UAVs helping us FARM

2016 Prestige Agri Awards

Veterinarians’ Compulsory Community Service
Celebrate 2016

It is a real privilege to be setting the scene for this final Agriprobe of 2016. Even in the midst of the drought and its associated impact on the country’s fiscal state, we have much to be excited about and to celebrate. At an organisational level, the Department continues to set the standard for others to emulate. Probably our greatest recognition this year was to showcase our extension model at the Food and Agriculture Organisation of the United Nations in Rome. This remarkable form of recognition cannot be underestimated.

This edition also highlights some exciting features, including a focus on the World Food Day event in Graafwater. Our work in climate change and proactive measures to mitigate the impact of the drought continues to enjoy the recognition and appreciation of our key stakeholders.

On a personal level, it does seem that all of us experience all the seasons at some stage in our lives, albeit in different measures. Reflecting on this past year, I hope each of you has experienced more summer than winter moments and that your joys have overshadowed the moments of sadness.

Either way, the end of the year means you are on the threshold of a new year full of opportunity, hope and promise. Whatever regrets you may have had this past year, the new year brings with it the promise of new beginnings.

Have a safe and blessed festive season and let’s make 2017 the year of delivery with passion.

My wish for each of you is that 2017 will see the realisation of all your hopes and dreams, that you will grasp each opportunity that comes your way and that your treasures will overflow.

Thank you for your contribution to the work of this Department. Have a safe and blessed festive season and let’s make 2017 the year of delivery with passion.
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ON OUR COVER

In the spirit of the festive season, we decided to make this our “feel good” issue. All the stories in this edition carry positive messages of acknowledgement, hope and new beginnings. We trust you will draw inspiration from them and start 2017 with fresh vigour.

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As the year draws to a close, we have the opportunity to take stock of our efforts to drive agriculture and agri-processing in the Western Cape.

One of the most significant challenges we faced was outside of our control. Extremely low rainfall levels meant we faced drought conditions and water restrictions for most of the year. This had a negative impact on both animals and crops.

The Central Karoo, West Coast region and parts of the Cape Winelands are still experiencing drought conditions. It is expected that there will be challenges with grazing for animals during the summer months.

Our research shows extreme weather events will persist. Temperatures will continue to rise, while rainfall is projected to decrease.

It is critical that we take urgent steps to ensure the sector remains sustainable.
Agriculture employs over 200 000 people in this province. Through its backward link to agri-processing, agriculture also has a central role to play in our Project Khulisa growth strategy.

One of the key achievements we made this year was the launch of a co-ordinated climate response action plan, SmartAgri, in partnership with the private sector and academia. One of SmartAgri’s recommendations is conservation agriculture, a pioneering and innovative method that includes minimum tillage and crop rotation to reduce water usage on farms.

We are also driving a suite of initiatives to grow agri-processing under the banner of Project Khulisa. These include efforts to boost halal and wine exports, and to create an enabling environment for all agri-processed products to flourish. Together with our partners we have made headway in our drive to increase water storage in the Brandvlei Dam, and we have commissioned the equipment we require for our residue testing facility. All of the initiatives under Project Khulisa are designed to open international markets for our produce, and I am pleased with the progress we have achieved thus far.

By being solutions-driven, we will continue to take agriculture forward, ensuring food security into the future. I would like to commend every person working in this sector. Through your hard work, we are delivering world-class products to South Africa and the world, and we are building an agriculture sector we can be proud of.

I wish you a joyous festive season with your loved ones and a prosperous 2017.

Minister Alan Winde, MEC of Economic Opportunities.
Dear clients of the Department

Another year rushed by and 2016 brought many challenges to the sector. Two key challenges jump to mind: drought and water. It seems these two challenges are here to stay and it would be best to work together to address the mitigation and adaptation for sustainable production.

The sector remains under pressure with risks generated by other stakeholders, but we need to reflect and express our gratitude to the farmers and agri-workers, delivering food and fibre under difficult conditions. So often we take food security for granted. Let’s think about those in our province that go hungry, especially during this festive season.

As for 2017, let us undertake to take hands and work (even harder) together for a united and prosperous global agricultural sector, in balance with nature.

Go well and keep safe for an exciting and better 2017.

Joyene Isaacs
Head of Department
The 2016 conference of the Agricultural Economics Association of South Africa (AEASA) took place from 14 to 16 September at the Misty Hills Country Hotel in Johannesburg. Agricultural economists from various government departments, the private sector and academia attended the conference. Over the three days, paper presentations, workshops and panel discussions focused around the central theme of “Supporting growth and transformation in South African agriculture”.

The current president of AEASA is the Western Cape Department of Agriculture’s (WCDoA) Bongiswa Matoti, Director of Agricultural Economics Services. The presidential address given on the first day, entitled “Navigating agricultural economics through new terrains”, took stock of the historic path on which agricultural economics has come in South Africa before looking ahead at what will be required of South African agricultural economists going forward to best serve the agricultural sector. In particular, current key skills and training gaps were highlighted, such as budgeting, resource economics and impact studies.
The 2016 conference had a stronger policy focus than in previous years, with fewer papers being presented in parallel sessions and instead making room for a number of panel discussions around important current policy issues in South Africa’s agricultural space. The issues covered in these discussions included: climate change policy and water constraints; funding for agricultural support and growth; progress on Chapter 6 of the National Development Plan; leveraging investment into South African agriculture; and agri-processing and government’s AgriParks plan.

The fewer number of paper sessions meant that what was accepted was of a high quality and relevance to the conference theme. Early on the final day, the three papers deemed the best by a committee were presented as “upgraded papers”. After the presentations a panel judged the three papers to determine which was first, second and third best at the conference.

The 2016 award for the best paper went to the Department’s Louw Pienaar, whose study done in collaboration with Dieter von Fintel at the Stellenbosch University looked at the impact the old age grant is having on agriculture in the former homelands. The study found the grant is having a positive enabling effect, meaning households receiving the grant tend to use that money towards farming inputs and technology in order to grow the household’s agricultural activities.

The other two upgraded papers were from the University of the Free State. Second prize went to a study on the effect of farmer networks to reduce opportunistic behaviour, such as falsely labelling lamb products as “karoo lamb”. The third prize went to a paper that looked at applying a methodology of measuring yield variability to the application
The former homeland areas consisted of 10 distinct states that took up 13.96% of the total 122.1 million hectares of land in South Africa. Out of the ten former states, the Transkei area, was the biggest with 4.42 million hectares, followed by Bophuthatswana and KwaZulu with 3.80 and 3.61 million hectares respectively.

One of the take home messages was that agricultural economists have some tough challenges on the horizon and work needs to be done to be better equipped for these challenges. However, given the quality of work on display at the conference and the eagerness of participants to engage collectively on the issues at hand, it would appear the profession is definitely moving in the right direction.

The presentations by Department officials, along with a workshop session held on the Western Cape Land Audit, provided the opportunity to connect with other agricultural economists working in all different areas to collectively bring different experiences and areas of expertise to tackle the main issues the profession is tasked with addressing.

One of the take home messages was that agricultural economists have some tough challenges on the horizon and work needs to be done to be better equipped for these challenges. However, given the quality of work on display at the conference and the eagerness of participants to engage collectively on the issues at hand, it would appear the profession is definitely moving in the right direction.

For more information, contact Andrew Partridge: andrewp@elsenburg.com
During this year’s annual SA Annual Cheese Festival, our Departments’ Cape Made Pavilion, exhibiting alternative crops and products of the Western Cape, welcomed a new addition in the Cape Made Kitchen. Here two Stellenbosch culinary schools, the Institute for Culinary Arts and The Private Hotel School, joined forces with Agri Expo and the Western Cape Department of Agriculture to bring a small food theatre to the festival.

A series of these recipes will be published in the AgriProbe. Herewith another recipe from the recipe CD booklet presented to the attendees to test at home. AP

Ever wondered what to do with ingredients? Let us show you.
Parmesan baked olives

Michelle Day
Serves 24

INGREDIENTS

- ± 24 Christine’s Green Olives, pitted
- 120 ml cake flour
- 60 ml butter
- 80 ml Parmesan cheese, grated
- ± 24 small rosemary twigs

Remove the olives from the brine and allow to dry well. Lightly rub together the flour and butter before adding the grated Parmesan. Work into a dough. Roll into a cylinder and allow to rest in the fridge for 30 minutes.

Preheat the oven to 200°C. Remove the dough from the fridge and break off just enough dough to wrap around each olive, enclosing it completely and ensuring that the dough is not too thick. Skewer one end of the olive with a small rosemary twig.

Allow the olives to firm up in the fridge for 20 minutes. Bake for 15 - 20 minutes until baked through and golden.

Herewith another recipe from the recipe CD booklet just in time for summer.

Scan the QR code or visit www.elsenburg.com to download the recipe.
The Western Cape branch of the South African Society for Animal Science (SASAS) hosted two scientific meetings, namely the 49th SASAS Congress and the 6th International Ratite Scientific Symposium. These meetings presented excellent fora for animal scientists to meet each other to share knowledge and experiences, while also providing excellent networking opportunities. More than 260 delegates registered for the SASAS Congress, while approximately 60 ratite scientists attended the symposium.

The six-member organising committee of the Western Cape SASAS branch drew on three members from the Directorate Animal Sciences and the Elsenburg Institute for Agricultural Training. Elsenburg scientists were also well-represented in the scientific programme, contributing four of 14 (29%) invited keynote addresses, 16 of 86 (19%) contributed oral papers and 10 of 102 (10%) posters to the SASAS Congress.

Scientists from the Directorate involved with ostrich research at the Oudtshoorn Research Farm of the Department were involved with four of 10 invited keynote addresses, 10 of 19 contributed oral papers and all three posters on display during the Ratite Symposium.

The achievements of a number of deserving members were recognised during the gala dinner event. Dr Lise Sandenbergh, scientist at the Directorate, received a bronze medal for her PhD thesis in genetics titled “Identification of SNPs associated with robustness and greater reproductive success in the South African Merino sheep using SNP chip technology”.

Dr Marna Smith-Stofberg, a PhD student from the University of Western Australia, was also acknowledged for her research. Her work focused on the genetics of reproduction in ostriches, which is crucial for the production of high-quality chicks. Her research contributed to the understanding of genetic factors affecting reproduction in these animals.

From left: Prof Schalk Cloete, Dr Lise Sandenbergh, Dr Marna Smith-Stofberg and Prof Irek Malecki from the University of Western Australia.
continuous professional development of natural scientists. It is therefore important for all practicing animal scientists to attend such meetings and contribute to the scientific programme to ensure continuous registration with the South African Council of Natural and Agricultural Scientific Professions.

Scientific meetings like these provide excellent networking opportunities for animal scientists.

Dr Zanell Brand and Prof Schalk Cloete.

conducted her studies at the Oudtshoorn Research Farm, also received a bronze medal for her PhD thesis in animal sciences titled “A protocol for liquid storage and cryopreservation of ostrich (Struthio camelus) semen”.

Both these theses were submitted at Stellenbosch University and drew praise from international external examiners.


Scientific meetings like these provide excellent networking opportunities for animal scientists to foster existing networks and establish new linkages. The attendance of such meetings is considered during the continuous professional development of natural scientists. It is therefore important for all practicing animal scientists to attend such meetings and contribute to the scientific programme to ensure continuous registration with the South African Council of Natural and Agricultural Scientific Professions.

For more information, contact Prof Schalk Cloete: schalkc@elsenburg.com
Annelie Kruger, a technician at the Directorate: Animal Sciences (RTDS), was awarded a special trophy prize for Best Animal Lecture at the 34th Annual Congress of the South African Society for Agricultural Technologists (SASAT) held in Upington in September 2016.

She delivered a presentation on some of the innovations she observed during her official visit to Western Australia. Some of these animal management and data collection interventions are under consideration for implementation at the Western Cape Department of Agriculture’s Research Farms.

Plot du Toit also presented her experience from the trip to Western Australia, focussing primarily on improving the accuracy and precision of research data collection.

Resia Swart chaired a paper session at the congress and presented a poster titled “Comparing the effect of age and dietary energy contents on the carcass composition of Boer goats”.

Nkululeko Mnisi delivered a presentation titled “Evaluation of carob pod meal as an alternative energy source for dairy cattle”.

All the poster and platform presentations made by the technicians from the Directorate Animal Sciences were well received.

The research technicians’ annual attendance of SASAT provides them with a valuable opportunity for networking and exposes them to work done by other institutions in the research environment. The technicians from the Directorate Animal Sciences have a history of outstanding performance at SASAT and do an excellent job of representing the Department in this arena with their contributions.

For more information, contact Pavarni Jorgensen: Pavarnij@elsenburg.com
2016 Prestige Agri Awards
ANTON TAKES TOP HONOURS

by Bronwynne Jooste

Anton Alexander and his wife, Sophia, with their children (from left) Charney, Anthony and Aylene.

Alan Winde, Minister of Economic Opportunities, with Sophia and Anton Alexander at the gala ceremony.

Anton Alexander was named the Western Cape’s Agri Worker of the Year at the 2016 Prestige Agri Awards. The gala ceremony was held at the Nederburg Wine Estate in Paarl on Saturday, 5 November 2016.

Alexander hails from the Elgin, Grabouw, Vyeboom and Villiersdorp (EGVV) region where he works as a human resources (HR) officer at the Ouwerf Farm (Crookes Brothers). “Agriculture is more than a job; it is a lifestyle,” said the Western Cape’s top agricultural employee.
lifestyle,” said the Western Cape’s top agricultural employee.

Alexander has been working at the Ouwerf Farm for the past twenty years. Initially employed as a general worker, he has held different positions, including that of tractor driver and supervisor, before being promoted to HR officer.

He hopes his achievement will inspire others: “If we are proud of who we are, it will spill over to the next generation.”

Alan Winde, Minister of Economic Opportunities, congratulated Alexander and praised the example he sets for others. “Anton is an ambassador for our agriculture sector. He’s making a major contribution to the farm where he works, but is also dedicated to encouraging young people to enter the sector. By being dedicated to his work and by learning new skills, he has achieved major progression in his career. I am confident his success will serve as an inspiration to young agriculturalists.”

Alexander’s prizes include an iPad Air sponsored by Daleen Turner Consultancy, a R20 000 Shoprite gift voucher, a overseas study tour worth R60 000 and R20 000 cash sponsored by the Western Cape Department of Agriculture. Alexander also joins the competition’s previous winners as a member of the Minister for Economic Opportunities’ Prestige Agri Worker Forum.

“Through the Prestige Agri Worker Forum, I am looking forward to working with Anton on growing our sector, especially in encouraging our agri workers to take their careers to new heights,” said Winde.

The Western Cape Prestige Agri Awards
is co-sponsored by the Western Cape Department of Agriculture and Shoprite, Africa’s largest food retailer.

“Communities are at the core of Shoprite’s business – they are our customers, our employees and of course our suppliers. Agri workers make such an important contribution to South Africa’s economy – these individuals are the reason we’re able to sell quality produce in our supermarkets on a daily basis,” said Dr Johan van Deventer, General Manager at Freshmark, Shoprite’s fruit and vegetable procurement and distribution arm.

Leaders in Action, the latest edition in the Abundant Harvest book series, was also launched at the Prestige Agri Awards. This book honours all the previous overall winners of this competition.
The booklet is not for sale, but can be obtained online at www.elsenburg.com or by contacting any of our Sustainable Resource Management Officials at our district offices.

GET YOUR COPY!

Soil Blanket, a booklet aimed at teaching South African children how to care for the environment, was launched in the Western Cape.

Alan Winde, Minister of Economic Opportunities, officially launched the booklet, written by Marina Möller-Eilers, at the Sustainability Institute in September. The event coincided with National Arbour Week 2016, which took place between 1 and 7 September.

Developed by the Western Cape Department of Agriculture, the booklet forms part of the LandCare programme and outlines the importance of soil to sustain life on earth. To be distributed across the country, it will be published in Afrikaans, English and isiXhosa and made available to pupils between Grades 5 and 7.

“We will be reaching 7 000 children at schools across the country with this booklet. Booklets will be distributed at 100 schools in the Western Cape. During the National LandCare conference in Kimberley a further 3 000 copies were issued to other provinces,” said Minister Winde.

He said Project Khulisa had selected agri-processing as a key growth sector with
the potential to add up to 100 000 jobs to the economy. This growth can only take place if the environment is sustained.

“Through initiatives such as our SmartAgri partnership we have prioritised sustaining the environment. This booklet is a great resource, because it is aimed at the future of the agriculture sector by targeting the youth.”

This is the fourth booklet in the series, preceded by Intaka, Ondersteboboom and Gou 'n jakkalsoor. Another edition, with a focus on the management of water, is set to be completed later this year. AP
As a CCS (compulsory community service) vet working in the Western Cape Department of Agriculture’s Veterinary Public Health (VPH) programme, myself and a few of my VPH colleagues were invited to attend the Red Meat Abattoir Association (RMAA) annual conference at the Spier Wine Estate outside Stellenbosch earlier this year.

The RMAA is an association that represents the owners of abattoirs across South Africa. The mission of the annual RMAA conference is to give members of the meat industry an opportunity to explore the latest developments and newest equipment from around the world, and through lectures and presentations develop newer, more optimised methods of converting livestock into safe meat products for the public. Various topics, such as waste management, bacterial contamination of carcasses, water usage, animal welfare and independent meat inspection, were presented.

The recent devastating drought brought home the fact that South Africa is a country with extremely limited water resources. In light of this, a major focus of presentations at this year’s conference was around the methods of re-use, recycling and reduced usage of water at abattoirs. Water is used in every step of the processing of an animal carcass – from the cleaning of the delivery vehicle, through slaughtering, cleaning of equipment, buildings and lairages to the cleaning of dispatch vehicles. For example, on average the production of a single beef carcass utilises 900 litres of water. An abattoir simply cannot function without an adequate supply of clean water, as all the hygiene practices rely on it.

The status of controlled and notifiable diseases, such as foot and mouth disease (FMD), brucellosis, bovine tuberculosis (TB), anthrax, snotsiekte and Rift Valley fever, were also discussed. It has become obvious that brucellosis control measures need reassessment as the number of outbreaks,
especially around the Gauteng region, has greatly increased. Brucellosis poses a zoonotic risk to veterinary officials and individuals working directly with animal products in abattoir plants. The Department of Agriculture, Forestry and Fisheries is aware of these risks and is making an effort to reduce them by updating the brucella manual whilst working on a strategic plan for dealing with the disease.

Another important point raised was the need to provide private vets with more regulatory responsibilities, as there is a great need for more veterinary presence at abattoirs. There are approximately 70 abattoirs across the Western Cape, with only eight VPH officials, one technical manager and one state veterinarian guiding and inspecting all these plants. Although abattoirs are audited once a year, it is far more important to observe daily abattoir practice. Regular independent monitoring is vital to ensure plants maintain these rigorous standards on a daily basis. Food safety and traceability in South Africa need to be improved – the regulations are there but monitoring and policing of implementation remain a huge concern.

As a result of their extensive training, veterinarians are excellent problem solvers. Therefore increased veterinary presence at plants not only improves hygiene standards, but also speeds up the identification of problem areas and improves disease surveillance.

The presence of a vet at the abattoir also leads to improvements in animal welfare. As the OIE puts pressure on the rest of the world to adhere to stricter animal welfare standards, the need for education and monitoring of this aspect of animal health is increasingly important for abattoirs looking to export their products. As society becomes more conscious of animal sentience, people demand better animal welfare, therefore non-export abattoirs also need to stay abreast of the developments in animal welfare science and educate their staff on correct handling practices in order to remain competitive.

All abattoirs are required to have access to the services of a veterinarian for at least the performance of secondary veterinary meat inspection. The CCS program has shown great success by placing some of the CCS vets in abattoirs, thereby increasing the more permanent involvement of veterinarians in abattoirs within the Western Cape by 350%. These CCS vets have been able to recognise and report back on everyday issues.

We as VPH CCS vets do not seek to “police” abattoirs, we see ourselves as educated observers, and where abattoir managers agree to work with us is where we have made the most progress. The past 11 months have been a great learning curve for all of us, and although we do not gain as much clinical experience as some of our peers, we certainly have a greater impact on the community. We’ve seen the value in what we do and we are proud to have made great improvements in the hygiene and safety of the food that leaves our plants.

This conference was a great opportunity to learn even more about the meat industry and to gain some perspective on the industry’s financial state and technological advances. AP

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Die Suid-Kaap Jersey-kampioenskappe het in Augustus vanjaar tydens die George Landbouskou plaasgevind. Daar was nege Jersey-stoetkuddes wat in 16 klasse deelgeneem het en altesaam 57 diere is ingeskryf. Die Outeniqua-navorsingplaas het in agt klasse met drie koeie en ses verse deelgeneem. Bertus Myburgh, Pieter Cronje en Daniel Veldman het beeste vir die skou uitgesoek en voorberei terwyl ander beamptes van die melkeryspan ook hand bygesit het. Hul harde werk is beloon toe Outeniqua se
Amsa 165 aangewys is as die Junior Kam-pioen-koei. Amsa het ook tweede gekom in die uierklas en spesiale vermelding van die beoordelaars ontvang. Verder het Outeniqua die Nestlé-wisseltrofee gewen met die beste groep lakterende koeie op die skou. Verder het Hes 8 ’n eerste plek gekry in die klas van koeie 8 jaar en onder 10 jaar. Outeniqua het ook ’n tweede plek in die klas koeie onder 26 maande, tweede plek by verse onder 12 maande en derde plekke by verse 12 tot 16 maande en verse 16 tot 20 maande behaal.

Die navorsingskudde van 400 koeie in melk op Outeniqua is ’n stoetkudde wat kan meeding met die beste kuddes in die Suid-Kaap. Die kudde word kommersieel bestuur en is ’n waardevolle navorsingsfasiliteit om navorsing te doen met die doel om doeltref-fendheid en winsgewendheid van melkpro-duksie vanaf weidings te verhoog.

Vir meer inligting, kontak Dr. Robin Meeske: robinm@elsenburg.com

“Verder het Outeniqua die Nestlé-wisseltrofee gewen met die beste groep lakterende koeie op die skou.”
Veterinary epidemiology is the branch of veterinary medicine that deals with diseases at a population level instead of in the individual animal. For instance, while a problem of mastitis in a dairy herd can be approached from a clinical perspective by treating the affected animals, the epidemiological perspective will focus on where, why and how much mastitis is occurring in the herd and will use this information to recommend mastitis control and prevention strategies.

In Southern Africa we have a unique situation in terms of the animal diseases that are present, the species of wild and domestic animals they affect and the impact these diseases and their control can have on human health, environmental health and the economy. In response to the need for local expertise in the region, the Southern African Society for Veterinary Epidemiology...
and Preventive Medicine (SASVEPM) was formed in 2000. Every year SASVEPM hosts a congress that is attended by veterinarians, paraveterinarians and researchers who share the latest knowledge and discuss challenges in the field.

The 14th annual SASVEPM congress was held in Cape Town from 24-26 August this year. The theme of the congress was “Epidemiology on the edge: economics, trade and movement”. Keynote speaker Dr Jonathan Rushton, an agricultural economist from the UK, introduced the theme of the congress by presenting in detail the importance of assessing the economic impact of animal disease and cost-benefit analysis of control and prevention measures.

A distinction that was made clear is that cost-cutting is not economics. Government spending should rather be optimised to achieve the desired benefits of government activities. In order to do this, however, more information is required on the economic impact of animal diseases on human health, food security and trade.

As our population becomes more urbanised, people are increasingly disconnected from the animals they use for food, but ironically have more indirect contact with animals by consuming more animal protein in the form of meat, dairy products and eggs. These consumers take the fact that their food is safe to eat as a given and are generally not willing to pay more to be assured that it is free of disease and harmful substances. Consumer reluctance to contribute financially results in little investment in disease and residue control in animals, which nevertheless requires considerable funding to ensure food safety and keep trade agreements with other countries.
In order to strengthen our economies and reduce poverty, trade within the Southern African Development Community and the Common Market for Eastern and Southern Africa regions should be encouraged.

Dr Misheck Mulumba, Senior Research Manager at the Onderstepoort Veterinary Institute, presented an assessment of trends in regional and international trade of livestock products and received the best presentation award. The global per capita consumption of animal protein is increasing, especially in developing countries as people improve their socio-economic circumstances. There are therefore opportunities for export of animal products to high-value markets, but these opportunities have largely been snapped up and Africa has been left behind. We run the risk of falling even further behind.
We are proud of our veterinary colleagues for tackling the animal disease issues required to keep the agricultural economy of the Western Cape growing.

MEC Alan Winde, Lodewikus Hanekom and Dr Gary Buhrmann, Chief State Veterinarian Boland, at Schoongezicht Farm in Paarl, the site of a recent AHS death.

as high-value markets like the EU introduce ever more stringent requirements in terms of freedom from animal diseases that are endemic to Southern Africa.

In order to strengthen our economies and reduce poverty, trade within the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA) regions should be encouraged, as these markets are expected to expand rapidly. As most countries in SADC are exporters of beef, each country should look at expanding in areas in which it may have a competitive advantage within SADC. For instance, in South Africa it is worth looking into developing the pork and poultry industries in order to supply our neighbouring countries.

Thanks to the location, the congress was well attended by officials of Western Cape Veterinary Services, with 36 state veterinarians and animal health technicians attending. The following talks related to the regulatory work of Western Cape Veterinary Services were presented:

- State veterinarian Boland, Dr Aileen Pypers, presented the challenges of Salmonella gallinarum control in commercial layer poultry flocks in the Western Cape.

- Dr John Grewar presented a quantitative risk assessment of African Horse Sickness (AHS) in live horses exported from South Africa as well as an assessment of the economic impact of bluetongue and other orbiviruses in Southern Africa.

- Dr Camilla Weyer presented the evidence of association between outbreaks of AHS in the AHS control areas of the Western Cape and inappropriate use of the AHS vaccine.

We are proud of our veterinary colleagues for tackling the animal disease issues required to keep the agricultural economy of the Western Cape growing.

For more information, contact Dr Lesley van Helden: lesleyvh@elsenburg.com
The project won silver in the Western Cape Provincial Service Excellence Awards 2016 in the Best Implemented Project category.

The Agricultural Partnership for Youth Development (APFYD) is a double silver award-winning project both provincially and nationally. The project won silver in the Western Cape Provincial Service Excellence Awards 2016 in the Best Implemented Project category. A second accolade was bestowed on the project when it was first runner-up in the national Centre for Public Service Innovation Awards 2016 in the Innovative Service Delivery Institution category.

The project aims to make skills development and training opportunities more accessible to individuals normally excluded from the mainstream of agriculture, specifically rural youth and agri-worker children. High school learners are informed of the potential careers in agriculture. Learners underperforming in mathematics and science get the opportunity to improve their matric results, which would improve their chances to enrol into higher education training programmes on
The Agricultural Partnership for Youth Development is a double silver award-winning project both provincially and nationally.

Offer. Financially challenged learners are assisted with bursaries to enrol and obtain a post-matric qualification in agriculture and related fields. The internship programme was taken to the next level by placing participants with external host employers to gain work experience.

Secondly, the agricultural sector had to undergo major changes in transforming itself. It has been a white male dominated sector for many years. In order to bring about effective change, it was necessary to systematically create opportunities to develop previously disadvantaged rural agri-worker children to become skilled individuals in the agricultural labour market.

The APFYD project emanated from the solution to address the volatile situation faced by agriculture with unrest in specific rural areas in 2012. The high unemployment rate amongst the rural youth within our province and the reluctance displayed by our youth to pursue a career in agriculture demanded an urgent intervention. This led to the APFYD project, a first of its kind.

With the collaboration with external partners within the agricultural sector, education and municipalities, this Department has made it possible to develop the skills of our rural youth, especially agri-worker children, giving them access to quality high school education with mathematics and sciences, and internships with the possibility of funding for further studies in agriculture. The project focuses on promoting agricultural opportunities to rural youth, specifically agri-worker children, through various development initiatives, such as:

• A one-year internship with placement at external host employers within the agricultural sector, to experience and gain exposure to agriculture and the career opportunities it offers.
• A scholarship for high school learners to complete their matric with mathematics and sciences giving them the opportunity for further studies in the scarce and critical agricultural skills.
• Awarding bursaries to rural youth to complete further education with Eisleenburg Agricultural College as well as other registered higher institutes of learning to obtain qualifications in agriculture from post graduate to doctorate degrees affording selected candidates to be placed on the Departmental Young Professional Persons (YPP) Programme.
Special agricultural learnerships are being offered at Elsenburg College for rural youth. These include accommodation, meals and monthly stipends.

A bridging course has been designed to assist students struggling with mathematics and science at Elsenburg College.

A summer and winter school have been included in the APFYD for Grade 9 to 11 learners for tutoring in mathematics and sciences during vacation periods. The project was piloted in the De Doorns community, one of the most affected areas in 2012. Extensive liaison with the local farmers in this area and the Breede Valley Municipality led to the signing of 13 Memoranda of Understanding (MOUs) between the Department and the commercial farmers who came on board and act as external host employers for the project.

This partnership allowed rural youth and children of agri-workers with matric to serve a 12-month internship with the Department. Each of the participating farms has billboards on their farms indicating and promoting their commitment to youth development, sending a proudly ‘Better Together’ message to the public. These billboards have encouraged more farmers to come on board.

Engagement with external host employers and agri-workers took place prior to the appointment of departmental interns on any of the farms. This gave all role players clarity and understanding of the internship programme. Agri-workers displayed excitement and pride at the initiative with identified workers being selected for mentorship training to equip them to serve as mentors to the interns.

To ensure all workers understood that the interns were appointed as employees of the Department, they were issued with a set of branded protective clothing, consisting of two sets of overalls, gumboots, safety shoes, T-shirts and a polar-fleece top with the instruction to at all times wear their T-shirts displaying the corporate identity of our Department. It was with a sound understanding that the interns, who underwent a full orientation programme, knew that, as
employees of the Department, they were ambassadors, representing the Western Cape Government in their workplace.

As part of the project, 27 candidates, of whom 16 are female, were placed on the respective farms where they completed a 12-month internship. After completing their internship, 19 interns were accepted into a learnership they are currently completing at Elsenburg College. Later, 14 unemployed youth were appointed as interns and placed with new external host employers in Saron and an additional 10 interns were appointed in De Doorns this year.

To date, 13 rural scholars (grade 8-12) with mathematics and science as subjects benefited from the project through scholarships. Bursaries were awarded to 119 (52 females) rural youth affording them the opportunity to further their studies in the agricultural field. A close relationship developed between bursary holders and the Department, with regular visits conducted and timeous updates on the students’ progress obtained.

The project funded two YPPs in their final year on the YPP programme. They have both graduated with a Masters degree and have been appointed permanently in the Department.

A total of 52 interns were appointed in the project, 40 of them females. Of these interns 26 successfully completed the internship and 17 progressed to further studies and are doing a 12-month learnership in Viticulture at the Elsenburg College.

They have previously been trapped in a cycle of hopelessness, poverty, lack of skills and unemployment ultimately becoming a societal problem and contributing to the crime escalation in these communities.

This award-winning project is seen as the beacon of hope that will alleviate poverty, create a skills development pipeline and employment opportunities for these youths.

To participate in the project, contact:
John Constable:
JohnConstable@elsenburg.com or 021 808 5044
Gladys Langa:
GladysL@elsenburg.com or 021 808 5082

The APFYD project was piloted in the De Doorns community, one of the most affected areas in 2012 during farm worker protests.

Marlon Van der Merwe.

To participate in the project, contact:
John Constable:
JohnConstable@elsenburg.com or 021 808 5044
Gladys Langa:
GladysL@elsenburg.com or 021 808 5082

The APFYD project was piloted in the De Doorns community, one of the most affected areas in 2012 during farm worker protests.
On 12 August 2016 more than 200 stakeholders from across the agricultural sector gathered for the annual launch of the Bureau for Food and Agricultural Policy (BFAP) Baseline at the beautiful Nelson’s Creek Wine Estate in Paarl. The Baseline is a publication that provides the sector with an agricultural outlook for the next ten years and the theme for this year was “Putting plans into action: Agriculture and economic growth in South Africa”.

Minister Alan Winde opened proceedings and noted the importance of the Baseline

Graph 1: Real income of agricultural commodities
and its theme, which guides us in putting together an action agenda to foster a sustainable, competitive and thriving agricultural sector in order to create economic growth and much needed job creation in South Africa.

The Western Cape Department of Agriculture has not only been a proud sponsor of this event for several years, but also contributes in doing research with the BFAP team in generating key outputs in the publication. This again highlights the importance and success of partnerships in taking the sector forward.

The Baseline presents an outlook of agricultural production, consumption, prices, trade and farm income in South Africa for the period 2016-2025 (see Graph 1).

At the same time, it makes key observations relating to agricultural employment, farm-level competitiveness and drivers within the broader global economy.

In simple terms the Baseline utilises the latest trends, policies and market information and constructs a projected picture of what the future might look like for agricultural industries given certain assumptions. This provides the sector with insights that can assist in improved decision-making and planning on various levels.

One of the highlights from this year was the assessment of how much progress has been made in achieving the objectives set out in the National Development Plan (NDP) for the agricultural sector, highlighting that the sector has not grown to its full potential over the past five years. However, the good news is that many of the constraints hampering growth can quite easily be turned around by efficient and effective bureaucracy and clear and direct leadership.

Some of the key agricultural industries particularly important to the Western Cape that were presented included the wine, grape, apple, pear, potato, wheat and canola industries. The 2016 launch was yet again well received and attended and this initiative continues to thrive, providing the public with an excellent publication compiled by more than 40 expert contributors from several local and international institutions.

The Baseline publication is freely available online: [www.bfap.co.za](http://www.bfap.co.za) and provides more details on the outlook for the agricultural sector.

For more information, contact Louw Pienaar: louwpp@elsenburg.com
MATURING GAME SPECIES PRICES

by Riaan Nowers

Photo © Quintus Strauss. Courtesy MARULA GAME.
Through its dynamic sales of game species, the game ranching industry demonstrated its continued vigour and is probably one of the greatest success stories in the agricultural and conservation sectors.

By the time this article was written, final figures of game species sales were unavailable, but the data of more than 100 formal auctions strongly indicate numbers sold to date (August) will be up there with the sales of 2015, which was a record year.

By end of August these numbers were only 28.1% lower than the previous year’s record of 46 982 animals. At the same stage, the data reveals the turnover is some 44.7% less than the 2015 figure of R2.3 billion, suggesting individual species’ prices came down from previous years but the numbers sold on auctions are still at healthy levels. This surely is proof of economic rationality since economic theory indicates that when supply is higher, prices generally tend to get lower.

Closer scrutiny of individual performances indicate some of the categories are reaching maturity in terms of supply and demand and logarithmic regression analyses reflect good cases of rational markets and signals.

An example is impala breeding herds. Because of their huge numbers made available on auctions, they show sound expected results that make it easier for both the potential buyer and seller to predict price outcomes in the future (see graph 1). This however is not the same for all species and it should be interesting to make comparisons between all species.

The game ranching industry demonstrated its continued vigour and is probably one of the greatest success stories in the agricultural and conservation sectors.

Graph 1: Dynamic price movements of impala breeding herds, 2013-2016.
Graph 2: Performances of highest/record prices of individual specie categories achieved 2000 – August 2016
With regard to colour variants, the Elsenburg game species database reveals these numbers are in the same region of 2015 levels, but prices came down strongly. Plains game sales continued their strong performances during 2014 and 2015 and healthy maximum prices have still realised.

Graph 2 shows how highest prices dominated the performances during the last three years. This is against a background of lower average prices achieved during the same period.

Generally game sales indicate that genetic transfers between herds are taking place but the huge price differences or gaps between individual categories strongly suggest the time is near for the game industry to move towards differentiating between stud and commercial breeding stocks.

The Western Cape Department of Agriculture continues to track the performances of both the game auction sub-industry as well as individual species in order to provide substantiated evidence to the game ranching industry on its economic performance.

For more information, contact Riaan Nowers: riaann@elsenburg.com
SMALLHOLDERS FROM BENIN
an INSPIRATION
by Dr Dirk Troskie

If you do not know where Benin is, do not fret. I only had the most rudimentary idea of it being somewhere in West Africa when I received the invitation to participate in a workshop to finalise the Geographical Indication (GI) Strategy of the African Union (AU).

A GI is a product of which the unique characteristics can be linked by human intervention to a specific geographic area. The AU believes Africa is rich in natural resources and biodiversity, but that the true economic and market potential of these have not yet been developed. The AU believes a GI will enhance market access to the domestic and international market with the latter always being in search of new, but trusted products. This will improve the income of farmers meaning they will be able to afford other goods (including food) and services. The result will be improved household and national food security as well as improved development of rural areas.

Part of the workshop was a field trip to the ananas pain de sucre (sweet pineapple)
GI in Allada, little more than an hour’s drive north of Cotonou. This GI was identified during a 2013 workshop in Benin, together with two others, *gari sohoui* (cassava) and *wagashi* (cheese).

As all pineapple farmers in Benin are smallholders, their government followed an inclusive process to get all the pineapple producers on board, develop the product description, and form a producer cooperative and a GI coordination body. With the GI allowing them the opportunity to focus on traditional varieties, they are in the process of selecting the best cultivar from traditional varieties.

Since the “right” colour will not have to be chemically induced for the export market, this *ancien* pineapple variety can be produced more environmentally friendly (organic) and cheaper than usual export cultivars.

Although this cultivar could also be produced in neighbouring countries, the specificity of the *ananas pain de sucre* GI can be found in the historical role of pineapples in Benin – one of their kings even used it on a flag a couple of centuries ago. They have already established seven nurseries and farmers in six municipalities are participating in the production process. The result is a flourishing export of pineapples to Europe.

We also had the opportunity to meet one of the pineapple producers. The producer, a lady by the name of Guedegbe Bertille, trained as an agriculturalist and was the agricultural advisor in the area.

About five years ago she was challenged by local farmers (her clients) to practice what she preached and to this end she got hold of 11 hectares of land. She initially could not get funding to establish pineapples – apparently the establishment cost is about CFA 1 million (R25 000) per ha – and first planted maize on 10 ha of her land. This provided sufficient income to plant 1 ha of pineapples. She subsequently successfully expanded her operation and is currently exporting 60 tons of pineapples weekly.

From the pineapples not fit for export, she started a juicing operation – first 24 bottles of juice per day (using an ordinary kitchen grater as juicing machine) and now 3 000 bottles daily for the domestic and neighbouring-country markets.

As other farmers in the region started to copy her product, she innovated by blending her pineapple juice with other fruits and, because of the high sugar content of the local pineapple variety, these blends are without added sugar. Due to the excellent quality of her product, she recently got a contract to export her juice to France and could attract the interest of four other investors in her new CFA 2,2 billion (R55 million) facility that will come online during 2016/2017.

What a heart-warming story of a smallholder succeeding in the global market!

I must express my appreciation to the AU for exposing me to this success story as well as to the Minister of Economic Opportunities and the HOD for Agriculture who allowed me to go to Benin.

For more information, contact Dr Dirk Troskie: dirkt@elsenburg.com
The Compulsory Community Service (CCS) programme for new graduate veterinarians has been in the pipeline for many years and finally came to fruition in 2016 (see Agriprobe Vol 13, No 1). It was the brainchild of Dr Tembile Songabe who tragically passed away in May this year having just seen the fulfilment of his dream.

In 2015, 134 students graduated as veterinarians from the Faculty of Veterinary Science at the University of Pretoria. On 4 January 2016 they were the first veterinarians in South Africa to commence with CCS – 19 of them were seconded to the Western Cape and the rest distributed amongst the other provinces.
There are three veterinarians in the sub-programme Animal Health – two in Beaufort West and one at the Boland state vet office. Their main responsibilities include animal welfare, disease surveillance, outbreak control for animal diseases, herd testing and pregnancy scanning. Beaufort West currently has no access to clinical veterinary services other than a part-time clinic that has to service an extremely large area, approximately 350km in diameter.

Six veterinarians work in the sub-programme Veterinary Public Health – five stationed at export abattoirs and one at the central office at Elsenburg. Their main responsibilities include ante-mortem inspections, secondary meat inspections, veterinary supervision of the abattoir, and improvement of meat hygiene and animal welfare through training of abattoir personnel and educating clients/farmers. Their presence has improved the accuracy and credibility of export certification to all trading partners of the Western Cape.

There are two veterinarians in the sub-programme Export Control assisting with export certification, CCS data management, policy and system development, client information and audits for export approval of food producing/processing establishments.

One veterinarian is stationed at the Stellenbosch Veterinary Laboratory primarily
performing post-mortem examinations. Seven veterinarians are stationed full time at animal welfare organisations doing primary animal health care and education.

All of the CCS veterinarians also provide part-time primary animal health care and education. Primary animal health care involves meeting the basic needs of an animal, including preventative health care such as vaccinations and parasite control. Other services include medical and surgical treatment, manning mobile clinics, sterilisation campaigns and owner education. Most of these treatments are provided at dramatically reduced costs or for free as some of these communities cannot even afford to take care of themselves.

People will always have pets (even if they cannot afford to care for them) and the CCS veterinarians try to help prevent suffering, disease and injury. There is a big emphasis on education, especially to the younger generations as most issues arise from ignorance or lack of education. Only a few cases are due to intentional cruelty.

Most of the primary animal health care takes place at welfare organisations that provide mentorship, facilities, equipment and consumables for the CCS veterinarians to use in providing a community service. There is a large variety of welfare organisations that are assisted, from well-established multi-vet organisations to small organisations run by groups of volunteers. There are a few private veterinary clinics that also provide mentorship, facilities, equipment and consumables at their own cost to the CCS veterinarians that work with them — a great example of public-private partnership.

An overview of the impact the CCS veterinarians have made in the Western Cape in a mere six months (1 April to 31 October 2016):

<table>
<thead>
<tr>
<th>Service</th>
<th>Apr-16</th>
<th>May-16</th>
<th>Jun-16</th>
<th>Jul-16</th>
<th>Aug-16</th>
<th>Sep-16</th>
<th>Oct-16</th>
<th>Grand Total</th>
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<tbody>
<tr>
<td>Dog medical cases</td>
<td>1403</td>
<td>1356</td>
<td>1868</td>
<td>1746</td>
<td>1494</td>
<td>1599</td>
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<td>119</td>
<td>90</td>
<td>100</td>
<td>115</td>
<td>152</td>
<td>118</td>
<td>44</td>
<td>718</td>
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<tr>
<td>Cat medical cases</td>
<td>577</td>
<td>563</td>
<td>829</td>
<td>803</td>
<td>878</td>
<td>679</td>
<td>441</td>
<td>4780</td>
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<tr>
<td>Cat other surgical cases</td>
<td>256</td>
<td>245</td>
<td>294</td>
<td>297</td>
<td>293</td>
<td>255</td>
<td>102</td>
<td>1742</td>
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<tr>
<td>Cattle medical cases</td>
<td>9</td>
<td>26</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>12</td>
<td>3</td>
<td>60</td>
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<tr>
<td>Small ruminant medical cases</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>13</td>
<td>46</td>
<td>11</td>
<td>5</td>
<td>86</td>
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<tr>
<td>Equine medical cases</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>0</td>
<td>24</td>
<td>10</td>
<td>63</td>
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<tr>
<td>Porcine medical cases</td>
<td>20</td>
<td>82</td>
<td>1</td>
<td>3</td>
<td>32</td>
<td>12</td>
<td>0</td>
<td>150</td>
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<tr>
<td>Wildlife cases handled</td>
<td>51</td>
<td>41</td>
<td>65</td>
<td>88</td>
<td>123</td>
<td>5</td>
<td>373</td>
<td></td>
</tr>
<tr>
<td>Euthanasias (animals other than dogs and cats)</td>
<td>13</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>14</td>
<td>8</td>
<td>5</td>
<td>60</td>
</tr>
<tr>
<td>Vaccination campaigns organised or attended</td>
<td>22</td>
<td>23</td>
<td>19</td>
<td>23</td>
<td>22</td>
<td>28</td>
<td>9</td>
<td>146</td>
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<tr>
<td>Sterilisation campaigns organised or attended</td>
<td>21</td>
<td>19</td>
<td>21</td>
<td>14</td>
<td>21</td>
<td>25</td>
<td>5</td>
<td>126</td>
</tr>
<tr>
<td>Training given</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td>Training attended</td>
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<td>6</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>7</td>
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<td>29</td>
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<tr>
<td>Community engagement activities: Schools</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>0</td>
<td>28</td>
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<tr>
<td>Community engagement activities: individual farmers</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Community engagement activities: Other</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Dog sterilisations</td>
<td>356</td>
<td>350</td>
<td>449</td>
<td>381</td>
<td>399</td>
<td>462</td>
<td>204</td>
<td>2601</td>
</tr>
<tr>
<td>Cat sterilisations</td>
<td>256</td>
<td>245</td>
<td>294</td>
<td>297</td>
<td>293</td>
<td>255</td>
<td>102</td>
<td>1742</td>
</tr>
<tr>
<td>Number of reporting CCS veterinarians</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>18</td>
<td>17</td>
<td>12</td>
<td>123</td>
</tr>
</tbody>
</table>
As with any new system there are always a few obstacles, one of these being the lack of consumables or resources originally promised through the programme. This has not hampered the enthusiasm of the CCS vets as they plan fundraisers, gather donations or become creative in their treatments. A steady flow of medications, vaccines, dewormers, consumables and so forth would increase the ability to deliver primary animal health care to those rural areas that are in desperate need of it.

The impact has been tremendous and in areas that would never have been reached without the implementation of CCS.

A welfare clinic has been established from scratch in Darling, a mobile clinic started in the West Coast region, and many welfare organisations now have the privilege of a part-time/full-time vet where previously there were none. There is a mobile clinic running in the Saron and rural Paarl area and Beaufort West now has two vets to assist the only two vets servicing a large portion of the Karoo. These are just a few examples.

Initially it was decided to place CCS veterinarians at established welfare organisations instead of in rural areas with no equipment, electricity or water, but as the programme improves in the coming years, this service will extend into the rural areas, which are traditionally underserved.

Every day the CCS programme makes an impact that will last for generations, not only for the community that receives the service but also for the CCS veterinarians who have developed their social consciousness as key professionals and have therefore all come out of this year with a better understanding of our government, our country, its people and its many struggles.

“The greatness of a nation can be judged by the way its animals are treated.”
- Mahatma Ghandi

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The Food and Agriculture Organisation of the United Nations (FAO) commemorates World Food Day on 16 October, the day on which the organisation was founded. World Food Day was proclaimed in 1979 by the conference of the FAO. In 1980, the General Assembly endorsed the observance of the day in consideration of the fact that “food is a requisite for human survival and wellbeing”.

This year the Western Cape Department of Agriculture (WCDoA) commemorated World Food Day on 28 October 2016 in Graafwater in the Cederberg Municipality. Graafwater is one of the 16 rural development nodes in the province and captured as a Western Cape priority rural area in the Provincial Strategic Plan 2014-2019. The town is approximately two hours from Cape Town, about halfway between Clanwilliam and Lambert’s Bay, and known for potatoes, rooibos tea and grains. There are 769 households and the population is estimated at 3 000. In 2012 Graafwater received an infrastructure boost when a total of 407 homes were built for agri-workers from surrounding farms.

It is expected that the hosting of World Food Day in Graafwater will stimulate long-lasting changes, both on an individual and a community level, which will stretch far beyond the scope of the event. Selected beneficiaries received household food garden starter kits and water tanks to help them grow and maintain sustainable vegetable gardens. This will enable them to provide nutritious meals for their families, while they can sell surplus produce at a local market.
School food gardens were also implemented and the produce will be used to feed the children on a daily basis. Greater awareness was created amongst children through their participation in a poster competition, and this, together with the school food garden, will inform and educate them on the need for sustainable food gardens and the importance of nutritious food.

The MEC of Minister of Environmental affairs & Department planning and local Government, delivered the keynote address. Other government departments and stakeholders involved in the food security sphere contributed by way of presentations, emphasising the importance of nutritious food. In addition, community-based organisations (e.g. retirement home, pre-school) benefited from a ‘food mountain’ that was sourced by way of donations and handed over at the event by the MEC and the Mayor of the Municipality.

The WCDoA, together with the different stakeholders in the form of government departments and the local municipality, is honoured to have presented this initiative to assist the community of Graafwater in becoming more self-sufficient through the aid of food gardens.
Technology has made quite an impact on our social, economic and environmental affairs. We have seen new concepts come alive in a short period of time, not to mention that technology has become a natural and unobtrusive part of our daily lives. Every day there seems to be something new that features advanced versions and new concepts to make our lives easier. The implementation of technology is seen everywhere, from new filmmaking techniques, transport, healthcare and medical devices to media, advertising and communication. So where does agriculture fit into this picture?

AGRI-TECH: UAVs HELPING US FARM

by Arie van Ravenswaay

Technology has made quite an impact on our social, economic and environmental affairs. We have seen new concepts come alive in a short period of time, not to mention that technology has become a natural and unobtrusive part of our daily lives. Every day there seems to be something new that features advanced versions and new concepts to make our lives easier. The implementation of technology is seen everywhere, from new filmmaking techniques, transport, healthcare and medical devices to media, advertising and communication. So where does agriculture fit into this picture?

Hexacopter test flight without the camera mounted.
Agriculture has taken numerous steps to implement technological advances and the results are clear. Autonomous vehicles are planting our seeds with great precision, while satellites and drone technology deliver images that allow farmers to make accurate decisions, hence the term precision agriculture.

Let’s take a closer look at Unmanned Arial Vehicles (UAVs) and their characteristics.

Rotary Wing UAVs
These vehicles are available in many different shapes and sizes. Their typical setup consists of a minimum of one rotor (your typical helicopter), three rotors (tricopter), four rotors (quadcopter), six rotors (hexacopter) and eight rotors (octacopter). There are also cases where the more unusual 12 and 16 rotor setups would be used.

The more rotors present on a UAV, the more stable the vehicle becomes in case a rotor fails mid-air, and obviously the more power it consumes. So there is a balance between the amount of rotors you have and the amount of flight time you want.

Other factors that may decrease flight time is your load, battery size, flight controllers and motor choices. Typical flight
time for a rotary wing can be between 10 and 30 minutes, depending on the setup, although longer flight time can be achieved. The advantage of rotary wings is that constant aircraft movement is not needed to produce airflow over the blades, allowing the vehicle to take off and land vertically, hover in a fixed position and perform agile manoeuvring. This is an advantage when photos are to be taken at specific GPS locations or waypoints.

Due to their shorter flight times and lower speeds they will require additional flights to survey large areas, which may increase time and operational costs.

Fixed Wing UAV

The fixed wing UAV consists of a much simpler structure than a rotary wing. This provides a less complicated maintenance and repair process allowing more flight time and fewer costs. A fixed wing flies with lift generated by forward thrust by means of a combustion engine or electric motor.

An advantage of a fixed wing is that its simple structure allows for more efficient aerodynamics. This provides longer flight times at higher speeds, allowing the UAV to cover larger areas per flight. If the operator wishes to save power, the motor can be disabled and the UAV can glide the designated route. Considering its structure a fixed wing has the ability to carry larger loads over longer distances using less power. This allows the operator to add larger (and more expensive) sensors.

A disadvantage is the fact that a fixed wing needs a runway or launcher for take-off.
and air is required to move over the wings to generate lift. Therefore a fixed wing cannot stay stationary the way a rotary wing can.

Endless possibilities
Both rotary wing and fixed wing UAVs are extremely useful in their own way. Whether it is for security of a property, counting cattle or taking NDVI images for precision agriculture, these tools are going to make an impact on the way we manage agriculture. Readers are welcome to suggest future topics and enquire about our technology discussions.

For more information, contact Arie van Ravenswaay: aievra@elsenburg.com

A WORD OF ADVICE
Users need to familiarise themselves with the CAA Regulations for Drones, as it is a serious offence if you do not have permission to use them. Farmers who want to use this technology should first look at a service provider that has a Remote Pilot Licence (RPL) before purchasing their own UAV. Using a licensed service provider enables the farmer to familiarise themselves with the technology.

Visit www.caa.co.za for more information on the regulations.
Kanola is tans die derde hoogste geproduceerde oliesaad ter wêreld. Daar is op die oomblik ook ’n toename in die aanplant van kanola in die Wes-Kaap. Vanjaar is sowat 71 000 ha aangeplant en volgens voorspellings gaan die syfer nog tot soveel as 150 000 ha kan styg.

Hoewel die grootste hoeveelheid hiervan vir olieproduksie aangewend word, is die oliekoek as neweproduk vir dierevoeding beskikbaar. ’n Gedeelte van die kanola is ook as onverwerkte voedingsbron, oftewel volvetkanola, vir plaasdiere beskikbaar. Volvetkanola en kanola-oliekoek, die residu nadat die olie mekanies en chemies uit die saad gedruk en onttrek is, is albei hoëgehalte produkte wat baie goed deur plaasdiere benut word.

Die proteïeninhoud van plaaslik vervaardigde volvetkanola is ongeveer 24% met ’n olie-inhoud van ongeveer 41%. Chemies verwerkte kanola-oliekoek wat in Suid-Afrika beskikbaar is, het ’n proteïeininhoud van 35% met ’n olie-inhoud van ongeveer 2%. Koudgepersde kanola-oliekoek het ’n proteïeininhoud van 32% en ’n olie-inhoud van 10%. Die sogenoemde verbyvloeiproteïenpersentasie van kanola-oliekoek is ongeveer 28% en vergelykbaar met die waarde vir sojaboonoliekoek.

Die relatiewe geldwaarde van volvetkanola is 90 tot 95% van die waarde van sojaboonoliekoek en die geldwaarde van kanola-oliekoek ongeveer 70% van die waarde van sojaboonoliekoek.

Studies wat deur Elsenburg en by die Universiteit van Pretoria uitgevoer is, dui daarop dat die ideale insluitingsvlak van volvetkanola ongeveer 12% in die volvoer van lammers en 6% in die volvoer van melkkoeie is. Kanola-oliekoek kan teen 15% in die volvoer vir skape
en 12% in die volvoer van melkbeeste gebruik word. Wat enkelmaagdiere betref, is die ideale insluitingspeile van volvetkanola en kanolaoliekoek 12 tot 18% in varke se dieet. Vir hoenders blyk die maksimum insluitings vlak tussen 5 en 10% te wees.

Met die insluiting van volvetkanola in die diëte van hoenders, varke en melkkoeie, is ’n gesonder vet- en melkvetprofiel verkry, m.a.w. ’n hoër konsentrasie onversadigde teenoor versadigde vette.

Dit is verder belangrik om te onthou die beste benutting van volvetkanola word verkry indien die kanolasaad tydens die maalproses met graan gemeng word.

Wat kanolastoppellande betref, het ’n studie op Langgewens aangedui skape wat kanolastoppel sonder byvoeding bewei het, beter gevaar as die wat koringstoppel bewei het. Die studie het aangedui kanolastoppel word in die algemeen goed deur weidende diere benut en met die korrekte byvoeding kan weidigtheid van meer as twee ooie per hektaar vir langer as drie maande gehandhaaf word.

Betrourbare wetenskaplike inligting oor die gebruik van kanola-oliekoek en volvetkanola vir volstruise bestaan egter nie. Weens die skaarsheid en gepaardgaande hoë koste van proteïene vir dierevoeding en ook volstruise, is inligting op hierdie gebied uitses noodsaaklik.

In ’n plaaslike studie by Elsenburg is ’n eksperiment daarom uitgevoer om die voedingswaarde en benutting van hierdie twee moontlike alternatiewe proteïenbronne vir volstruise te bepaal. Die studie het bevind die energiewaardes van albei hierdie bronne (totale metaboliseerbare energiewaardes van onderskeidelik 13.76 en 22.50 MJ/kg voer vir kanololiekoek en volvetkanola) was baie hoër vir volstruise as byvoorbeeld vir hoenders (onderskeidelik 7.81 en 16.65 MJ/kg voer).

Die beter benutting was danksy volstruise se bykomende benutting (ongeveer 32%) van die veselfraksies (hemisellulose en sellulose) in die bronne, wat byvoorbeeld nie deur hoenders benut kan word nie. Tans word groeistudies op Elsenburg gedoen om die optimale insluitingsvlakke van volvetkanola en kanolaoliekoek in diëte van groei- en slagvolstruise te bepaal.

Gegewens uit hierdie studies sal bydra tot die huidige gebrekkige kennis van die voedingswaarde van grondstowwe vir volstruise. Dit sal gebruik kan word om akkurater diëte vir volstruise te formuleer, wat ekonomiese produkies van volstruise sal verbeter en ’n alternatiewe mark vir kanola-oliekoek en volvetkanola in Suid-Afrika sal skep.

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This year the Western Cape experienced rather warm temperatures during August, resulting in above normal maximum temperatures at various weather stations. For example more than 4°C above the historical long-term monthly mean of 21°C was observed at the Oudtshoorn Research Farm. In fact there were more weather stations that exceeded the same threshold (monthly average >4°C above long term), for instance Citrusdal recorded a monthly average of 26.2°C, which was 5.5°C more than the monthly average long term for August.

Users familiar with the Agri-Outlook webpages have been used to this sort of information as supplied by the departmental website (www.elsenburg.com) under the Agri-Tools heading. Each month a report is generated presenting monthly information in the form of maps and statistics with regard to provincial rainfall, maximum and minimum temperatures, dam levels and plant growing conditions, including brief weather forecasts obtained from the South African Weather Service.

This year the layout and design of the Agri-Outlook webpages have undergone

AGRI-OUTLOOK
- A FRESH NEW LOOK
by Henk Cerfonteyn and Arie van Ravenswaay
certain changes, including three major alterations. The Agri-Outlook landing page presents a more intuitive manner of explaining what is being offered (monthly reports, NAC Advisories, etc.). Secondly, the monthly reports can be downloaded from the website as PDF documents for offline purposes, which should greatly benefit remote users, for instance to further disseminate, print and save climate information.

The PDF format allows users to distribute the information with ease, while links embedded in the document lead back to the website for any updates that may occur.

Monthly reports present information with regard to provincial rainfall, maximum and minimum temperatures, dam levels and plant growing conditions.
An important update is the email and phone link, which allows users to select a contact method and contact the researcher directly. Users can click on the email and the device will refer them to their email application, and if they are viewing the document on a mobile device, the phone link allows them to make a call directly from the document.

Lastly, a colour-in competition was held at the local school, J.J. Rhode Primary, whereby grade three learners participated in expressing their unique artistic talents on how they perceive agriculture.

"A colour-in competition was held at the local school, J.J. Rhode Primary, whereby grade three learners participated in expressing their unique artistic talents on how they perceive agriculture."
on how they perceive agriculture. The top three entries each received a prize and all the students received a certificate for their entry in the competition. Since July this year the top drawings have been incorporated into the monthly reports of the Agri-Outlook webpages, including the PDF copies. In this instance we would like to convey our gratitude to Mr Adams (principal) and Ms Tromp (grade three teacher) for making this possible.

The Agri-Outlook webpages will progressively change as the need arises. Comments for further improvement are most welcome and farmers and other interested parties are invited to help make the Agri-Outlook webpages more relevant and interesting for agriculture. AP

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Maurice Breda won first place in Agri-Outlook's colour-in competition held at J.J. Rhode Primary School at Elsenburg. Verinique Clarke came second and Frenita Plaatjies third.
Project KHULISA
– Minister Winde tours Brandvlei Dam Project
by Shelton Kaba Mandondo
The month of September 2016 will best be remembered as the turning point in the history of Project Khulisa as Minister Alan Winde took time out of his busy schedule to visit the Brandvlei Dam Project to get practical and visual exposure of the planned interventions. The Department of Water and Sanitation (Infrastructure Branch) provided the guided tour.

The development of this irrigation infrastructure in the Brandvlei region is a sub-initiative under the Project Khulisa strategic intent “Increase exports of wine and brandy to China and Angola”. It is a collaborative, inter-governmental project comprising 15 institutions from national, provincial government, local authorities, statutory entities and water users association coordinated by the Western Cape Department of Agriculture.

Phase one of this project involves increasing the capacity of the Brandvlei Dam feeder canal to allow more water to be diverted into the dam. Increasing the canal capacity entails raising the height of the feeder canal by 30cm. This will result in the diversion of an additional 33 million m³ of water needed per annum to irrigate an additional 4 400ha of productive land. The new irrigated land will generate approximately 8 000 primary jobs, 6 500 secondary jobs and may draw in R2.2bn worth of value chain investment by the private sector.

Phase two, which is still in the planning phase, will involve the provision of additional pumping capacity at Papenkuils (Nekkies pump station) to increase the yield from Brandvlei Dam by a further 51.1 million m³ per annum in addition to the proposed increase of 33 million m³ above.

Minister Winde toured the Smalblaar River and the 4km canal, the Holsloot River and the intake structure of the Brandvlei canal, hot water springs that feed into the Brandvlei Dam and the Nekkies pump station.

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A reflection on family farming in the Western Cape Province

JG (Jan) Theron
A reflection on family farming in the Western Cape Province

JG (Jan) Theron

Department of Agriculture, Western Cape Government, Email: jant@elsenburg.com

Background

The family farm is still an important source for food production worldwide. The Food and Agriculture Organization of the United Nations/FAO (2014), estimates the number of family farms in the world is at least 500 million. This means that families run about nine out of ten farms. Additional analysis shows that family farms occupy a large share of the world’s agricultural land and produce about 80 percent of the world’s food.

Further interesting information from the same source revealed that the vast majority of the world’s farms are small or very small, and in many lower income countries farm sizes are becoming even smaller.
Worldwide, farms of less than one hectare account for 72 percent of all farms but control only eight percent of all agricultural land. Slightly larger farms between one and two hectares account for 12 percent of all farms and control four percent of the land. In contrast, only one percent of all farms in the world are larger than 50 hectares, but these few farms control 65 percent of the world’s agricultural land. Many of these large, and sometimes very large, farms are family owned and operated.

The United States Department of Agriculture Economic Research Services/USDA ERS (2015) described the general concept of a family farm as one in which ownership and control of the farm business is held by a family of individuals related by blood, marriage, or adoption. These family ties often extend across households and generations. In the past it was apparently not uncommon for the American family farm to provide all of the labour and to own all of the land and capital thereof. Nowadays this is not the case anymore although the extent to which farms will hire labour, rent land or contract a variety of farm services differs considerably across farms.

The FAO (2013) defines family farming as: "Family farming includes all family-based agricultural activities, and it is linked to several areas of the rural development. Family farming is a means of organising agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, including both women’s and men’s." Whilst this broad definition could be regarded as one that is suitable in a global context the USDA ERS (2015) more specifically states that: "The current definition of a family farm, since 2005, is one in which the majority of the business is owned by the operator and individuals related to the operator by blood, marriage, or adoption, including relatives that do not live in the operator household." However, this institution admits that a preferred definition of a family farm would allow for organisational changes regarding the way in which producers restructure their farm businesses as they respond to changes in technology, the marketplace, and policies, but still capture the general concept of a family farm in which a family unit maintains majority control and ownership.

Woods (2014) examines the pressures on family farms from globalisation and the adaptation strategies that have been adopted. He argues that the values and practices...
associated with the family farm appear to be increasingly outdated against the tide of rural modernisation and globalisation. This means that global integration of the agri-food system has favoured mass, industrial and corporatised agricultural production, with an unrestricted approach to sourcing produce that has dominated conventional agricultural characteristics. This situation has put economic pressure on family farms, often with terminal effect, and the number of family farms has tumbled in Europe, Australia, New Zealand and North America (de Raymond 2013; Johnsen 2004). Nevertheless, many family farms have survived, and in some cases are thriving (Woods 2014). In South Africa the same trend is evident in the commercial farming sector where farm units have declined from about 120 000 in 1952 to less than 40 000 in 2007 (AgriSA 2013). (It is recognised that these numbers might not denote the actual number of family farms.) This is in contrast with the perceived trend regarding the number of smallholders in South Africa where a strategic plan for smallholder support suggests that the figure for this type of farmers should be increased from 200 000 to 300 000 by the year 2020 (Department of Agriculture, Forestry and Fisheries/DAFF, 2013).

Whilst family farming recently became a topic amongst different role players and stakeholders, the Western Cape Department of Agriculture decided that it is necessary to gather information on 12 family farms in the province to reflect on this farming type.

Methodology
On-farm, structured, recorded interviews with eight black families and four white families were conducted. Nominations by prescribed template were done by all districts in the province and farming on irrigated land, dry land as well as extensive livestock production was included. The following enterprises are on the farms that were interviewed; sheep, grain, potatoes, fruit, rooibos tea, ostriches, vegetables, layers, dairy cattle, beef cattle, wine grapes, lucerne, vegetable seed, tobacco, angora goats. All farms are diversified to a greater or lesser extent. The size of farms ranges from 8,5ha to 11 0000ha. All but one interview has been done on farm. The duration of interviews was about an hour for most of these engagements.

Results
What does it take to farm?
In the first instance one must be fond of farming. Farming is also about taking opportunities to the best of your ability. It also entails a lot of hard work from early to late. Planning must be done in advance and it is much more important recently than in the past. A lot of adaptation and sacrifice is required if the family has not farmed before. To start farming can be very difficult because the income might not be adequate to sustain a livelihood. It some instances it might be necessary to acquire income from non-farming sources in order to survive. Acceptance of a newcomer by the established farming community is a challenge but farming performance and building of relationships can overcome this. Adaptation regarding farming enterprises and technology is very important and it will have a significant influence on the viability of a farm over time. A breakdown of all enterprises must be done to the finest detail to determine its efficiency and relevancy. Sentiment could be very costly and might even jeopardise the survival of a farm. The business must grow but an aggressive-conservative approach will guard against investments being made that are beyond the capacity of the farm and that are not affordable.

Pros and cons of family farming
After a good day even if it was hard, it is satisfying to realise that the work has been done for the benefit of the family. If farming is a passion nothing seems like a
burden because seeking for solutions then became the modus operandi. Any owner or active shareholder of the farm is inclined to be more productive and caring than employed staff. The fact that the farm could be a significant asset to successors is also a motivating factor. Another aspect, the family is obliged to remain and work together to survive and prosper. Decisions that are taken together mostly are better than those made by the individual only.

The downside is that smaller family farms have to do almost everything by themselves, which demands hard work, long hours and very little time for leave. Also, it is not always easy to reprimand a family member who has not fulfilled a task. In times when the business is under financial pressure it will filter into the family and problems most likely will surface during such periods.

Decisions

Decision-making processes ranges from one dominant decision-maker that will consult with the rest of the family to get their insights to full democratic processes where consensus is sought with all important decisions. In the majority of cases the tendency appears to be more towards the latter. This could be one of the mechanisms to get buy in from all members concerned and to strengthen commitment towards inclusive goals. On operational level there exists a general principal for members that have been assigned to specific divisions on the farm to carry the responsibility for their decisions and be accountable as well.

Information from a variety of sources is used to make decisions. Sources of information include “senior partners” (mostly fathers), mentors, departmental officials, other technical and financial experts, commodity organisations, marketing structures, the internet and visits abroad. Accounting services are valued in most cases and for the majority it is the only input that is not been provided by the family.
Succession
Succession is a very important and contentious issue in family farming. Not all family members might be direct or equal beneficiaries as far as ownership or shareholding in the farm as such is concerned. Succession in most cases is a phased process of handing over the farm and its operations to dedicated successors while arrangements are made to provide some benefits to non-dedicated family members.

Challenges and survival strategies
Droughts coupled with the dependency on the natural environment are one of the most pertinent issues that was mentioned. Other seemingly important factors are rapidly rising costs and especially expenses such as electricity and taxes, which have a direct negative effect on spendable income of households. The competitive nature of modern agriculture and constantly shrinking, smaller profit margins, which makes financing inevitable, are deemed significant aspects to deal with. The social situations in rural areas as well as the lack of attractiveness of on-farm labour going into the future are additional concerns that were raised.

Diversification, application of precise technologies and consolidation of different family farm units into a bigger cooperative type of entity are some of the strategies that were suggested to keep the family business afloat.

Important factors for success
Leadership, effort, adaptation, understanding and honouring the principles of a sound business as well as a supportive environment are some of the crosscutting factors that were mentioned and identified to make a success out of farming.

Conclusions and recommendations
• The small sample been used restricts the validity of conclusions if an attempt is made to portray it as representative of the Western Cape Province. However, some interesting perspectives were revealed and it seems that there are marked similarities with family farms elsewhere.
  • VanNiekerk, et.al(2015) studied the transfer of intergenerational family knowledge for sustainable commercial farming. Key knowledge themes that were identified are; maintaining a business mindset; investment and diversification decisions; planning and implementing operational plans; valuing human resources; genetic preservation; adapting to changing climatic conditions and risk taking. The key modes of knowledge transfer were continuous engagement, discussions and networking. Finally it was recommended that smallholder farmers need to incorporate these lessons in commercialising their enterprises.
  • Woods (2014) concluded that family farmers are not the inevitable victims of globalisation, but that there are areas within the global agri-food system where they have the potential to make a difference, or attempt to do so. Such strategies involve proactive engagement with the opportunities presented by globalisation, developing new international networks to strengthen a family farm business or moving the farm to a more competitive location in another country. Finally he argues that; “most family farmers are responding to globalisation through modest adaptations: on-farm diversification that can attract a few local or national customers; selling some produce on local markets or at the farm gate; taking on contracts to supply supermarkets that bring stability for a while but leave the farm vulnerable to corporate decision-making. For most farms, these small actions may be enough to survive – for now.”
  • Further investigation on family farming regarding its qualities in the rural landscape, coupled with cooperative models that could improve the viability and growth of smallholder, emerging and marginal commercial farmers while maintaining the inherent structure of farm families, is recommended.
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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, 2014. Food and Agriculture; Innovation in family farming. ISSN 0081-4539


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AGRI PROBE

Is a quarterly magazine, distributed to subscribers at no charge by the Western Cape Department of Agriculture.

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CTP Printers (Cape Town)
Tel: 021 929 6200

Packaging
Stellenbosch Work Centre for Adults with Disabilities
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