that the producer can make an informed decision on deep tillage and soil inversion as a management tool to promote the positive effects of conservation agriculture.

The Tygerhoek study will be managed by Dr Johan Labuschagne from the Directorate Plant Sciences of the WCDA. At Langgewens Johan Van Zyl and Izane Leygonie, two MSc Agric students from the Stellenbosch University, will cover the agronomic and soil science aspects of the study respectively.

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Bedieningsgebied
Die Noordwes-streek van die Wes-Kaap strek vanaf Bitterfontein in die noorde tot by Elandsbaai en Citrusdal in die suide. Die Nortier Navorsingsplaas, een van sewe navorsingsplase van die Wes-Kaapse Departement van Landbou, verteenwoordig die Noordwestelike deel van die Wes-Kaap en is noord van Lambertsbaai geleë. Hiervandaan bedien die plaas die ekstensiewe veeboere met navorsingskundigheid in veldbestuur en dierreproduktsie.

Dr. Ilse Trautmann, ilset@elsenburg.com en Christie Rheeder, christier@elsenburg.com
Teen 1935 word die hele plaas noord van die Jakkalsrivier toe tot reservaat verklaar en staan bekend as die Nortier Reserwe. Hierdie aksie het tot baie suksesvolle veldherstel geleë en die plaas is vandag nog ’n voorbeeld van goeie veld in die omgewing.

Ná verskeie prosesse en gesprekke tussen die staat en ander belanghebbendes is die Nortier Reserwe in 1958 as reservaat gedeplorner. Die Sekretaris van Landbou aan die Departement van Lande het bevestig dat die voorbehoud van die grond ten gunste van die Departement van Landbou is aanvaar en onder die bestuur van die Departement van Landbou Wes-Kaap geplaas.

Tesourie het ’n bedrag van R11 000 (£5 500) bewillig en goedgekeur vir die boekjaar 1959/60 vir die vestiging van ’n “proefplaas” op die Nortier Reserwe. JP Pieters het sy pligte as die eerste plaasvoorman op die Nortier Proefplaas aanvaar en daar is onmiddellik begin met die bekamping van die plaas, aanlê van suipings en die veekuddes bestaande uit Afrikanerbeeste en Suid-Afrikaanse Vleismerino’s is geleidelik aangevul.

Op versoek van die Nasionale Botaniese Tuin van Suid-Afrika is ’n klein gedeelte van die proefplaas toegekomp. Dit is tans die enigste stukkie natuurlike veld in die Sandveld wat beskou kan word as verteenwoordigend van die oorspronlike flora van die gebied.

Nortier het in 2008 ’n boeradag aangebied ter viering van sy 50-jarige bestaan. Die luisterryke geskiedenis van die plaas is op aanvraag beskikbaar.

**Nortier vandag – ’n sentrum van kundigheid**

Sedertdien 1957 word die plaas, wat 2 780 ha beslaan, as ’n navorsingsfasiliteit (ook “navorsingsplaas” genoem) van die Program: Navoring en Tegnologie Ontwikkelings-
Dienste bestuur. Verskeie navorsingsprojekte is begin. Die meeste was op veld-monitoring en -bestuur gerig en 'n aantal projekte op kleinvee en beeste. Tans word verskeie navorsingsprojekte van die Direktorate Plant- en Dierewetenskappe op die plaas uitgevoer.

Dierewetenskappe

Die Direktoraat: Dierewetenskappe en sy twee spesialis-navorsers is betrokke by navorsing op Nortier. Prof. Tertuis Brand het onlangs 'n Bonsmara-stoet gevestig vir die verspreiding van geregistreerde bulle aan nuwe boere. Prof. Schalk Cloete en dr. Jasper Cloete, dosent aan Elsenburg Kollege en navorsingsgenoot, is betrokke by proewe waarin aangepaste skaaprasse en kruistipes vir ektensiewe toestande geëvalueer word. Die suiwer rasse is die Dorper, Suid-Afrikaanse Vleismerino en die inheemse vetstert Namakwa-Afrikaner. Die rasse en kruisings word geëvalueer vir die standaard-reproduksie en -groei-eienskappe, asook vir die vermoë van diere om besmettingsvlakke van bosluise te verdalk.

Omdat Nortier nie naby enige pluimvee- of volstruisplase geleë is nie, is dit ook die ideale plek waar 'n gedeelte van die skaars genetiese hulpbronne van die Oudtshoorn-volstruiskudde bewaar kan word indien voël griep die huidige kudde op Oudtshoorn sou uitwis. Die skaars genotie sluit in Kenian Reds, Zimbabwean Blues, SA Blacks wat vir groei uitgesoek is en ook SA Blacks wat vir eierproduksie uitgesoek is. Die helfte van die voëls word jaarliks met die nuwe generasie vervang.

Plantwetenskappe

Nelmarie Saayman, senior navorser in die Direktoraat Plantwetenskappe, is verantwoordelik vir navorsing oor die veldhergestiging op ou landerye en verbetering van gedegradeerde veld, asook die monitering van die veldtoestand. Kennis van die veldtoestand van 'n plaas kan help om meer ingeligte bestuursbesluite te neem om volhoubare boerdery te verseker.
The Nortier Research Farm, one of the seven research farms of the Western Cape Department of Agriculture, is situated just outside Lambertsbay and serves the extensive small stock farmers of the northwestern part of the Western Cape with research information in veld management and animal production.

Since 1957 the farm is a fully-fledged research farm of the department and celebrated its 50th anniversary in 2008. The animal science portfolio includes research on small stock (Dorper, SA meat merino and the indigenous Namakwa Afrikaner breed) and large stock (Bonsmara stud) and also houses an ostrich flock as genetic back-up resource flock for the ostrich research portfolio in Oudtshoorn. The plant science portfolio focuses on veld research, improvement of degraded veld as well as monitoring of veld conditions. A seed production unit has also been established to multiply seed of indigenous species for use in veld rehabilitation or to disseminate to farmers in the area.

Kennis van die veldtoestand van ’n plaas kan help om meer ingeligte bestuursbesluite te neem om volhoubare boerdery te verseker.

’n Saadproduksie-eenheid is ook onder Nelmarié se beheer op Nortier gevestig. Hier word gepoog om saad van gewenste inheemse spe- sies in landerye te vermeerder of waar moontlik in die veld te oes en te gebruik in veldhervestigingpro- jekte of vir dieselfde doel aan grondgebruikers te verkoop. As deel van die eenheid is ’n kweekhuis opgerig waar plante vanaf steegies gekweek en saailinge gevestig kan word om in hervestigingswerke gebruik te word.

Research farms set trend in recycling

Leann Cloete-Beets, leanncb@elsenburg.com, and Vanessa Barends (YPP), vanessab@elsenburg.com

In support of the Western Cape Green Economy Strategic Framework for agri-production, i.e. sustainable farming practices, balancing farming and conservation needs, resources efficiency and waste minimisation, all research farms of the Department of Agriculture have adopted a recycling system. This initiative is also one of the many actions of the department to “green” its own operations in an attempt to improve on our own environmental footprint.

The purpose of the recycling system is to:
• Assist in combating the effects of climate change and contribute to mitigation actions.
• Assist in reducing the carbon footprint of the farm activities.
• Help improve resource efficiency on each farm.
• Enhance the reputation of the farms as supporters of sustainable farming practices by means of resource efficiency and waste minimisation.
First small step towards sustainability

Each farm appointed a recycling manager to facilitate the implementation of the system on the farm, ensure proper record keeping of the system, provide regular feedback, assist farm managers with the system and ensure that all recycled materials are delivered to their respective drop off sites.

Waste on farms includes household waste from employee houses, office waste, conference facilities and overnight facilities. Before the inception of the systems it was difficult to get a true measure of the total waste of each farm. Proper record keeping of recycle systems has alleviated this problem. Figure 1 illustrates the total waste collected and removed from the department’s research farms from October 2013 to May 2014 and this served as the baseline.

It’s important to note that each of the research farms differ in size, number of households, facilities and activities on farm. Elsenburg also houses the head office of the WCDA. Farms’ waste statistics thus varied greatly as the system was implemented, expanded and refined on each farm.

With greater refinement of the systems more accurate and constant data is now being obtained that can be used directly in each farm’s carbon footprint calculation and monitoring.

Follow-up workshop

A follow-up workshop was hosted at the Tygerhoek Research Farm in June 2014. The purpose was to address any concerns, highlight possible opportunities, and afford each recycling manager the opportunity to give feedback on their recycling system.
From humble beginnings to a new way of thinking and working
The Oudtshoorn Research Farm had a waste collection day in support of Mandela Day 2014. Children and colleagues working and living on the farm were encouraged to join forces and clean up the surrounding farm area. This proved to be an excellent opportunity for all participants to actively support the message of Mandela Day: each individual has the ability and the responsibility to change the world for the better.

Organic vegetable garden for children
The recycling manager at the Tygerhoek Research Farm near Rivieronderend de-

This initiative is also one of the many actions of the department to “green” its own operations in an attempt to improve on our own environmental footprint.
decided recycling on its own wasn’t enough; something had to be done with the organic compost the system was generating. So he decided to start with a small-scale organic vegetable garden for the children living on the farm.

The farm manager kindly allocated a small unused piece of land close to the main office building for the children to start with their organic garden.

The vegetable garden helper group includes approximately 13 children between the ages of five and 14 years who live on the farm. Currently the groups are making their own compost from garden waste, vegetable peels and hay. The children are so passionate and proud of their garden that they work in the garden every day after school, weather permitting.

**Recycling display**

A recycling display is currently housed at the main building at Elsenburg. Its purpose is to help share the message of recycling, create awareness of the recycling initiatives of the various research farms, and showcase the re-usability of various waste objects. All visitors to Elsenburg are more than welcome to visit this display.

The recycling systems are generally working well and the following positive outcomes have been noted:

- There is a reduction in household waste to landfill.
- Individuals living and working on the farms are constantly showing support for the project.
- New and exciting initiatives have sprung from this project, i.e. organic vegetable gardens and regular competitions.
- The public has started to enquire how similar systems could be implemented on their farms.
Weens die toename in die aantal wildplase en wildboerderye en die gewildheid van die Groot Vyf, is daar baie meer buffels op wildplase. Hierdie diere speel ’n belangrike rol in die bestuur van ’n wildplaas, maar daar is sekere belangrike veeartsenykundige vereistes wanneer buffels aangehou en verskuif word.

It is important for the buffalo owner to be aware of the disease risk associated with buffaloes. From a veterinary disease perspective, there are three categories of buffaloes in South Africa. The first group is the KNP- (Kruger National Park) buffaloes, which are infected with B+K and corridor disease, also known as buffalo disease (CD for corridor disease). The second group of animals is CD-infected, but B+K negative. The third group is the so-called disease-free buffaloes.

Disease-free buffaloes (Addo-buffaloes) have received this description because the animals are negative for B+K, corridor disease, bovine tuberculosis (BTB) and bovine brucellosis or contagious agalactia (BM). The latter two diseases are both contagious diseases, but also occur in buffaloes. Buffaloes in the KNP and on several adjacent reserves are infected with BTB and BM.

To maintain the disease-free status of disease-free buffaloes, the Veterinary Services are obliged to test buffaloes from one farm to another when they may be moved. All the mentioned four diseases are managed diseases according to the Animal Health Act, 1984 (Act 35 of 1984).

Land where buffaloes are kept, must be registered with the Directorate of Veterinary Services of the National Department of Agriculture. Applications must be handed in to the local state veterinarian.

Dr. Edwin Dyason, edwind@elsingburg.com

Verskuwing van buffels 101

Veeartsenykundige vereistes vir die beweging van buffels in Suid-Afrika
en vergesel word van ’n aanbeveling van die plaaslike Omgewingsbewaringsowerheid. ’n WR-nommer word aan die eienaar en grond toegeken en ’n sertifikaat uitgereik.

**Toets van buffels**

Wanneer ’n buffelboer buffels wil vervoer of verskuif van een eiendom na ’n ander, moet die betrokke buffels vir al vier bo- genoemde siektes getoets word en mag ’n veeartsenydiens-vervoerpermit slegs uitgereik word nadat al die toetse negatief verklaar is deur die verantwoordelike staatsveearts.

In praktyk sal ’n buffelboer ’n privaat-veearts kontak wat die verdoving van die diere, die neem van bloedmonster vir B+K, korridorsiekte en BM, die doen van ’n tuberkulose-veltoets en die versending van die monsters sal hanteer. Aangesien die aktiwiteit staatsbeheerde siektes behels, word die proses deur ’n beampte van Veeartsenydiens gemoniteer.

Eienaars en veeartse moet seker maak elke monster word deeglik gemerk met die mikroskyfienommer van die betrokke buffel om enige vertragings te voorkom wanneer toetsresultate met die buffels se mikroskyfienommers vergelyk moet word.

Die tuberkulose-veltoets word gedoen deur ’n toetsmiddel, tuberkulien, wat in die vel van die buffel gespuit word en die reaksie daarop ná drie dae nagekeurig moet word. Dit beteken die buffels moet twee keer in drie dae verdoof word, aangesien die evaluasie van die reaksie fisiese betasting en meting insluit. Dit is belangrik dat goeie en sterk bomas op die eiendom van oorsprong opgerig word, want die buffels moet daarin bly totdat die toetsresultate beskikbaar is.

**Beweging van buffels**

Sodra die toetsresultate as negatief bevestig is, mag die buffels onder dekking van ’n veeartsenydiens-vervoerpermit (Rooikruis-permit) verskuif word. Die Veeartsenydiens-owerheid op bestemming moet egter ook eers vooraf die toetsresultate ontvang, evalueer en dan toestemming verleen (’n “geen beswaar” genoem) vir ’n buffelbeweging na die eiendom van bestemming. Hierdie proses van aansoek en goedkeuring neem tyd en die buffels moet intussen in isolasie van enige ander diere in ’n goeie boma aangehou word.

Die vragmotors en sleepwaens word amptelik geseël by oorsprong en onseël by bestemming. Reëlings moet vooraf met die beamptes op bestemming getref word om die vragmotors te ontvang en te onseël. Sorg moet ook gedra word dat buffels binne amptelige werksure afgelaai word. Dome tamings is onderhewig aan die beskikbaarheid van beamptes en dit kan soms ’n struikelblok wees.

Toetsuitslae is vir 60 dae geldig en vertragings met reëlings kan meebreng dat die toetse ná 60 dae verval en herhaal moet word.

Die vragmotor en sleepwaens moet deeglik skoongemaak, ontsmet en teen bosluisie behandeld word voor die buffels vervoer word, want siektevrye buffels kan tydens vervoer besmet raak.

’n Vervoerpermit deur Departement Omgewingsbewaring is ook nodig en dit word gewoonlik bekrom sodra die Veeartsenydiens-goedkeuring verkry is.

Goeie beplanning en tydige kommunikasie met die plaaslike staatsveearts en Cape Nature kan baie probleme uitskaal. Staatsveearts is daar om die boer te help om sy diere siektevry te kry en te hou. Staatsveearts se kontaknommers is beskikbaar op die Departement van Landbou se webblad by www.elsenburg.com/services-and-programmes/veterinary-services-0#s=Animal-Health-and-Disease-Control.
There are strict requirements surrounding the movement of buffalo in South Africa. From an animal health perspective three categories of buffalo are recognised – Kruger National Park buffalo, infected with both foot-and-mouth disease (FMD) and corridor disease (CD), CD positive but FMD negative buffalo, and disease free buffalo.

Disease free buffalo are considered to be free of FMD and CD as well as the cattle diseases brucellosis and tuberculosis.

Land that buffalo are kept on must be registered with the Veterinary Services directorate of the National Department of Agriculture, Forestry and Fisheries. These farms are issued a WR number.

When buffalo need to be moved they have to be tested for the four above-mentioned diseases. The tuberculosis test is a skin test where the skin is measured, injected with tuberculin and then measured again 72 hours later. The consequence of this is that a buffalo needs to be darted twice in 72 hours.

If all the test results are negative, the buffalo are allowed to move under cover of a Red Cross permit. Permission must also be granted by the Veterinary Services programme in the receiving province, a process that takes time and during which the buffalo need to be kept in isolation. Arrangements also need to be made for the vehicle to be sealed at origin and unsealed at arrival. Test results are only valid for 60 days and therefore these logistical arrangements need to be done timeously.

Good planning and timely communication with the responsible state veterinarian as well as Cape Nature is essential to limit complications.

**Statistics**

In the Western Cape there are 72 properties registered to keep buffalo. In the 2011 census 582 buffalo were counted. Since then, 353 buffalo have entered the province, while 462 have left. These figures do not include the number of births or deaths that have occurred.

Snippet as part of Afrikaans article on Buffalo movement regulations (supplied by Vets).

<table>
<thead>
<tr>
<th>Categories</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding group</td>
<td>66</td>
<td>0</td>
</tr>
<tr>
<td>Cows</td>
<td>80</td>
<td>9</td>
</tr>
<tr>
<td>Cows in calf</td>
<td>33</td>
<td>12</td>
</tr>
<tr>
<td>Cows with calves</td>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>Cows with bull calves</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Cows with heifer calves</td>
<td>42</td>
<td>2</td>
</tr>
<tr>
<td>Cows 3-in-1</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>Cows 3-in-1 (with heifer calves)</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Cows 3-in-1 (with bull calves)</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Heifers</td>
<td>114</td>
<td>29</td>
</tr>
<tr>
<td>Heifers in calf</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Bulls</td>
<td>156</td>
<td>93</td>
</tr>
<tr>
<td>Subadult bulls</td>
<td>52</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>699</td>
<td>195</td>
</tr>
</tbody>
</table>

* Results as at 5 August (66 auctions)
Gee veediefstal ‘n vuishou

‘n Allesomvattende publikasie, *Handleiding vir veediefstalvoorkoming*, is verlede jaar deur die nasionale Veediefstalvoorkomingsforum gepubliseer en die Engelse weergawe het pas verskyn. Die handleiding is ‘n uitvloeisel van die werk deur die veediefstalvoorkomingsforums en sal elke vee-eienaar met die nodige kennis toerus sodat die veebedryf ‘n verenigde front teen veediefstal kan vorm.

Willie Clack, voorsitter van die Nasionale Veediefstalvoorkomingsforum, sê hy hoop elke vee-eienaar sal die handleiding in sy bakkie of op sy bedkassie hou. “Dit is die boer se eenstopgids vir die voorkoming en hantering van veediefstal wat die veebedryf verlam.” Volgens Clack is die meeste van die inligting in die handleiding bekend en beskikbaar, maar dit is nog nie voorheen in een gids saamgevat nie.

Die handleiding dek alle aspekte van veediefstal en die bekamping daarvan. Die twee bekendste wette wat op veediefstal van toepassing is – die Wet op Diere-identifikasie en die Wet op Veediefstal – word breedvoerig behandel. Ander toepaslike wette soos die Wet op Oortreding en die Omheiningswet word ook bespreek.

Die korrekte optrede nadat veediefstal plaasgevind het, wat die boer van amptenare kan verwag, hoe die strafregstelsel werk, en waar om aan te klop indien jy nie tevrede is nie, word uitgelig. Dit is egter belangrik om te besef dat hoewel slagoffers van misdaad sekere regte het, hulle ook verkantwoordelikheid het. Net omdat jy skade gely het, gee dit jou nie die reg om onenigheidig op te tree nie. Doen eerder moeite om verhoudings met amptenare te bou.

QR-kodes is deurgaans gebruik en gee die leser toegang tot die volledige wetgewing soos in die Staatskoerant vervat. Die onderskeie artikels van die wette word aan die begin van die bespreking woordeliks (in ‘n grys blokkie) aangehaal, waarna die implikasies vir vee-eienaars bespreek word.

Volgens Clack het die veebedryf self egter ook skuld aan die hoë voorkoms van veediefstal. “Die meeste deelnemers wat met vee handel dryf, verontagsaam die bepaalings van die Wet op die Identifikasie van Diere en die Wet op Veediefstal en voldoen dus nie aan die basiese vereistes om veediefstal te bekamp nie.”

“Met hierdie handleiding het vee-eienaars nie meer die verskoning dat hulle nie weet wat hulle verpligtinge is nie. Gebruik die gids, pas die wette toe en lewer só ‘n bydrae in die stryd teen veediefstal.”

Vir meer inligting skakel die Rooivleisprodusente-organisasie se hoofkantoor by 012 349 1102. Die publikasie is ook beskikbaar op www.elsenburg.com.
The effect of collection time and genotype on embryonic development in artificially incubated ostrich (Struthio camelus) eggs during the first 7 days.
Dr Z. Brand and Prof S.W.P. Cloete

Market attractiveness index analysis: South African plum exports to the Netherlands
Asanda Jafta and Michelle Swarts
The effect of collection time and genotype on embryonic development in artificially incubated ostrich (*Struthio camelus*) eggs during the first 7 days

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Take home message
Research showed the hatchability of ostrich eggs is affected by collection time and genotype. These factors also affect the growth rate of the embryo and need to be considered during the incubation period. Results from our study can be put to practical use when investigating the age of early embryonic mortalities.

Introduction
Artificial incubation has become an integral part of any commercial poultry enterprise. Successful artificial incubation is, however, affected by a number of factors such as collection time (Van Schalkwyk et al., 1999; Blood et al., 1998). It is a common practice to collect ostrich eggs in the late afternoon, the time most eggs are laid. Weather conditions may have a significant impact on the embryo for eggs laid after collection time.

Egg quality was reported to have significant genetic components (Stewart, 1995). Brand et al. (2008) reported that Zimbabwean Blue (ZB) females laid significantly heavier eggs (5%), which resulted in their chicks being 7% heavier than those of South African Black (SAB) females. Shell deaths were accordingly influenced by breed combination in the study of Brand et al. (2007), involving the SAB and ZB breeds. The aim of this study was to determine the effect of collection time and genotype on the embryonic changes that take place during early embryonic development for the first 7 days of incubation.

Material and Methods
Eggs used for this study were from the commercial pair-bred ostrich flock maintained at the Oudtshoorn Research Farm of the Western Cape Department of Agriculture, South Africa (2008 and 2009). The husbandry and management of the flock have been described previously by Cloete et al. (1998) and Bunter & Cloete (2004). The flock consisted of the South African Black (SAB) genotype, the Zimbabwean Blue (ZB) genotype, and the reciprocal cross between the two. Eggs were collected in the afternoon and early morning, disinfected by ultra-violet lights, weighed, and identified by date and pad-dock of origin. Details on the methods of egg collection, sanitation and storage on the research farm have been previously documented (Van Schalkwyk et al., 1999; Brand et al., 2007).

Eggs were artificially incubated at
36°C and 24% RH. Between 37 and 45 eggs were collected for each of the developmental stages: freshly laid and 1 - 7 days of incubation. On the pre-selected day, eggs were weighed, measured, and opened to investigate developmental changes. The techniques of opening the eggs and measuring the blastoderm have been described by Brand et al. (2014). The traits measured were the blastoderm area, area pellucida (AP), area opaca (AO), length and width of the area vasculosa (AV), embryo area, length and embryo head width. The data were then subjected to least-squares analysis, using ASREML (Gilmour et al., 1999). Fixed effects considered were collection time and genotype. Differences between comparable means were discerned with the least significant difference (LSD) method, provided that it was protected by a significant F-value in the ANOVA (Snedecor & Cochran, 1967). Data are reported as means ± SEM and P < 0.05 was considered significant.

Results and Discussion

Table 1 contains the overall means across the total experimental period for the respective measurements. For the blastoderm area, AO or AP it represented means taken over 2 days of incubation and for the embryonic and AV measurements it represents means recorded over the first 7 days of incubation. Collection time did not affect blastoderm area, AO or AP, while it did affect embryo length, embryo area and embryo head width, with higher measurements for eggs collected in the afternoon. Malecki et al. (2005) found that the embryonic development becomes “arrested” after oviposition as the egg cools down and awaits incubation. It could be speculated that, because of the practice of collecting eggs in the afternoon and the immediate placement of the collected eggs into an Ultra violet machine to be disinfected, the cooling down process of the egg is delayed. This might cause continued growth of the developing embryo, whereas eggs collected in the morning were subjected to immediate cooling, because of the lower night temperatures.

The effect of genotype on blastoderm growth for the first 2 days of incubation is shown in Figure 1. There was no difference in blastoderm area between genotypes for fresh eggs. At 2 days of incubation the blastoderm area of the SAB x ZB crosses (104.5 mm²) was smaller (P < 0.05) than those of the pure ZB (161.7 mm²) and ZB male x SAB female crosses (166.1 mm²). This result was unexpected since SAB male x ZB female crosses produced, together with the pure ZB line, the heaviest eggs and chicks (Brand et al., 2008). The blastoderm area of the ZB male x SAB

Table 1: Means (± SE) depicting the effect of collection time on embryonic development.

<table>
<thead>
<tr>
<th>Measured traits</th>
<th>Collection time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Afternoon (n = 194)</td>
</tr>
<tr>
<td>Blastoderm area (mm²)</td>
<td>74.4 ± 6.3</td>
</tr>
<tr>
<td>Area opaca (mm²)</td>
<td>8.2 ± 1.2</td>
</tr>
<tr>
<td>Area pellucida (mm²)</td>
<td>63.2 ± 5.9</td>
</tr>
<tr>
<td>Embryo length (mm)</td>
<td>7.3 ± 0.1a</td>
</tr>
<tr>
<td>Embryo area (mm²)</td>
<td>14.8 ± 0.4a</td>
</tr>
<tr>
<td>Embryo head width (mm)</td>
<td>3.2 ± 0.1a</td>
</tr>
<tr>
<td>Area vasculosa length (mm)</td>
<td>25.4 ± 0.4</td>
</tr>
<tr>
<td>Area vasculosa width (mm)</td>
<td>22.4 ± 0.4</td>
</tr>
<tr>
<td>Area vasculosa area (mm²)</td>
<td>152.2 ± .4</td>
</tr>
</tbody>
</table>

a,b - Means in the same row with different superscripts are significantly different (P < 0.05)
female crosses was also significantly larger than of the pure SAB line. This difference in blastoderm area could be related to the hypothesis that the rate of embryonic growth in larger eggs is slowed, thus the need for a longer incubation time.

Figure 2 illustrates the effect of genotype on embryo area over a 7-day incubation period. At 3 days of incubation pure ZB embryos had a smaller area (P < 0.05) (8.8 mm²) than the pure SAB and SAB male x ZB female crosses (11.9 mm² and 12.8 mm² respectively). Rapid growth for the pure ZB embryos at day four of incubation resulted in the area of embryo from ZB females being significant higher (25.2 mm²) than those from SAB females (20.5 mm² to 20.7 mm²). Pure SAB em-

**Figure 1: Effect of genotype on blastoderm area of fresh ostrich eggs, eggs incubated for 1 day and for 2 days.**

**Figure 2 Effect of genotype on embryo area from the fresh egg till eggs incubated for 7 days.**
bryos were also shorter (P < 0.05) at 7.2 mm at day 4 of incubation compared to SAB male x ZB female crosses (7.8 mm). Both embryo length (15.1 mm) and area (35.1 mm²) of the ZB male x SAB female cross were larger (P < 0.05) at 7 days of incubation in comparison to the other genotypes (14.1 mm to 14.5 mm for length and 30.1 mm² to 31 mm² for area respectively).

Conclusions
Due to an increase in embryo length in eggs collected during afternoons, collection time needs to be considered in determining the age of developing embryos. Genotype had a clear effect on the growth of the embryo in this study, as embryos from the ZB male x SAB female cross generally had larger dimensions than those of pure breeds by 7 days. Genotype thus needs consideration in the developmental staging of embryos. Information stemming from these observations expands our knowledge of the development of ostrich embryos and may be used to identify incubation problems that may result in a low hatchability.

References


Market attractiveness index analysis: South African plum exports to the Netherlands

Asanda Jafta1 & Michelle Swarts1

1Directorate: Agricultural Economics Services; Marketing and Agribusiness Division
Western Cape Department of Agriculture

1. Introduction
The market profile reviews the export market for plums to the Netherlands. The purpose of this article is to guide existing and new entrants on potential markets for plum exports and its future prospects. This article is a summary of a comprehensive market profile report compiled as part of training provided by the International Trade Centre (ITC), sponsored by the Department of Agriculture, Forestry and Fisheries (DAFF) to capacitate officials in export market research. Plums were selected as they form part of the deciduous fruit basket of which the majority of fruit is produced in the Western Cape. The aim of this study is to encourage plum producers to export their produce to markets where it would be more competitive compared to other supplying counterparts. The results of this study will contribute towards Provincial Strategic Goal One of the Western Cape Province, which strives to create opportunities for growth and jobs.

The South African plum industry is well established and primarily aimed at supplying fresh plums for the export market. Plum exports account for 80% of the total production and are mainly destined for the European Union (EU) (54%), United Kingdom (UK) (25%) and Middle East (13%) (Hortgro, 2014). Smaller percentages of the annual crop are sold fresh on the local market or processed into various products such as juice, preserved jams and dried fruit.

The Western Cape Province is the main producing area for plums. Production in the Province accounts for over 50% of all plums produced in South Africa. This is primarily due to the Mediterranean climate, characterised by cold winters and moderate summers which is favourable for the production of most deciduous fruits. Other production areas within South Africa include Limpopo, Eastern Cape and Northern Cape provinces. The Western Cape Province serves as a distribution hub for plums destined for exports which are channelled through the Cape Town harbour (DAFF, 2011). There are 33 plum varieties produced in South Africa (at the time of the study) of which the top four plum varieties are Laetitia, Songold, Sapphire and Pioneer, accounting for about 45% of the total plums production in South Africa. Harvesting commences from mid-October till late April, approximately between weeks 42 and 15 annually.

2. Global production and trade
Plums are produced globally, with China being the largest plum producer with a total production of 6 227 440 tons of plums in 2012 (FAO, 2014a). Combined production for the rest of the world’s producing

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1 HS codes are internationally standardised names and numbers that classify traded products that are developed and maintained by the World Customs Organization (WCO). The WCO is an independent organisation of 160 countries based in Brussels, Belgium. The HS system represents almost 98 percent of world trade, which includes 200 countries (www.wcoomd.org).

countries amounts to less than 1 000 000 tons. The ranking for the second largest producing country changes almost every year due to the alternate bearing nature of plum trees. South Africa ranked 44th place in terms of world production of plums in 2012 with the total production amounting to 59 560 tons (FAO, 2014b).

Plums are traded under the Harmonised System (HS) Code: 080940. Caution should however be taken as similar products can be grouped together and traded under the same HS code, as in this instance sloes (fruits of blackthorn bush) are also categorised under the same HS code as plums (ITC, 2014a).

3. Domestic production in comparison with export competitiveness

Production of plums in South Africa has been increasing over the past 3 years, reaching more than 65 000 tons per season from 2010/11. The most notable decline in the production of plums was during the 2005/06 season when production reached a mere 39 018 tons. The decline in production was mainly due to severe droughts in some of the production areas in the Western Cape, major logistical problems and a low demand in the EU market. The 2005/06 season were followed by three years of significant growth in production which was mainly due to favourable weather conditions and extended marketing campaigns in export markets, etc. The production seasons for 2010, 2011 and 2012 also showed a relative stable recovery in plum production (Hortgro, 2014).

South Africa has been able to increase the quantity of plums passed for exports during 2012/13 to 59 593 tons (19.2% increase y/y), although the production slightly decreased to 55 240 tons during the 2013/14 season (7.3% decrease y/y) (Hortgro, 2015).

4. Determining a potential export market for South African plums?

To advise the South African plum exporters regarding a potential market, a Market Attractiveness Index (MAI) was used to identify the most attractive and lucrative export market for South African plums. The MAI uses International Trade Centre (ITC): Trade Map and Market Access trade indicators to conduct a market screening analysis. In order to determine the most attractive markets, the following market indicators were used to conduct the market screening and formulate a Market Attractiveness Index (MAI) which entails indicators such as:

Figure 1: South African plum production (2003/04 till 2012/13)

![Figure 1: South African plum production (2003/04 till 2012/13)](source: Hortgro, 2014)

59 593 tons amounts to 11 352 014 5.25 kg equivalent cartons, and 55 240 tons amounts to 10,521,857 5.25 kg equivalent cartons.
(a) Import market growth over a 5 years period from 2009 to 2013,
(b) market size (i.e. share in the world imports),
(c) concentration in the market to evaluate the level of competition,
(d) tariffs applied, and
(e) identify whether the country has a tariff advantage over competitors in that specific market.

These indicators were used to assist in the selection of a potential market for South African plums; countries were ranked in terms of their importance to the South African plum exporters. Table 1 illustrates the top ten countries in terms of their performance with regards to the five indicators used in MAI to identify the most attractive market for South African plum exports.

### Table 1: Market Attractiveness Index (MAI) for plum exports from South Africa.

<table>
<thead>
<tr>
<th>IMPORTERS</th>
<th>MARKET GROWTH IN VALUE (2009-2013)</th>
<th>MARKET SIZE (SHARE IN WORLD IMPORTS)</th>
<th>COMPETITION</th>
<th>TARIFF APPLIED TO SA (%)</th>
<th>TARIFF ADVANTAGE FOR SA</th>
<th>FINAL RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>Very fast growing</td>
<td>Medium</td>
<td>Diversified</td>
<td>3.8</td>
<td>Small advantage</td>
<td>1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Fast growing</td>
<td>Medium</td>
<td>Highly concentrated</td>
<td>0</td>
<td>No advantage</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>Slow growing</td>
<td>Small</td>
<td>Moderate concentrated</td>
<td>0</td>
<td>No advantage</td>
<td>3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Slow growing</td>
<td>Medium</td>
<td>Concentrated</td>
<td>0</td>
<td>No advantage</td>
<td>4</td>
</tr>
<tr>
<td>France</td>
<td>Fast growing</td>
<td>Small</td>
<td>Highly concentrated</td>
<td>0</td>
<td>No advantage</td>
<td>5</td>
</tr>
<tr>
<td>Brazil</td>
<td>Very fast growing</td>
<td>Small</td>
<td>Highly concentrated</td>
<td>10</td>
<td>No advantage</td>
<td>6</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>Very fast growing</td>
<td>Small</td>
<td>Highly concentrated</td>
<td>3.9</td>
<td>Small advantage</td>
<td>7</td>
</tr>
<tr>
<td>United States of America</td>
<td>Slow growing</td>
<td>Small</td>
<td>Highly concentrated</td>
<td>0</td>
<td>No advantage</td>
<td>8</td>
</tr>
<tr>
<td>China</td>
<td>Very fast growing</td>
<td>Medium</td>
<td>Highly concentrated</td>
<td>10</td>
<td>High disadvantage</td>
<td>9</td>
</tr>
<tr>
<td>Canada</td>
<td>Slow growing</td>
<td>Small</td>
<td>Highly concentrated</td>
<td>3.7</td>
<td>Small advantage</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Trade Map, 2014
The below results were obtained from the Market Attractiveness Index analysis:

- According to the MAI results Russia ranked first, followed by the Netherlands market.
- The Russian market has a very fast import growth rate, which depicts the demand of plum imports in the market. South Africa however faces an import tariff of 3.8% on plums exported to Russia.
- Although Russia is ranked first on the market screening, the Netherlands is identified to be a more attractive market than Russia, due to various factors, which amongst others include the language barrier that makes it difficult to conduct business.
- The mentioned language barrier could impose additional cost on the exporter’s side as well as increased risk due to the misinterpretation or unreliable translation of information, which could result in unnecessary trade losses being incurred during trade negotiations.
- Furthermore, the Russian political and financial crisis gave rise to the selective banning of fresh produce being imposed on certain markets exporting to the Russian Federation.
- It is suggested that exporters should attempt to avoid incurring unnecessary costs when exporting products.

### 4.1 Rationale for selecting the Netherlands as an export market for South African plums

- Between 2009 and 2013, plum imports to the Netherlands market grew by 6%, which demonstrates positive and substantial growth in imports compared to other importing countries.
- However, being the second largest importing country worldwide by value, the Netherlands is highly concentrated by other supplying countries. Hence it scored low for competitiveness, and this poses a challenge to exporting countries’ to ensure that their produce is uniquely marketed within the Netherlands market.
- The Netherlands applies a 0% preferential tariff to fresh plum exports deriving from South Africa. However, it should be noted that South African exporters has to comply with the Netherlands Free Trade Area Agreement (NFTA) and the Country of Origin rules (ITC, 2013b).
- In the Netherlands more than 95% of the local production of plums is freshly consumed with the remaining 5% allocated for processing in juice, wine, jellies, jams, etc. Production is dominated by two cultivars namely: Victoria and Opal. The Dutch harvest is spread over eleven weeks, commencing in the first half of July till September (Fruit Masters Holland, 2014).
- According to the Ease of Doing Business Index, it is relatively easy to do business with the Netherlands. The country is ranked 28th out of 189 countries in the overall category of doing business and in terms of the sub-category of trading across borders, the Netherlands is ranked 13th out of 189 countries. This implies that it is relatively easy to enter the Netherlands market with minimal complications (Doing Business, 2014).
- The largest port in Europe namely Rotterdam, is located in the Netherlands, acting as a logistical gateway to the rest of Europe. A reliable agent could be a good source to act as an intermediary to ac-

**Table 2: South African competitors within the Netherlands plum market.**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>53.4%</td>
<td>494 338 000</td>
<td>18%</td>
<td>23 408</td>
<td>7%</td>
</tr>
<tr>
<td>Chile</td>
<td>28.4%</td>
<td>262 966 000</td>
<td>28%</td>
<td>12 147</td>
<td>3%</td>
</tr>
<tr>
<td>Spain</td>
<td>6.8%</td>
<td>63 014 000</td>
<td>-7%</td>
<td>3 862</td>
<td>-5%</td>
</tr>
<tr>
<td>France</td>
<td>3.6%</td>
<td>33 591 000</td>
<td>-59%</td>
<td>1 950</td>
<td>5%</td>
</tr>
</tbody>
</table>
cess such a mature market in order to minimise the risk of suffering unnecessary trade losses (Holland Trade, 2014).

4.2 South African export performance in the Netherlands plum import market

South Africa’s main competitors within the Netherlands market are Chile, Spain and France (table 2). Although South Africa has a market share of 53.4% within the Netherlands market, Chile remains to be a forceful competitor with a market share of 28.4% in 2013. The Chilean market, which is also a Southern Hemisphere market player, also seems to develop momentum in terms of import growth (in value) which increased by 28% between 2012 and 2013 as opposed to South Africa’s 18% for the same period. The Spanish and French markets are also relatively significant market players that supply the Netherlands market in the Northern Hemisphere counter-seasonal production months. These are opposite production months than the Southern Hemisphere (of which South Africa and Chile are part of) winter season.

5. Conclusion

The Netherlands plum import market presents a good opportunity for South African plum exports. According to the Ease of Doing Business Index in 2014, the Netherlands was overall ranked 28th and ranked 13th for trading across borders, which implies that it is relatively easy to enter the Netherlands market from a foreign market’s perspective (Doing Business, 2014).

There are however a number of mandatory non-tariff barriers that exporters need to comply with such as sanitary, phytosanitary and private market standards that govern the quality and safety of imported food produce, marketed and sold within the EU. The demand for plums imports in the Netherlands is fast growing and the counter-seasonal fluctuations of plums exports between South Africa and its main competitors (Spain and France) within the Netherlands varies. This further concludes that South African exporters can take advantage of the market gap to gain increased market share. South Africa benefits from a preferential tariff of 0%; which indicates that South Africa is exporting plums more competitively to the Netherlands as opposed to exporting countries that faces tariffs.

6. References


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