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Harvest SA

Securing South Africa's Food Resources

FULLY ENDORSED BY GRAIN SA GRAAN SA

The next generation

New people, new technologies to feed a growing population

ISSN 2305-0551 ***Harvest SA*** **wins gold at the international Tabbie Awards 2013 in the Best Single Edition Category**

TABBIES 2013 Award Winner

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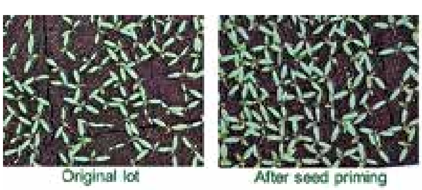
SEEDS OF SUCCESS

incotec
involved in seeds

Pelleting and priming

Planting flat, irregular or small vegetable seeds in the field or nursery can often prove inefficient or challenging due to planter set-ups and workability of the seed. INCOTEC SA provides nurseries and open-field farmers with crop specific and tailor-made technologies to help alleviate these potential problems. Pelleting is a process where inert materials are used to build up a seed's size and shape into a more workable product. This improves plantability, and decreases the number of misses or doubles in trays and in the field. Encrusting is a weight build-up used to fill in irregularities on a seed's surface. This technology is used on, but not limited to, carrot and onion crops.

Some seed lots may struggle to preform optimally in the field or in the nursery due to dormancies or irregular seed maturity within the seed lot. INCOTEC's priming technology can help break dormancy in crops, and can improve the maturity of individual seeds within a lot. A seed lot that has been primed can be expected to have an even emergence, and often emergence occurs after a shorter time in the field or tray. This makes priming an ideal technology for use on crops that have a narrow window of planting time.



Seed Loading Test

Application of plant protection products (PPP) on seed has been shown to reduce the risk of crop losses to insects, other pests, weeds and diseases and thereby increase the crop yield. However the effectiveness of the PPP administered depends on the dosage applied to the target seed. If a lower dosage than the recommended one is applied, the effectiveness of the PPP could be reduced significantly. Alternatively, a dosage that is too high could be harmful to the seed and/or environment. GCMS is a high-tech and accepted method to determine not only the amount of PPP applied to a batch of seed, but also on individual kernels.

Pesticide Residue Analysis

In order to protect humans, animals and the environment, strict regulations governing pesticide usage have been implemented worldwide and as a result Maximum Residue Limits (MRLs) have been enforced. Monitoring of pesticide residue forms an integral part of food safety using GC-MS/MS.

GMO testing

INCOTEC is also proud to announce that we have obtained our ISO17025 accreditation for GMO testing (Accreditation number: T0534). The scope of our accreditation includes the qualitative and quantitative testing of GM maize, soy and their adventitious presence in food, feed and seed. The benefit of this accreditation to our customers lies in the global recognition of SANAS accreditation. This will also benefit anyone wanting to export food, feed and seed to non-GMO countries. It will assist customers in related fields with establishing compliance to the local and international GMO legislation. Using PCR we offer a standard turn-around time. We are proud to be able to bring this level of service to our customers.

Citrus Black Spot (CBS)

INCOTEC is a laboratory audited by the Department of Fishery and Forestry (DAFF) to assist with the testing of CBS on various citrus species. The presence of CBS becomes important when citrus is exported to countries where CBS is not present. Rapid testing using PCR (48 hours) for the presence/absence of CBS, can help in assuring that consignments are not intercepted, which in turn will avoid potential losses while the consignments are being inspected.

For further information you can contact INCOTEC SA offices on 033-386 1560/1. Email: tertia.erasmus@incotec.com or fernando.pienaar@incotec.com.

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www.harvestsa.co.za

Fully Endorsed by

SENTER 360

- Your pivotal partner in irrigation

Africa's pivot of success

COMPANY PROFILE

SENTER 360 is a South African company. We have a simple policy of doing business with the highest standards of integrity. We therefore pride ourselves on not merely selling a product, but building long term relationships.

Designed and built in South Africa in 1994, SENTER 360 centre pivots are known for their superior construction quality and strength – above industry standards, and we as a company are renowned for excellent sales and after-sales service.

We have been in the irrigation industry for more than 20 years, specialising in surveying, system design, installation and commissioning of irrigation systems. We have growing business interests in South Africa, Africa and internationally and offer a turn-key project development service from feasibility study phase to implementation and project management.

One of our recent achievements has been the allocation of an international tender for the supply of more than 50 centre pivots to the South African Government for the Taung irrigation scheme.

At SENTER 360 we are passionate about our centre pivots. Apart from building a functional and exceptionally strong and rigid structure, we pay great attention to the finer details, making a day-to-day difference in your life.

STRUCTURE STABILITY

The SENTER 360 centre pivot utilises trusses made from pipe being lighter than the traditional angle iron trusses, allowing us to incorporate two more sets of trusses, and so giving enormous strength and exceptional resistance to high wind. Longer 4,5 m base beams (5,8 m for the high profile machines), tower supports, stabilising rods and diagonals add to the exceptional stability.

INNOVATIVE CONTROL PANEL RANGE

The simple modular design is also applied to our control panel range. The basic panel with direct millimetre adjustment can be expanded at minimal cost through various stages of automation and communication.

"LAST SPRINKLER" SOLUTION

One of the problems in centre pivot irrigation is that the last sprinkler clogs regularly. We came up with a genius yet simple way to constantly keep the last sprinkler clean. SENTER 360 centre pivots are fitted as standard with the pressure regulated Senninger I-Wob sprinklers on drop pipes to ensure outstanding water distribution in most climatic conditions.

HEAVY-DUTY GEARBOX AND MOTOR

The drive train of the SENTER 360 centre pivot comprises a heavy-duty wheel gearbox as standard with a free optional five year warranty* driven by the UMC Power Saver centre drive motor and gearbox.

*Terms and conditions apply

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Africa's pivot of success
Since 1994

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Success is our motivation.
agricol
go for growth
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FOREWORD

JANNIE DE VILLIERS
CEO: GRAIN SA

Who climbs with us?

I recently read that when things get tough, it's important to look around you to see who is climbing the mountain with you. You are always so intensely aware of those who are trying to pull you down and those who are putting some stones in your kitbag while you are struggling up a steep cliff.

Climbing up the transformation mountain of Agriculture is not your usual mountain. This is a mountain full of loose sand, there are many steep cliffs and very little grip getting up there. Some days I am also short of breath, as it seems there is very little oxygen around. There are also the rainy days and the cold and heat, testing all your abilities to succeed and to endure.

This mountain does not allow a lot of sleep, either. The food is sometimes cold and not so tasty. Agriculture is struggling with the issues of land reform. We have not yet found a sustainable solution to keep everybody happy and to maintain food security. Some areas have not been developed and some areas are lacking infrastructure such as rail roads and storage facilities.

The commercial banks regard this sector as very risky and do not want to lend money to the farmers who are willing to face these cliffs and extreme weather conditions. They need security to ensure their profits. Farming does not have certainties; you plant a crop of millions of rands and then wait upon the good Lord to provide the rain. There is no certainty in that. It is all about faith. These are the mountains we are climbing!

There are actually very few leaders who are willing to step up, take on the mountains and show the way forward. The benefit we have as agriculturalists is that most of our leaders grew up on a farm and know the circumstances and skills needed for climbing mountains. When it is your time, you step up with faith and know you will not be climbing these mountains alone.

People need food three times a day, therefore somebody needs to get up early in the morning to start preparing the soil to produce a crop. We know it by heart and have the passion for it. Evaluate your own position: Are you cheering on the farmers of South Africa or are you one of those pulling them down or throwing rocks because of your own personal interest? There are those driven by greed who begrudge others everything.

During the tough times in Agriculture: trying to unite the people, finding solutions for land reform, solving the problems with labour and weathering the effects of climate change while producing food to our nation – we will be looking around to see who is climbing the mountain with us. It is the season of 'We', and no longer 'Us' against 'Them'. Leading under these circumstances is tough, but the rewards are great and will ensure a safe and peaceful future for our children and grandchildren. Let's go!

EDS NOTE

GREG PENFOLD
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Bringing home the harvest

The month of May heralds a veritable bumper crop of agricultural happenings, with two of South Africa's premier country occasions taking place. First of all there's NAMPO, Grain SA's showpiece, taking place from 13 to 17 May. No one with an interest in the commercial agriculture agenda can afford not to miss this showstopper. Be on the lookout for the *Harvest SA* team, represented by Tony Sanderson and his camera crew!

Then there's The Royal Show, the pride of KwaZulu-Natal, which promises to be more spectacular than ever this year. Read more about this, the oldest agricultural show in SA, in this issue.

It is keenly to be desired that the delegates at these events will include a generous representation of emerging farmers and farmers who have made the transition from emerging to established commercial status. It's vital for South Africa's food security, job security and the sustainability of agriculture as a whole that all players in the agriculture space engage each other in conversation – for there are burning questions to be answered. What is the best strategy to adopt in an increasingly globalised market? How best to partner with government to achieve development goals? Everyone is both teacher and pupil alike in this environment.

Grain SA
The next generation

Future technology, conditions of work and the expectations of the next generation formed the focus of the 2014 Grain SA annual congress


Congress in seating

Grain SA's annual congress took place from 5 to 6 March 2014 at NAMPO Park. The theme, "The Next Generation", focused on the importance of the new generation in the agricultural environment and highlighted the significance of new technologies to provide food security for a growing population.

The chairman's report, presented in audio-visual format, was as popular as ever, whereby Louw Steytler (Chair: Grain SA) and Jannie de Villiers (CEO: Grain SA) focused on highlights from the past year and further discussed the successful achievement of strategic objectives.

Chairman's report

2013 was definitely a year of acceleration – a year during which Grain SA focused on delivering on its promise, "allowing grain producers to concentrate on production", said Steytler in his opening of this year's congress.

"Grain SA is continuously busy piecing the pieces of the puzzle together. As a result, we can view the organisation as a whole, allowing us to plan and reassess as the landscape changes", he said. "Grain SA's primary responsibility is ensuring food security for South Africa, and we wish to create a policy environment in which producers can operate in a profitable and sustainable manner".

According to De Villiers, it was a year marked by great challenges such as the extreme climates experienced. "The season started off with a lot of promise and a wet East, but drought in the West and abnormal rainfall in the South during harvest. In addition, some thunderclouds developed surrounding the free market and speculation that Government wishes to regain control.

"Fortunately, we have capacity within the organisation to manage such crises, and the speed at which we respond is of utmost importance", he added.

Steytler reiterated, "Food security is a privilege that we should value. We cannot rely solely on imports. Agriculture therefore represents the foundation from which growth can be maintained and our people fed."

Grain SA's discussions with government departments are focused on issues that directly impact agriculture and the country as a whole. To counter the negative effects of importing cheap products on local agriculture and long-term food security, negotiations with the Department of Trade and Industry led to the establishment of import tariffs on products such as wheat and chickens. Moreover, export facilitations have further increased potential markets for grain internationally.

"South Africa this year exported maize to Mexico's tortilla industry, as well as to Japan, Korea and Taiwan – all big customers of ours," De Villiers said. "We are also investigating the possibility of exports to the Middle East, where we are constantly focused on strengthening relationships and providing exposure to our products.

"Furthermore, there are new developments such as biofuels in the local market. The policy on biofuel presented by Government is a major development for Grain SA and corresponds to our country's overall policy," De Villiers added. "As of 1 October 2015, it will become compulsory to combine a percentage of biofuel to our fuel supply. Accordingly, producers and especially emerging farmers must seek and investigate the possibilities and opportunities further given that raw materials will need to be purchased".

The relevance of next-generation technology

The keynote address at this year's Grain SA Congress was delivered by Rob Dunlop, who is currently the Europe, Middle East, Africa/Asia corn technology lead with Monsanto, based in St. Louis, Missouri in the United States. He originally hails from Port

Grain SA leadership, Andries Theron (vice chairperson), Jannie de Villiers (ceo), Nico Vermaak (manager: corporate services), Victor Mongoato (vice chairperson) & Louw Steytler (chairperson) all from Grain SA left to right

Media briefing with (left to right) Jannie de Villiers (CEO, Grain SA) and Dr Julian Jaftha (Chief Director: Plant Production and Health, DAFF)

Shepstone and is a graduate of the University of KwaZulu-Natal, Pietermaritzburg.

He spoke about new developments and the relevance of next-generation technology. He believes technology is the cornerstone of food security and is all about looking to the future and investigating all possibilities through research, breeding and using new technologies to increase production.

Dunlop says the company has realised the need to focus on consumers by engaging in conversations with them and providing them with more accurate information about the advances that have been made. The anti-GMO sentiment is an issue that floods social media with negative messages rather than an appreciation of the value of increased production to feed the hungry masses.

He assured Congress that Monsanto is not striving to develop any "frankenfoods", but rather to find innovative ways to feed a growing population off less land in harsher conditions.

Major trends driving the need for next-generation technologies are the rapidly growing population (200 000 people are added to the world population per day), climate change, the need for a biofuel industry, the need for affordable food, the increasing pressure on water availability, and global food security.

Next-generation technology in discussion

The first panel discussion, led by Max du Preez (well-known author, journalist and analyst), further focused on new-generation technology and centred on precision farming, JSE market developments, climate change patterns and global warming. The panel consisted of Len Brand (Managing Director, John Deere), Chris Sturgess (Director: Commodity Derivatives, JSE Limited) and Dr Peter Johnston (Applied Climatologist, University of Cape Town).

In keeping with the theme, Brand's presentation focused on precision farming, which is broader than the equipment alone, defined as a system in order to optimise production. Furthermore, the presentation focused on the current mega-trend that the world needs more food, how this can be achieved through an increase in providing more land for production, and to what extent current farmers need to increase their production systems.

Further, Sturgess discussed technology from the JSE's perspective and highlighted the necessity of a trusted trading platform providing a secure and safe environment with accurate and timely information. In addition, price volatility of a free market was discussed, where uncertainty about the rise and fall of prices once again highlighted the importance of a set platform with clearly defined rules and practices.

Finally, Dr Johnston concluded the panel discussion with an overview of weather patterns, highlighting global warming and further focusing on water resources as central to climate change issues. He concluded by emphasising that although it seems more extreme weather conditions are

Rob Dunlop, Monsanto

Dr René Uys, Thinking Fusion

occurring, in all likelihood the trend is rather concerned with an increase in reporting of these extreme events.

The next generation – consumers, workers and officials

Whereas the morning session focused on next-generation technologies, the afternoon session turned the delegates' attention to the more human element of human knowledge and skills.

Dr René Uys from Thinking Fusion had her audience intrigued by the insights she offered. Many delegates found themselves chuckling as they recognised characteristics they have to deal with and found the insights helpful in explaining why the differences between generations may sometimes give rise to conflict or confusion.

She highlighted differences between generations, saying we need to understand what drives and influences them and what causes their different behaviour. Today's economy is described as the 'Connection Economy', which is very different from the 'Information Age' we have just experienced, which was process-orientated, revered the MBA, celebrated the hero leader and was characterised by technology and innovations.

In contrast, the connection economy is not about the connectedness through technology, but about relationships. It is an engaging, collaborative, relationship-based community that is all about using the Internet to move from the Information Age to the Connection Economy simply because we are all connected.

Congress delegates were given the opportunity to vote by way of colour-coded cards in a quick poll

Panel discussion with Len Brand (MD, John Deere), Dr Peter Johnston (Applied Climatologist, University of Cape Town), Chris Sturgess (Director: Commodity Derivatives, JSE Limited) and Rob Dunlop (Corn Technology Lead: Europe, Middle East, Africa/Asia, Monsanto

Next-generation expectations in discussion

The second panel discussion, again led by Du Preez, consisted of Professor Riëtte de Kock (Department of Food Science, University of Pretoria), Dr Julian Jaftha (Chief Director: Plant Production and Health, Department of Agriculture, Forestry and Fisheries) and Mzimbili Stephen Ngoza (precision farming machine operator, Rhys Evans Group).

Prof. de Kock shared insight into the food preferences of the new-generation consumer, impacting greatly on how producers plan for the future.

Ngoza affirmed that the required skills of new-generation workers change on a daily basis due to the new-technology machinery that is available.

Dr Jaftha commended the good work and commitment of Grain SA and further highlighted the importance of effective engagement with government structures. He appealed to delegates to remain proactive in their approach and urged all to direct any enquires to the relevant line function in order to receive the most appropriate feedback and best results. He further reiterated the importance of consolidated issues with a non-fragmented approach and, in closing, highlighted the importance of changing the dialogue and engagement in order to establish and maintain effective partnerships.

Election of chairpersons

Grain SA is strategically heading in the right direction. The producers confirmed their confidence in the current management structure by re-electing the chairman, Louw Steytler, and the two vice chairmen, Victor Mongoato and Andries Theron, to their respective offices.

The 2014 Congress was certainly one for the record books. Grain SA is known for its innovation and improvements and therefore invites you to keep an eye out for what will be happening at next year's Congress.

Alzena Gomes, Estie de Villiers & Jenny Matthews

Syngenta SA invests in future agricultural leaders

The 2014 Grain Academy leadership development intake reflects the diversity of young commercial growers in South Africa

On 26 February this year, Syngenta unveiled a diverse group of 20 young progressive commercial growers selected from across the country to participate in the Grain Academy's leadership programme for 2014.

The academy is Syngenta SA's flagship leadership development initiative and is fully sponsored by this world-leading agri-business.

The programme seeks to equip the growers with leadership skills required to tackle the ever-rising challenges of food security and agricultural productivity. The first intake was in 2013. Developed in partnership with the University of the Free State Business School, the programme is facilitated by Thinking Fusion, a strategic leadership development organisation.

Antonie Delport (managing director of Syngenta SA) said: "It is Syngenta's firm belief that the future of agriculture should be shaped rather than left to chance. Equipping these young growers with skills to manage diversity and lead the industry is going to be vital in optimising South Africa's agricultural productivity.

"It is also heartening to see that the response to the academy has grown phenomenally in the past two years. Our dream is to see future leaders in the sector taking charge of opportunities and contributing to global food security."

The Grain Academy initiative is supported by the industry body, Grain SA, whose chief executive Jannie de Villiers views the

Jannie de Villiers (CEO, Grain SA) seen here with Prof. Helena van Zyl (Director, Business School, UFS), Linda van der Merwe (Head of Customer Marketing, Syngenta SA) and Antonie Delport (Managing Director, Syngenta SA) at the launch of the Grain Academy 2014 held in Bloemfontein programme as a trajectory to the country's economic competitiveness that lies in skills development.

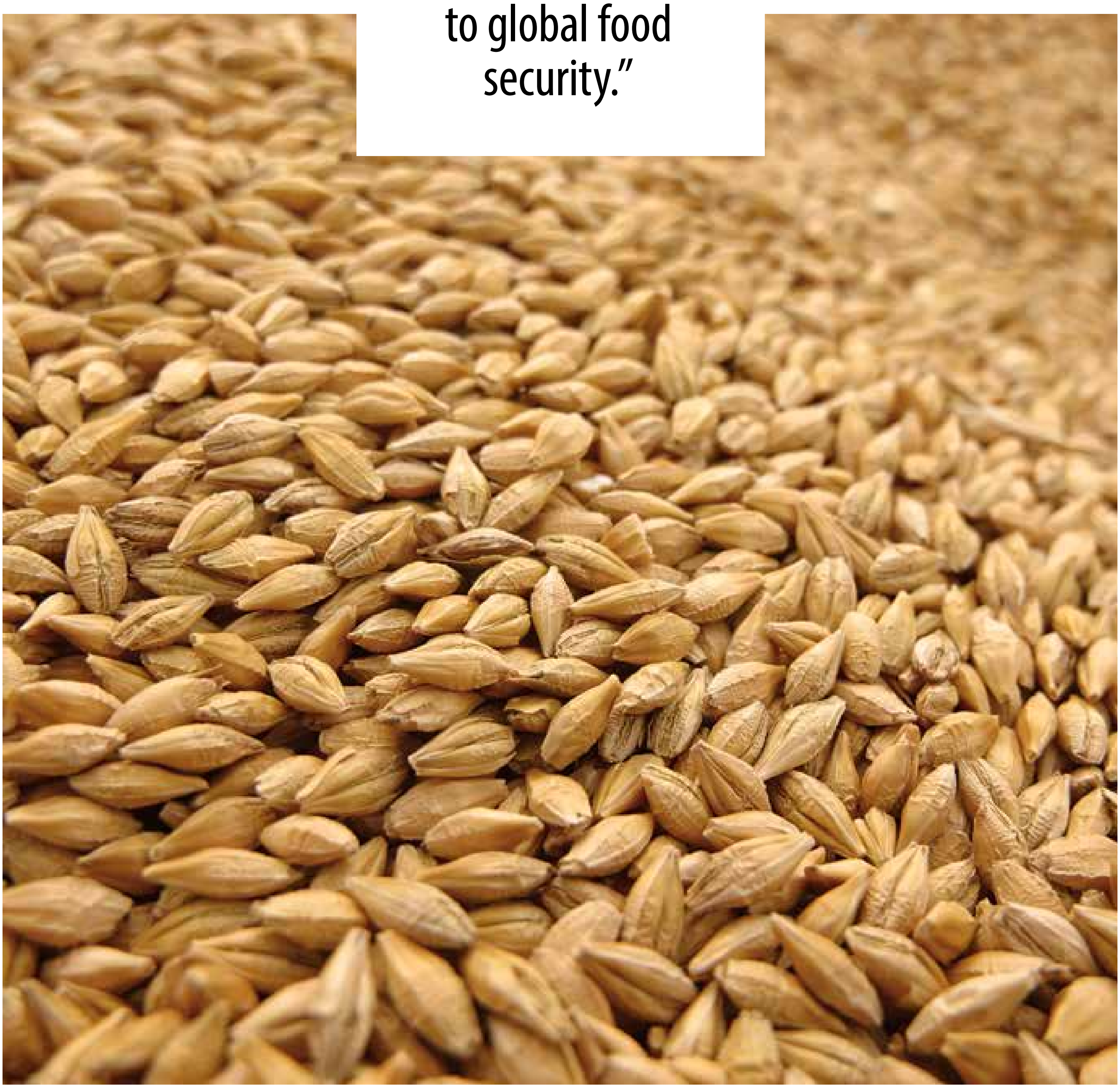
De Villiers said: "The establishment of a Grain Academy is in line with Grain SA's strategic objectives and we're excited to partner with Syngenta in delivering on this project. The future of sustainable production lies in our competitiveness and it can only be improved with ongoing training."

This programme equips growers to lead, think and behave differently in order to make a profound difference in their sphere of influence, and in the agricultural environment in which they operate.

Floyd Murray from African Bio-Resources, who participated in the 2013 Academy, described the programme as highly rewarding. He said: "Participating in the Grain Academy was an incredible experience of self-discovery, sharing and learning for me."

Usman Aly

"Our dream is to see future leaders in the sector taking charge of opportunities and contributing to global food security."

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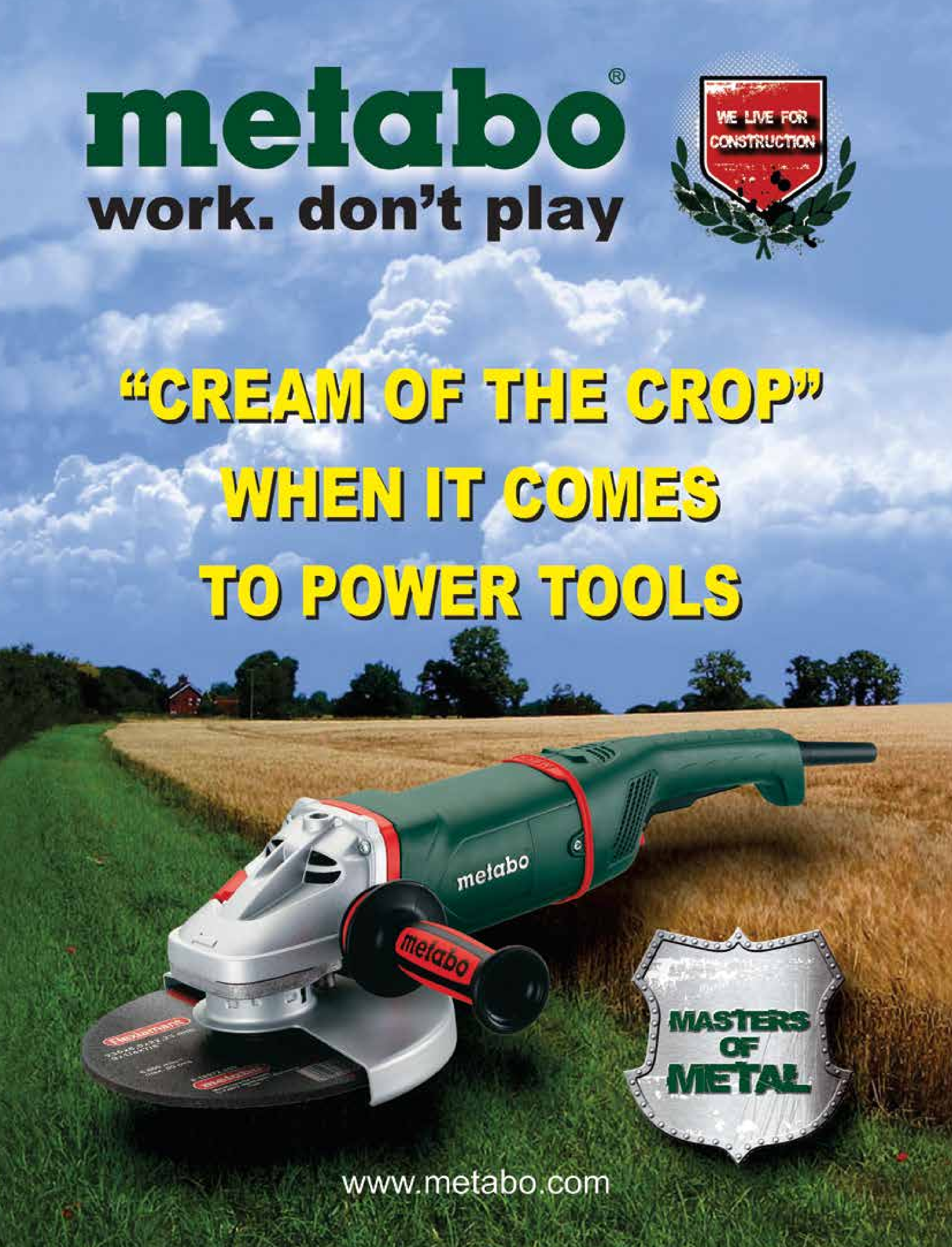
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Good times for SA agri exports

South Africa's agri exports continue to grow as more and more advanced farming technologies become available

South Africa has always boasted a strong export market in agricultural commodities. Indeed, we are one of the world's largest exporters of wine, fruit and ostrich.

In addition, the companies that provide these South African farmers with the necessary support and services have started venturing into international markets and breaking new ground.

Larger agricultural giants such as Afgri and Senwes have been supplying Africa and the world with agricultural ideas, support and services for decades.

For smaller companies, expanding into unknown global waters is a daunting task, to say the least. However, the need for innovative and advanced accurate farming technologies that improve profitably and farming methods are required by farmers everywhere. Exporting South African products, as well as supplying other countries with our services, is of great value to our economy.

The Food and Agricultural Organisation (FAO) has stated that the expansion of agricultural trade has helped provide greater quantity, wider variety and better quality food to increasing numbers of people at lower prices. "Agricultural trade is also a generator of income and welfare for the millions of people who are directly or indirectly involved in it. At the national level, for many countries it is a major source of the foreign exchange that is necessary to finance imports and development," according to the FAO.

International destinations

Agricultural companies not only have their eyes on international destinations, but also on trading into Africa – an environment that has become ever more attractive.

A report by the national Department of Agriculture says that "South Africa is the most active country in intra-Africa agricultural trade. However, it is a relationship defined predominantly on exports to Africa, with a low level of imports. South Africa exports a diverse range of value-added products, while imports remain concentrated in commodities."

Considering South Africa is now classified as a water-scarce country, innovation in this space, which benefits agriculture, is needed and, thankfully, is on the increase.

According to the World Water Council, by 2020 humankind will need 17% more water than what is available if we want to continue to feed the world.

Agriculture relies heavily on irrigation to produce food and it is imperative that it takes place with due cognisance of water scarcity. Producers who irrigate must use water optimally and limit wastage if they are to ensure the long-term sustainability of global food production. The role that water plays in crop production is significant and the water application to crops determines 80% of the success of the eventual yield.

South African companies have come to the fore in this space and are offering the African and international markets products and services that provide much-needed solutions to water management on farms. Two such companies are IrriCheck and AquaCheck.

State of the art

IrriCheck is an innovative state-of-the-art precision irrigation system that reduces risks and increases yields. It has earned two industry awards and was crowned the 2012 winner of the South African Department of Water Affairs' Water Conservation and Water Demand Management Sector Awards and scooped second place in the South African National Committee on Irrigation and Drainage Award in the Farming category.

The synergy between irrigation consultants, horticulturalists, soil scientists and agronomists ensures effective placing of probes – a process that measures the amount of available water very effectively. This optimal water consumption enables expansion to take place.

IrriCheck offers its clients the design and supply of irrigation systems, while consulting and evaluating the farmer's current irrigation systems. Its added services include irrigation scheduling software, supply of continuous logging probes, supply (manufacturing) of automatic rain gauges, supply (manufacturing) of Irricoms (which communicates by GPRS modem between probes, rain gauges and weather stations, and the

IrriCheck web server) and irrigation scheduling services throughout South Africa and Africa.

This innovative system is now available across several countries in Africa and the company's innovative systems are gaining popularity all the time.

Still on the subject of water management, another company, AquaCheck, is a South African-based manufacturer of quality and affordable capacitance-based soil moisture probes. Its probes are compatible with a range of telemetry options and solution partner platforms.

Visualising the dynamics

The company offers an online soil moisture management software platform to host, process and display soil moisture and related data. AquaCheck's technology is used to simply visualise the dynamics of plant-water-soil-atmosphere interactions within any irrigated crop. Irrigators use the data generated by these probes and auxiliary sensors to manage their day-to-day irrigation scheduling requirements.

The probes have applications in agriculture, turf, mining and environmental management.

AquaCheck (Pty) Ltd is based in Brackenfell, Cape Town and has distribution centres in the United States and Australia. AquaCheck also has representation in several countries across five continents.

AquaCheck started in 1997 as an on-farm technology transfer programme assisting potato growers in improving on-farm production efficiency. Precision irrigation scheduling soon became the top priority for most of the growers in the programme and from there the initiative rapidly evolved in the direction of improving on-farm water use efficiencies.

This development, among others, included the use of continuous soil moisture monitoring probes. This success story naturally spread to other crops and eventually across the entire South Africa and the globe.

In 2005 AquaCheck launched its own proprietary wireless capacitance-based continuous logging probe. Success in the local market created the foundation for an export business, which today distributes robust and affordable soil moisture probes across five continents and several dozen countries. Today the AquaCheck probe is recognised and available across the world as a reliable, robust and affordable capacitance-based soil moisture probe.

Whether it is the export market of our commodities or agricultural systems and products, South Africa's agricultural industry is a powerful one and the ever-increasing innovative minds at the helm of growing our exposure worldwide will continue to ensure South Africa remains a formidable leader in this sector.

Rudi Massyn

Potatoes for the Nation

potatoes
SOUTH AFRICA

pure potato passion

Potatoes are the biggest fresh vegetable crop produced in South Africa with a gross value exceeding R 5.5 billion which represents approximately 55% of all vegetables and 3% of the total South African agricultural sector. In respect of the 2013 crop year, approximately 50 000 hectares of potatoes were planted commercially, which yielded a crop equalling 218 million 10 kg bags.

Photograph by Hanrie Greebe

Potatoes South Africa is committed to increase the per capita consumption of potatoes. Through its marketing campaign, it has managed to increase the per capita consumption from 20kg in the early 2000's to approximately 40kg currently. Of special significance is the importance of the potato as a carbo-loader in the diet of sportspersons. For this reason special emphasis is made to the association between potatoes and performance.

The status of the potato in the agricultural sector plays a prominent role as job provider on farms due to the labour intensive nature of potato cultivation, as well as creator of entrepreneurial opportunities, eg. opportunities offered to informal traders, spaza owners, "slap-chips" vendors, formal and informal processors and exporters. An excellent example of the latter is the fact that 60% of all potatoes sold on the fresh produce markets are purchased by informal traders.

What is equally important is the role the product plays in the development of enterprise development farmers and assisting communities to produce potatoes. In this regard Potatoes South Africa is currently assisting 16 enterprise development farmers and 11 communities under its small grower development programme. Apart from providing financial assistance in procuring certified seed, it renders an extension service with the primary objective to transfer knowledge.

Knowledge transfer is especially relevant in the potato industry as potatoes are a complex crop to grow and require very specific knowledge. As a result, three of the core business entities of Potatoes South Africa are directly involved in knowledge management activities supported by six regional managers to ensure close interaction with potato producers. These core businesses include research and development, transformation and information. The Potatoes South Africa internship programme, student bursaries, mentorships, enterprise development and small grower development programmes are all directly and indirectly fostering knowledge transfer pertaining to potato cultivation. In addition, research on, among others, pests, diseases and soil nutrition, as well as generation of farm level economic data, contribute to the knowledge package offered to potato producers in South Africa.

As an example of Potatoes South Africa's commitment towards transformation in the potato industry and consequently the transfer of knowledge about potato cultivation to new entrants in the primary potato industry, it has published the Potato Production Quick Reference Guide. The guide covers issues ranging from financial planning and general requirements from how to produce potatoes, to issues pertaining to choice of cultivar, seed quality, pest and diseases, production management and marketing.

As a result of the intrinsic value of the potato, it can play a pivotal role in ensuring food security as it is produced all year round, as well as in hunger alleviation because it is affordable, nutritious and healthy – a must for every consumer's daily diet. It also compares extremely favourable with other products in the carbohydrate category such as bread, maize meal and rice in terms of price and value for money. In addition, it is especially in the rural areas and towns where the potato can play a key role in the sustainability of these areas through its capabilities as a job creator and strong economic multiplier effects that improve the welfare of poor communities, which is in line with the government's transformation goals.

Gawie Geyer

Potatoes is a strategic crop to ensure household food security

Availability - Potatoes are produced all year round in all provinces. Hence fresh potatoes (apart from processed potatoes) are available all year round.

Affordability – Potatoes are sold by a number of sellers at different levels of the value chain of which 50% are bought at 19 Fresh Produce Markets countrywide, of which 60% is bought by hawkers. Potatoes have a price advantage over many other staple food such as bread, maize meal and rice. The potato supply chain has one of the highest employment multipliers, thus an important source of income to buy food.

Nutritional - Recent research shows that potatoes are highly nutritious, in fact more so than rice, maize meal, pasta and bread, for example medium potato with skin contains 45% of the daily value for vitamin C.

The average potato was compared to other commonly starchy foods, and the comparisons revealed that potatoes are favourable in terms of lower energy and carbohydrate yields, and higher in vitamin C and potassium:

Per 100g serving	Potato (cooked with skin)	Pasta (cooked)	Rice (white, cooked)	Maize meal (cooked stiff)
Energy (kj)	332	589	531	455
Carbohydrates (g)	16	27	28	24
Fibre (g)	2	1.6	0.4	1.8
Fats (g)	0.1	0.7	0.3	0.6
Vitamin C (mg)	5.5	0	0	0
Potassium (mg)	710	3.1	39	37
Zinc (mg)	1	0.53	0.5	0.63

Source: Nutri-Vation, ARC, University of Pretoria

Potatoes provide important dietary diversity for rural households

Many rural households farm with potatoes on a very small scale. The wonderful aspect of this is that even on a small scale surpluses are produced that can be given or sold to other community members. Together with the dietary diversity effect of potatoes, this allows for income generation opportunities as well. Potatoes are however disease prone and production costs is high.

However, if correct cultivation processes are followed with good management the returns justify the cost.

Potatoes South Africa's Small Growers Development Programme

Over the last six years 60 projects were established through the Small Growers Development Programme with an average of 57 rural growers per project, with more than 3 900 small holders participating.

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Eradicate hunger, not hope

DAFF responds to the Democratic Alliance's allegations on Fetsa Tlala

The Department of Agriculture, Forestry and Fisheries (DAFF) is appalled by the recent media statements that seek to besmirch the good food production campaign, Fetsa Tlala.

In a country where over 13 million people are faced with hunger, it is disturbing to see a government food production initiative that is capable of ensuring a community that is able to feed itself, so vehemently opposed.

Fetsa Tlala ('eradicate hunger') is a government initiative that seeks to push back hunger inadvertently working toward the elimination of the triple challenges of poverty, inequality and hunger. It contributes to the broader national Integrated Food Security and Nutrition Programme. This policy is our country's commitment to the 2008 United Nations' call for a second green revolution that would ensure sustainable global food systems to feed the almost 7 billion global population.

Our own country's hunger statistics are a cause for concern for government and in particular for the DAFF. According to a study conducted by the University of Cape Town, food insecurity is not only prevalent in the poor rural areas, but modern cities such as Cape Town and Johannesburg have recorded alarming numbers of hungry people. The study reveals 80% of hungry people found in Cape Town and 43% found in Johannesburg. These poor citizens cannot afford to buy food.

One of the areas of Fetsa Tlala is a government call for 'one family, one garden', to at least ensure a fresh supply of food. Naturally, to ensure success for Fetsa Tlala, Government called for partnerships with all stakeholders.

While many heeded the call for increased food production, others have been determined to destroy the campaign. It comes at a great price for the poor and hungry, whose hope of getting out of poverty is a purposeful objective and a determination to work hard, through own vegetable patches or raising chickens or other small livestock for survival.

To maximise the launch of Fetsa Tlala, the campaign was branded in accordance with government standards. For the over 13 million hungry South Africans, Fetsa Tlala and the rallying stakeholders bring hope.

It is a shame that some elements in our society are hard at work fighting government's hunger eradication at a cost and especially at the expense of hungry and poor South Africans. Government has a duty to the hungry and poor people of this country and, in addressing this scourge, the voice of the detractors should not divert the real issues.

These real issues are that:

- Fetsa Tlala has seen an increase in production in particular of smallholders;
- Smallholder producers have increased their high-quality crop;
- Smallholders have produced enough of this high-quality produce for themselves and could also export 288 tonnes of maize through the World Food Programme; and
- Fetsa Tlala has brought food security and hope in a country where over 13 million are hungry, regardless of ignorance of some real bread and butter issues for the poor people of South Africa.

Statement issued by Tsotso Sehoole, Acting Deputy Director-General: Stakeholder Relations, Communications and Legal Services, Department of Agriculture, Forestry and Fisheries, 9 April 2014

Bühler launches new milling plant

Food processing plant and equipment supplier Bühler South Africa launched its two-ton per hour mobile Isigayo compact mill on 12 April 2013, in conjunction with the Department of Trade and Industry (Dti).

The mill was launched in a bid to address the government's mandate of developing the small-scale milling sector and improving food security in the Southern African region.

Bühler South Africa's solution came in reaction to the country's need to move the processing of raw maize products into the country.

"This is a game-changer," said Garth Strachan of the DTI at the launch of the mill in Honeydew, Johannesburg. "It will introduce new technology to bring new players into the sector."

Some 30% of high-yield, under-utilised land is located in sub-Saharan Africa. "Various challenges – such as infrastructure – prevent role-players from utilising this land. Africa imports about 28% of its maize," added Strachan.

Easy to use

Designed by the Bühler Group, the two-ton per hour Isigayo Compact Mill comes pre-assembled in two containers. It can be installed quickly and easily, requires minimal training to operate, and has a low start-up cost. It is targeted at small and medium millers as well as commercial maize farmers, small farming communities, entrepreneurs, governments and non-government organisations.

The chief executive officer of the Bühler Group, Calvin Grieder, believes that the compact mill will revolutionise the country's milling sector. He described the Isigayo mill as affordable and easy to transport, adding that it would create employment and improve nutrition.

The idea of a compact maize mill started with the "Innovation for a Better World" award that Bühler received in 2010. Their "container mill concept" innovation was initiated for the agricultural sector, providing affordable and improved nutrition to the people. With the Isigayo project, Bühler decided to enter the small-scale milling segment. The unique and cost-effective processing is ideal for villages in rural and subsistence farming areas.

A clear focus

Having a standard plant pre-assembled in a container posed a technical as well as a marketing challenge when it came to addressing the needs of new target groups. For this reason an external market study was conducted through interviews with farmers, small millers and entrepreneurs, and the feedback revealed that a low start-up cost and quick return on investment were critical success factors for new millers. Target costing therefore became a clear focus during the further development of the project.

With the launch of the Isigayo mill, Bühler have found a local growth opportunity leading to an extension of core competences. Further developments are being considered to multiply the Isigayo approach to other raw materials such as wheat.

The Isigayo mill can lead to a 30% saving in costs as harvesting, production and consumption can all be concentrated in one place, thereby cutting out the middleman. This gives rural milling a competitive edge over industrial mills located in bigger centres.

For more information
visit www.buhlergroup.com
or email grain-logistics@buhlergroup.com

Hamba kahle, Ma Ntombi

With the passing of Ms Ntombi Msimang, chairperson of ASUF, South Africa has lost a great leader

The untimely passing of Ms Msimang, who was also chairperson of the National Agricultural Marketing Council, is a blow and setback to agriculture in South Africa.

Ms Msimang was a bridge builder of note, fostering relationships across the broad divide in South African agriculture. Her leadership in the Agri-sector Unity Forum (ASUF), as so clearly exhibited in the first ASUF Policy Conference recently held in Stellenbosch, went a long way to build trust and unity in such a critically important sector to South Africa and its future.

Minister of Agriculture, Forestry and Fisheries, Tina Joemat-Pettersson, the African Farmers' Association of South Africa (Afasa), ASUF and the entire South African agriculture community expressed their condolences to the family of Msimang.

"It is with great sadness and shock that the Agri-Sector Unity Forum this morning learnt that its chairperson, Ms Ntombi Msimang, had passed away on Sunday night, 13 April 2014.

"ASUF wishes to extend its sincerest condolences to the Msimang family, who have lost a very special and loved mother, grandmother and wife", said Japie Grobler, deputy chairperson of ASUF.

"ASUF pays tribute to Ms Ntombi Msimang as a very special person and someone who will be sorely missed", Grobler said.

Ma Ntombi served as the chairperson of the National Agricultural Marketing Council for the past five years, having been reappointed by the Minister of Agriculture, Forestry and Fisheries for a second term as a result of her sterling work. In 2012, she was appointed as the chairperson of ASUF, where she assumed the daunting and historic role of creating a single structure for the entire agriculture sector to speak to Government with one voice. Ma Ntombi also served as a council member of Afasa.

In all her portfolios, she led with a quiet and humble nature.

Ma Ntombi was instrumental in establishing the African Women's Entrepreneurship Programme chapter in South Africa in 2014. She was a true spirited entrepreneur who managed all these portfolios with clear, decisive leadership.

All who knew her have been positively lit up with her smile, generosity and warm nature and will sorely miss her.

Lala kahle, Qhawekazi, your spirit will live on.

Brief profile of Ms Ntombi Msimang

Ntombi Msimang was the founder/managing director of Peulwana Agricultural Financial Services and the owner of Sunny View Farms. Her career in agriculture spanned over 30 years. She worked for co-operative financial institutions such as Oikocredit, and was once mandated by the Department of Trade and Industry to operationalise the South African Microfinance Apex Fund.

Prior to 1994, Ntombi worked in Zambia, Kenya, Canada and Ethiopia and, for the better part, in agro-industrial enterprises as a senior member of the management teams.

Her passion for SMME development and mentoring emerging farmers gave rise to organisations such as the South African Women Entrepreneurs' Network, Women in Agriculture and Rural Development and the Agri-Vie Fund.

In 2012, she was appointed chairperson of the newly established Agri-sector Unity Forum.

Crossing over

Emerging farmers are vital to national food security, but making the transition from emerging to commercial agriculture takes understanding and application

Emerging farmers in South Africa face many obstacles and it is difficult for them to cross over into the sphere of commercial agriculture. Jay Ramdeen, project manager of rural agricultural development for Farm Agricultural Risk Management Holdings Limited (FARM SA) in South Africa, talks about success stories and what lies ahead for these food producers.

How does one classify an emerging farmer?
An emerging farmer is a farmer who was previously disadvantaged, was given land by Government via the land reform process, has operating knowledge of farming or might have been a previous employee on the same farm, lacks technical know-how, farm and risk management skills, and also lacks access to formal markets with defined off-take agreements. This type of farmer needs constant mentorship and training. These farmers also lack access to finance and usually rely on government grant funding to kick-start their operations.

How does one classify a commercial farmer?
A commercial farmer knows about agricultural production, farms on a large scale, farms for profit, uses mechanisation and continuously adapts his best agricultural practices.

What are the biggest obstacles emerging farmers face in becoming commercial farmers?
Lack of skill, lack of technical know-how, lack of finances, lack of access to markets, lack of risk management, difficulty in gaining access to more land to grow.

Are there success stories? Are there emerging farmers who have now become commercial farmers?
A few examples can be cited such as the Buffelshoek Farm in Uthukela District Municipality where production has grown to yield 8 tonnes per hectare of maize on 10ha of land and now seeking to acquire more land. Ma Ande Farm, a dairy farm in Kokstad area, Suurbraak in the Southern Cape, which farms grains and livestock, to name a few. These farms are recently established or enhanced by government support, and the future of their sustainability lies in point 3 mentioned above.

What is the role of the emerging farmer in national food security?
Failed land reform projects threaten SA's ability to produce an adequate food supply. A land reform policy in which land is proactively acquired by the state and then transferred to black South Africans, without proper guidance and support, could render even more arable land unproductive. It is of critical importance that emerging farmers are given the adequate support to enhance food production while creating a sustainable and profitable operation. SA is a net importer of most staple foods besides maize and more land given to emerging farmers who lack several success factors will lead to reduced output including maize.

Why is it important for these black commercial farmers to continue growing?
The future of land reform in SA is subject to large tracts of arable land within SA being handed over to emerging farmers. Emerging farmers will have to qualify into commercial farmers by using best agricultural practices and with important factors of skills, technical know-how and market price dynamics. The future of black commercial farming has been recently highlighted in the National Development Plan and the Industrial Policy Action Plan This is to ensure farming creates jobs, generates income and ensures these farming activities are sustainable and can continue in the future. Government support

is limited in the first year of production via subsidies for inputs, mechanisation and fencing, thereafter the farmer is left on his own to fend for himself. The farmer needs to understand professional agriculture and enhance his operations to adapt to changing policies and climate factors. Agricultural production costs are constantly rising.

Is it necessary that private sector and government promote not only national food security, but community food security and household food security?
There are several municipalities within SA that are categorised within the high poverty level index. Unemployment is rising and youth are demanding income resources via grants. These regions have arable land that is not utilised to maximum potential. Growing of staple crops and horticultural produce would ensure these participants generate an income, produce food for their own families as well as sell off any surplus production to the formal and open markets. This reduces poverty, creates jobs and generates income for ongoing farming operations. Included in this element is livestock on a smaller scale, but having the potential to collectively engage in better production and marketing practices.

Can you give a few examples of black commercial farmers – where do they farm? On what do they farm?
Sinethembe Land Trust, Winterton, owning a piggery, poultry operation and producing own crops for feed on 100ha. Sinothele Agricultural Co-op Utrecht District – crop production and horticulture on 500ha. Tugela Estates, a government-funded project over 10 000ha which is co-funded by international Indian investors.

Lastly, how were these black commercial farmers able to break through the barriers to become commercial farmers?
In most cases with black commercial farmers, funding and grants were provided by Government. Support was given to these farmers via agricultural development agencies in the forms of the Agribusiness Development Agency, Comprehensive Agricultural Support Programme, COGTA. This kick-start, together with constant training, mentorship, market linkage and input supplier support programmes (Grain SA, GAFDA to name a few) allowed these farmers to enhance production and produce enough to sell into markets and make profits. The profits were reinvested in mechanisation to ensure production costs were reduced and that farming was done professionally. However, to date, not many of these farmers have explored the avenues of precision farming to enhance yields and thus make more profits. A great opportunity within this area lies ahead.

Rudi Massyn

FARM SA is an affiliate of FARM Limited based in Mauritius

Bank on Davey

Malcolm Corns, brand product manager for Davey Water Products at Safequip, talks to us about Davey's unique products and the dire need for water conservation.

When one speaks to people in various farming communities, they are familiar with the Davey Firefighter, South Africa's leading firefighter pump, but know very little about other products in the Davey range and what Davey, the company, is all about. Davey – as the company is known – is a leading Australian company and the Davey brand, exclusively distributed by Safequip, has recently launched the full range back into SA.

Malcolm Corns elaborates, "Davey has probably one of the most extensive water product ranges in the world. More than that, Davey is a brand that offers solutions designed to solve specific problems."

Most farmers know about the Davey Firefighter, widely considered South Africa's leading fire-fighting pump – but there is much more to it than that, as Malcolm points out. "The pump is not only used for firefighting; it has many other uses such as animal wash down, truck wash down and is used extensively on the mines. Davey also has a range of home pressure systems and water transfer systems. We also specialise in borehole pumps – vertical multistage pumps – as well as an extensive water treatment range, many of which are unique to Davey. Our range of products is built to help lift water, treat it, use it, and even move waste water."

Asked about the water treatment products and the necessity for water treatment in agriculture, Malcolm expands: "Farmers want to be self-sufficient. Municipal water is not consistent and a lot of it that goes to homes or into the agricultural environment is not purified, and so there is a great potential for disease. Water treatment and water harvesting are becoming buzzwords in South Africa."

One product unique to the Davey range is the Rainbank. As Malcolm explains, there is no competing product anywhere in the world. "The Rainbank connects mains and rainwater tanks and is adaptable to different uses, whether it is flushing the toilet, washing clothes or drinking water.

"The concept of the Rainbank came at a time when Australia was literally running out of water. Water harvesting was illegal in Australia at that stage, so Davey created the Rainbank. Today the system is mandatory in most of Australia."

Asked if stricter water control is needed, especially in the agricultural sector, Malcolm emphasises. "I think South Africa is at a point where the water situation is in a major crisis. We are running out of water pretty quickly and the water we are using is not adequately purified. The challenge is to conserve water and make it safe to drink. I believe South Africans need to realise the seriousness of the situation. There are some who predict that within four years the country will begin to run out of water. In fact, places like Thabazimbi, Phalaborwa, Queenstown, and parts of the Free State are experiencing scarcity already.

"On the other hand there are places in the country that have lots of rain. And what happens? The water simply washes away, even washing away roads. It is time for South Africans to embrace the importance of water conservation. The head office of Davey in Australia, for instance, has a massive warehouse and there is a Rainbank attached to the building. They are saving millions of litres of rain water per year!"

He adds that the Davey brand is cost effective, contrary to what people believe. The cost of a Rainbank system, which comes with the Rainbank unit and a pressure system attached to the tank would cost in the region of nine to 10 thousand rand.

However, Malcolm insists that Davey is not all about selling products; rather, it's about providing solutions to problems – and educating people.

"We spend a lot of time and effort promoting the Davey brand. It's about changing methodologies and mindsets. I have spent the last seven to eight weeks travelling around the country, speaking to farmers and communities about our products and the benefits to them, as well as the dire need for water conservation."

Currently Safequip have four branches distributing the Davey range around the country and are setting up a dealer network. Dealer training is vital, Malcolm says: "We spend a lot of time with our dealers, getting them to understand the enormous benefits of our products, ensuring they are fully on board in terms of training and mostly how to assist their customers with the right solutions.

We do not deal directly with the public; the port of call for the public is their dealer and that's the relationship we support."

Media relations are also important: "I spend a lot of time with the media, as we believe that brand awareness is crucial'."

Malcolm trusts the Davey brand implicitly. "From a product point of view, Davey is unsurpassed and well known and respected globally. Ask any Davey user and they will tell you that Davey products don't break down. And, that Davey will go that extra mile for them. Recently we had an urgent call for two Davey borehole pumps. It was the first time this need arose and we flew them in because of the urgency. We will ensure that farmers and the agricultural community do not have down-time, because that's what costs money."

In closing, Malcolm points out that one of the biggest reasons for the success of Davey in South Africa is because of the similarities between Australia and South Africa. Australia is the driest continent in the world, and, as a country, South Africa is the third driest. He believes that all the findings, research and development that has been conducted in Australia, apply to South Africa.

"Both countries go through very similar climate changes, which are why the Firefighter is such a successful product. It is now mandatory on rural dwellings in most parts of Australia. The same applies to the Floodfighter, another product in the range, because of the floods Australia experience from time to time. One thing I can assure South Africans is that when the water crisis becomes serious, we'll ensure that we have the right solutions available!"

DAVEY

Malcolm Corns, brand product manager for Davey Water Products at SafeQuip

Putting funds in farmers' hands

Richard Akwei, principal at Musa Capital, talks to *Harvest SA* about creating a more sustainable agricultural sector in sub-Saharan Africa – including funding farmers banks won't touch

Musa Capital is a boutique merchant banking firm with expertise in private equity investing, investment banking and investment banking advisory services, according to Akwei.

"One of Musa's objectives is to spark sustainable development in Africa, especially in the field of agriculture," he says.

Through its agricultural investment company, Musa Capital Agriculture (MCA), Musa is in the process of building a sub-Saharan agricultural value chain focusing on ensuring regional food security and enhancing capacity among small-scale farmers.

For Musa, says Akwei, investment and social development are one and the same.

Most aspirant farmers face huge problems, he says. They cannot afford to buy their own land, and in cases where they do have land, they find it difficult to get finance from banks to buy the equipment they need.

Poor infrastructure and storage facilities, as well as poor access to markets also pose major stumbling blocks.

A value chain perspective

"We look at agriculture very much from a value chain perspective. For us, farming – which people call primary production – is in itself not a viable investment opportunity," says Akwei.

"Farming is a requirement for the value chain in that it feeds the procurement, the processing business and, ultimately, retail; in a nutshell, food security – one of our core objectives," he adds.

Musa, Akwei explains, invests in production, processing, distribution and logistics and it is common knowledge that Africa has a huge deficit, and this applies to all countries on the continent.

"We are importing food, although just over 60% of our population is connected in one way or another to agriculture. So our approach at Musa has been to start with the retail side because that's where the products ultimately end up," he says.

In the United States, says Akwei, consumers probably waste 70% of food after they have bought it from the retailer. "They simply throw it out. In Africa, the opposite is true; 70% is wasted before it leaves the farm because infrastructure and storage are so poor. We can produce the most fantastic tomatoes, for instance, but half of the crop will rot before it gets to the store."

In order to reduce this problem, he says, "we need to look after the value chain and access to the retailer, as well as the margins that the retailer is benefiting from in order to make the farmer sustainable."

The biggest problem faced by aspirant African farmers is capital investment. They can't afford to buy the land they need and they can't raise capital for equipment because they either have no tenure on the land or it is under tribal authority.

Getting access to finance

Akwei says Musa will not necessarily assist aspirant farmers in buying their own land because the company does not believe that is the best solution.

"Our model is one where, every time we produce or set up a commercial farm, we integrate the emerging farmers around it in such a way that they get access to finance, equipment and inputs," he explains.

"This makes it a lot easier for emerging farmers to sell their products without worrying about storage and access to the nearest market. This is important because, firstly, these farmers are probably occupying communal land which they don't own, but may have some sort of arrangement with the community".

He says such farmers don't have access to input, they don't get financing from the banks, and they don't have enough money to afford the equipment when it comes time to harvest.

Smoothing out the price

"We also look at smoothing out the price volatility in the market and that is one of the reasons one of the companies in our portfolio, African Frontier – which owns a number of Spar retailers and is one of the largest buyers of fresh fruit and vegetables – is now looking to invest in primary production because rather than go out and search the market for produce that is off-season and pay peak prices, we can use some of our own. Our strategy is to get up to 30% of our supply needs from our own funds," says Akwei.

On the question of vast tracks of arable land, specifically in South Africa, which are not being used, Akwei says: "A major priority of ours is to put more of the potential agricultural land into production. (This entails) communal land and land owned by Government that is not producing at the moment."

Asked about government involvement in the agricultural sector, Akwei has frank views. "Government, in the last 12 to 24 months, has spent significant amounts on agriculture and is keenly aware of how important it is. But they haven't quite got it right.

"They spend a lot of money and they're still trying to find the right mix. Nigeria seems to have got it right. The Nigerian agriculture minister is probably one of the most dynamic speakers and effective ministers on the continent, as far as agriculture is concerned, and his philosophy is very simple.

"He is not in agriculture to create jobs; he is in agriculture to create businesses and out of the businesses will come jobs. And as a result, investment has poured into Nigeria and agriculture in huge volumes, the sort of investment which has yet to flow into South Africa."

Education the greatest gift

So, how much emphasis does Musa Capital place on education and how it affects the agricultural sector?

Akwei has the answer at the tip of his tongue. "We believe that the greatest gift one can bestow on any individual or community is education and understanding knowledge. There is no compensation for that. In our structure, we approach this with a holistic philosophy. In each of the areas we invest in, there is an educational element because it is not just about production. In South Africa we have adopted the attitude, 'let's help you with your education'."

Akwei points to Zimbabwe as an example of a country with the right attitude toward agricultural training.

"One of the great things about Zimbabwe in terms of its agricultural setup is that almost every town you go to, there is an agricultural college of some kind. When you drive around, there is one agricultural college after another and that has extended the depth of the experience in agriculture in that country. We need some of that in South Africa."

Richard Akwei

Concerning the challenges his company faces in terms of uplifting aspirant farmers, he says Musa's approach is to start with the commercial hub, "by teaching them the right technical skills, how to keep a balance sheet that says: you know what, I need fertiliser, I need seed and I need access to water, not only for my farm but all the farms around me.

"Then we assist them with best practices, so that they'll have a co-ordinated growing scheme, a planting scheme – which sets out when they should fertilise, when they should harvest, and so on because all that is important to them and neighbouring farms".

Akwei says Musa envisages that, in the next five years, it will increase the amount of available productive land. "We are going to employ more people and we are going to help those people become sustainable in terms of what they do best."

And the future?

Asked about the future of Musa Capital in South Africa, Akwei says the company has never been defined as a country-specific entity, and its focus is to be the best boutique merchant bank in Africa.

"We want to be associated with a quality and level of expertise that you would associate with JP Morgan, Goldman Sachs or any other world standard in that grouping. And so we realised that to do that, and to be effective on the continent further north, we have to have a regional platform. In this regard, we have established partnerships in Tanzania, Botswana, Ghana (and soon in Nigeria), where we have a physical presence and are part of the local fabric," he says.

"We also benefit greatly from the base that we have here in South Africa; it is our springboard into the rest of Africa. We are Africans, so we know more about Africa than 'outsiders'."

Interview: Tony Sanderson
Writing: Mario D'Offizi and David Capel

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An integrated USB port allows easy connection to the Drive composer PC tool, which offers fast and harmonised start-up, commissioning and monitoring. The built-in energy calculators, including used and saved kWh, CO2 reduction and money-savings, help the user fine-tune processes to ensure optimal energy use. The energy optimiser control mode ensures the maximum per ampere, reducing energy drawn from the supply.

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- Removable memory unit for easy maintenance
- Supports various motor types; Induction, PM and SynRM
- Direct torque control (DTC) - ABB's signature motor control technology provides precise speed and torque control also without any feedback devices like encoders or position sensors
- Wide range of fieldbus adapters enable connectivity with all major automation networks

Interface

The ACS880 single drives offers a wide range of standard interfaces. In addition the drive has three option slots that can be used for extensions including fieldbus adapter modules, input/output extension modules, feedback modules and a safety functions module.

Direct torque control (DTC)

The drives are equipped with direct torque control (DTC), ABB's signature motor control platform which supports motors such as induction motors, permanent magnet synchronous motors, servo motors and the new synchronous reluctance motor. DTC helps control the motor from standstill to maximum torque and speed without the necessity of encoders or position sensors. DTC allows high overload ability, gives high starting torque and reduces stress on mechanics.

Removable memory unit

The removable memory unit stores the software that includes user settings, parameter settings and motor data. Situated on the control unit, the memory unit can easily be removed for maintenance, update or replacement purposes. This common type of memory unit is used throughout the ACS880 series.

ABB (www.abb.co.za) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 150,000 people.


Local
ACS880
1400.0 Rpm
Save money
Save energy
Save nerves
Save all
Exit
Select

Farming success

Everyone knows that farmers like to do things with their hands, preferring technical and physical work to abstract thought – but nowadays, with increasing participation in global markets, farmers neglect strategy at their peril

Some 14 years ago, author and consultant Dr Wim Nell was asked by a dynamic group of farmers to develop a short course on strategic management in agriculture. Subsequently, it emerged that "there is no book internationally available where strategic management is applied to agriculture" – something Nell attributes to the tendency among farmers to prefer technical management and shy away from financial management, with only "a very small portion being interested in strategic or holistic/futuristic management". Even in a country such as the United States, "strategic management is nearly non-existent because their government supports them to such a large extent."

The need to fill this gap inspired Dr Nell and co-author RJ Napier to write *Strategic Approach to Farming Success*. Now available in a revised second edition, the book is intended to promote "holistic–futuristic thinking".

As Nell says, "Farmers must realise that they form part of a total agri food and fibre system and that they cannot operate in isolation and expect to prosper sustainably."

The book is attractively laid out in two parts.

Section A distinguishes between strategy and operations. Dr Nell and Napier emphasise that whereas operations deals with managing the daily round of farming activities, strategic management aims to strategically position the farming business for the future, a continuous process that "focuses on critical factors that play a significant role in creating a sustainable competitive advantage" and entails achieving "a strategy-focused culture in management and staff" in which everyone "is committed to the same goals and strategies".

Section B sets out a method for farmers to develop their own strategic plans and achieve their vision.

Farming Success has won widespread praise from within agricultural and business management circles alike. Acclaimed strategist Clem Sunter describes it as "an excellent model for farm managers to assess their future", while Paul Webster, professor of Agricultural Business Management at Imperial College London, says: "The book translates the methods and analysis of corporate strategic planning into a farm management context. Large-scale commercial farmers in many countries around the world are increasingly operating in global markets."

Namibian farmers who attended one of Dr Nell's courses on the book at Grootfontein commented that the training opened new horizons for them: they suddenly realised their position within the global agri food and fibre system. One farmer said, "I learnt to look past the things I'm used to and I am now able to identify the challenges and shortfalls in my own farming business."

So from a strategic point of view, what should commercial farmers be looking at in 2014? Dr Nell provided *Harvest SA* with a list of strategic priorities: "Optimise the productivity (reproduction levels) of direct productive assets (land and livestock). Make sure you know what is poor, average, good and very good.

"Manage your farm on a precision basis – irrespective of the kind of farm. Apply the following production cost: farming income ratios: Livestock farming, 45-55%; cash crop farming, 58-65%; irrigation and labour-intensive farming, 70-75%; dairy farming, 64-66%. If the ratios are higher than that, the chances are good that the farm can go bankrupt, as there will not be capital available to invest in new technology.

"Ensure your labour costs stay within the following norms: Livestock farming, 6-8%; crop farming, 8-10%; dairy farming, 10-11%; irrigation and other labour-intensive farming, 10-15%. If the cost: income ratio is close to these norms, it indicates that labour costs balance with productivity.

From a strategic point of view, what does Government need to do or change to promote long-term sustainable agriculture? For Dr Nell, a priority for Government is to create the conditions for agriculture to thrive. "This includes, for example, upgrading of rural infrastructure (including road and railways, and access to electricity and communication), a stable policy environment conducive to investments, capacitating and broadening extension services, and consistent governance and implementation through all tiers of government of policy directives."

But Government cannot be all things to all people: "Partnering with industry is crucial, but a prerequisite is that there should be trust among public and private-sector stakeholders." A typical example of what the private sector can achieve, Dr Nell says, is the model used by Potatoes South Africa (PSA) to engage with new farmers through its transformation programme.

As Dr Nell describes, the PSA's approach follows three basic steps. First, the regional managers of PSA identify persons preferably already in farming or intending to start farming in the near future. One of the first steps taken once a prospective potato producer is identified is to conduct soil analysis on the farm or land accessible to them. Identification of a local mentor with the necessary knowledge and willingness to mentor is regarded as vitally important.

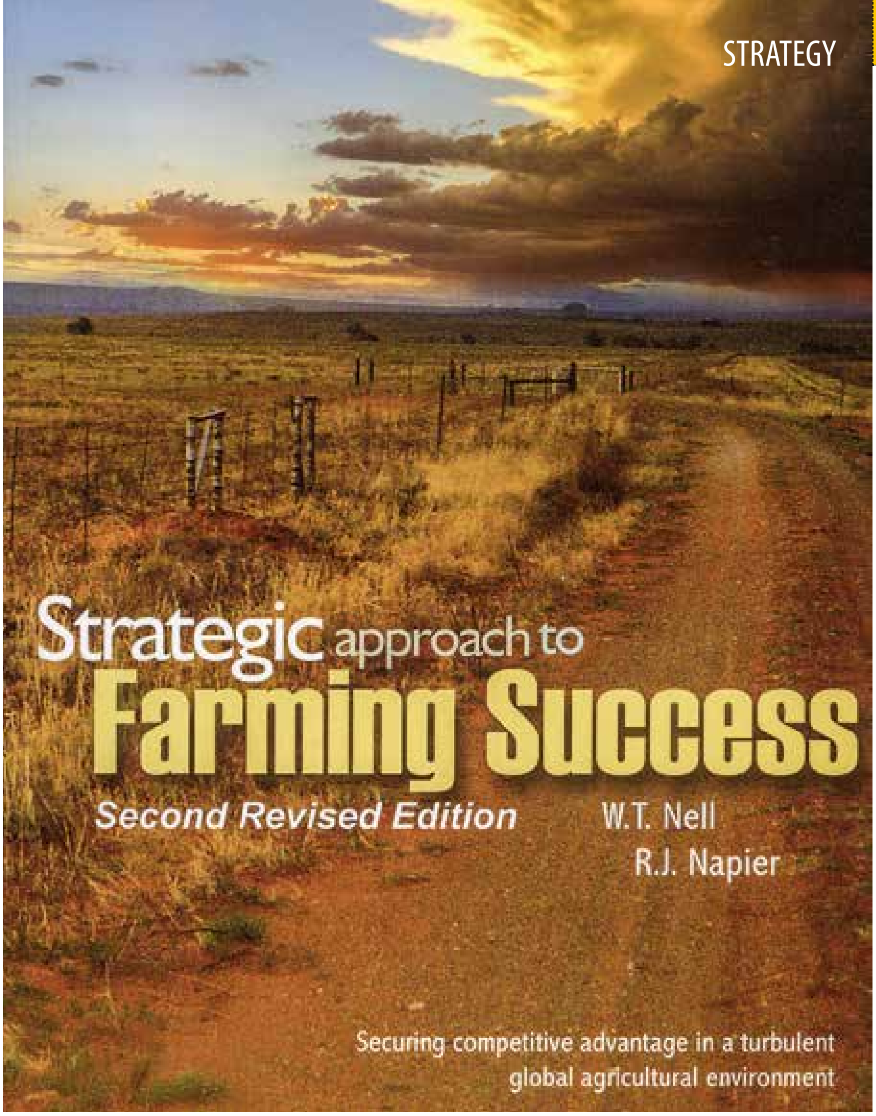
Second, if the soil analysis shows that soils are suitable for potato production and a willing and capable mentor has been identified, a pre-feasibility study is conducted to establish whether a prospective farmer has the necessary skills and resources (land, water, attitude, management capacity, finances) to enter the potato industry as a small-scale producer with the aim of growing into a fully fledged commercial producer. Once the pre-feasibility shows the producer can produce potatoes, the next step is to compile a business plan.

Finally, a functional and practical business plan, based on the approach followed in *Strategic Approach to Farming Success*, is compiled in collaboration with the identified producer and his/her mentor.

It is of utmost importance that the producer and the mentor form part of the process, as they are the ones who must make it work. Continuous support is provided throughout the process of implementation of the business plan for a period of four years by PSA, with the option of extending such support. The process of delegation of responsibilities is very important during this stage.

Government (especially local government), Dr Nell emphasises, must "act in tandem with industry, since they can make a significant contribution to, for example, capitalisation of the farm and providing access to finance. Private sector rarely has the resources to cover the funding requirements of lending money or financing of capital items."

These are only a few examples of what can be done to accelerate transformation sustainably. Dr Nell concludes, "There are also other models being used in the agricultural sector, for example the one by Grain SA, but any such models can contribute only in partnership with Government, while Government takes responsibility to ensure an overall conducive environment for agriculture to grow."



Greg Penfold
For more information about successful farming strategy, visit www.farmingsuccess.com

Join us at Nampo

One could say that calendar years and Syngenta years bear a close resemblance to human years and dog years. Over the past 12 months, our business has seen the kind of innovation and progress that could keep other companies occupied for seven years

It would be a mistake to assume that because you visited the Syngenta stand at the Nampo Harvest Day last year, it wouldn't be worth your while to come see us in 2014. On the contrary, we have lots to talk about.

Integrated solutions

Only about 3% of the earth's surface is available to agriculture and can be used to grow food for the ever-increasing population. One of Syngenta's strategic drivers is to produce more with less. We also want to enable technology, soil and people to work together to determine the future of agriculture in South Africa and Africa. Come and exchange ideas with us on how we can address the challenges of the 21st century with our integrated crop solutions for vegetables, wheat and maize.

A-Z™

Did you know that without crop protection measures, as much as 42% of pre-harvest and a further 10% of post-harvest crops would be lost? The impacts of insects, weeds and diseases would leave very little for human consumption. Syngenta's A-Z™programme is already synonymous with higher yields, healthier crops and a dramatic reduction in the damage caused by pests and plagues. In 2013 we paid specific attention to the fine-tuning of our A-Z™programme for small grain, notably wheat. We would love the opportunity to explore with you how our programme can address your wheat headaches.

Root health

Root health is a new focus area for Syngenta. Although we have always known that a healthy plant needs healthy roots, we launched a targeted programme in 2013 to promote root health. Cruiser Maxx® is one of our specialist products in this area. It is a seed treatment that controls both fungi and aphids even before the seedling emerges. As a result, the grower can start working towards optimal yield as soon as the seed is in the ground. Come talk to us about this trailblazing product.

AgriSafe™

Did you hedge your crop protection investment with AgriSafe™ this year? If so, we would like to hear how you experienced the process and what we can do to improve it. If not, let us tell you more about this innovative way of protecting your maize and other cereals against risk. The AgriSafe™ model translates the value of a grower's Syngenta account into a tonnage equivalent on the SAFEX futures market, without exposing the grower to any further costs or risks. The grower is protected against lower prices while still being in a position to benefit from any increases, without the risk of actually delivering the crop. AgriSafe™ made its debut in the 2012 planting season and is available for next season.

Grain Academy

In February 2014, the second group of young growers started their year at the Syngenta Grain Academy. The first candidates completed the programme at the end of last year and their feedback confirms that this tailor-made leadership development programme for commercial growers is the right initiative at the right time. The future of agriculture cannot be left to chance but should be actively shaped. The Syngenta Grain Academy aims to equip the agri-leaders of tomorrow to address challenges on their own farms and in the broader agricultural community. Come talk to us to learn how you can extend your leadership influence through the Syngenta Grain Academy.

Partnership development

Are you already involved in business ventures in Africa and interested to find out how Syngenta can assist? It will be our pleasure to exchange ideas about how to develop partnerships with commercial farms in order to optimise yield, decrease agronomical risks and ensure sustainability.

As you can see, there are more than just a handful of good reasons to pay a visit to the Syngenta exhibition at stand numbers 14f and 14g. We look forward to seeing you there.

For further information, contact Laraine Kruger, Communications & CRM Lead Syngenta on laraine.kruger@syngenta.com
Syngenta South Africa (Pty) Limited, Private bag X60, Halfway House, 1685.
Tel: 011 541- 4000 I www.syngenta.co.za I @SyngentaSA

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Farming less is not an option. World population will increase by 2 billion by 2050. Can we grow all the food we need without taking new land into cultivation and losing biodiversity? At Syngenta, we believe the answer is yes. We develop new, high-yielding seeds and better ways to protect crops from insects, weeds and disease.

So farmers can get more from existing land, and preserve ecosystems. In fact, we're going further with programs that help growers ensure that wild plants, insects and birds can flourish alongside crops. It's just one way we're helping to meet the challenge of the future: to grow more from less.

To find out more, please visit us at www.growmorefromless.com

Bringing plant potential to life

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Taking the high ground

Harvest SA talks to Jannie de Villiers, CEO of Grain SA, around a number of topics from price-fixing and free markets to emerging farmers

Should South Africans be worried about the possible escalation in the price of maize? "I think if we don't have adequate rain, then yes, we should be very worried. Without sufficient rain, and especially in drought conditions, there would be a tremendous spike in food prices," says De Villiers.

"Not just the price of maize meal itself, but all the produce dependent on maize as feed, specifically poultry, dairy and meat.

"We had a very good crop last year, and we marketed the surplus to international buyers and neighbouring countries. We exported quite a substantial quantity, perhaps a little more than our surplus. We sometimes import, but people started using white maize for animal feed purposes. That reduced stock levels, which resulted in a huge spike in prices for the months of February and March. Now, with the rainy season, prices are already 30% lower. Whereas we've seen a short spike in food prices, from April things should be back to normal.

"I think the input cost is going to increase for the next season, though. Luckily, for the current crop, there were lower input costs, especially with regard to fertilisers; and the rand was a little stronger. At the moment, I think we are going to see a fairly normal season, although the crop has not been harvested yet. We still need a little more rain.

"If you look at the hectares planted and the potential of the crop, we will probably produce another surplus. The R3 300 per tonne should drop to about R2 300; and if we get more rain, the prices could drop even lower."

Although consumers are happy about prices dropping, farmers are not, as their costs – especially for fuel – are rising. De Villiers explained, "Sure, farmers are not happy, but it's good news for consumers and the country. It's a free market and there are

no specific rules. We normally talk about what we call the pipeline requirements. The millers buy at least a month in advance and so there is always stock available for about 40 days. We compare the stock ratio to consumption, and when that gets below a certain percentage then everybody gets nervous. This is how the world prices its market of soft commodities."

Price-fixing or free market?

When asked about farmers' unhappiness with the stock exchange and allegations of price-fixing, De Villiers was quick to point out: "If you think about the definition according to the Competitions Act of South Africa, it is not. What they are doing is fixing a cost, which is the transport cost between delivery points. What the farmers want is for the market to determine these costs.

"At the moment, the Johannesburg Stock Exchange does calculations based on information it collates, calculates and publishes. Grain SA's position is to promote a free market. There are farmers who are going to benefit from a fixed system, and those who will lose out. It's a very controversial issue.

"We learnt that the JSE took the documentation and comments they received to the Financial Services Board. They had a look at it and suggested the market be kept liquid. If standardisation and maintaining this is good for the JSE, then this is what they will protect.

"They explained that our first interest is to keep liquidity in the market, which may not be in the best interests of consumers. But there will be winners and losers in this instance.

"The other thing about fixing transport costs – or the location differential, as we call it – is assisting the farmer to get pre-season contracts at a higher level. We are still trying to convince all the role-players because the farmers are in favour of removing it, but the silo operators, the traders, the animal feed people and the millers are in favour of maintaining it."

Recapitalisation programme

Because of shortfalls in the implementation of the recapitalisation programme, especially in the North West, it has been suggested that rising black farmers stand to be affected.

When asked if this is true, De Villiers said: "I think so. Last year was a very tough year because of the drought. So black farmers received funds and mechanisation. They also planted well, but the yields were not that great. They didn't make a lot of money to reinvest back into the business.

"This year they received tractors, planters, ploughs and all the necessary equipment, but they didn't have the financing to buy fertiliser, diesel and seed. So none of these farmers actually planted. Some of them have only planted a few hectares.

"We need to continue building up these farmers we've been working with for the past two to three years. They've been in our programmes, they've been trained, now they have the opportunity to become bigger. The government allocates the funds and we select the farmers. Our criterion is pretty simple: We want those who want to be farmers to have the passion for farming in their hearts."

Interview: Tony Sanderson
Writing: Mario D'Offizi

VB AGRI – China. Seeking agricultural investment opportunities in South Africa

China has, for some time, been South Africa's largest trading partner. It aims to continue to invest in South Africa to develop active participation in the South African economy and promote Sino-African trade relations

Since VB Agri was appointed the sole distributor of YTO tractor, forklift and light construction machinery products, we have been actively involved in developing commercial trade relations between South Africa and China.

Mr. Kobie van Breda was appointed the international market development consultant to the YTO group. It is his responsibility to communicate directly with YTO's board of directors on all issues regarding the development and advancement of every aspect of YTO products.

Over the past five years VB Agri and YTO have been actively involved in developing YTO's presence in the South African machinery markets. YTO is a state-owned enterprise and the largest manufacturer and distributor of tractors and other agricultural machinery products in China.

It's been VB Agri's mission to develop the distribution and after-sales service infrastructure capable of supporting YTO products in accordance with the high service demands of the domestic market.

VB Agri operates a national dealer network of over 35 dealers and three wholly-owned branches in Stellenbosch, Bethlehem and Nigel. An off-the-shelf, spare-parts stockholding of over 85% ensures that in the event of a breakdown, a YTO product can be repaired immediately to limit production down-time

VB Agri and YTO has supplied 72 tractors and 352 implements to the Department of Agriculture, Forestry and Fisheries and 50 tractors and 30 forklifts to the National Department of Defence.

China is home to over a fifth of the world's population and one of the fastest growing economies and has, for some time, been South Africa's largest trading partner.

China's interest is in a variety of commercial agricultural and socio-economic development projects and aims to continue to invest in South Africa, develop its active participation in the South African economy and promote Sino-African trade relations. Commercial agricultural projects will be evaluated on the projects' viability, which could be further supported through fixing export supply contracts with Chinese enterprises.

Socio-economic development projects will be evaluated in the light of developing and uplifting communities through the investment in agricultural infrastructure based on commercial principles. Finding potential synergies between commercial and socio-economic projects are other alternatives to explore.

In Ethiopia, YTO has recently set up an agricultural mechanisation project of over US$100 million. It includes the development of complete infrastructure, from the supply of 1500 tractors with implements and irrigation systems, to the building of schools, technical workshops, roads, dams, crop storage and processing plants.

In alignment with China's interests, VB Agri is seeking investment opportunities to present for approval. VB Agri aims to be more than just a machinery distributor, but an active contributor to the advancement of agriculture in South Africa.

VB Agri will be exhibiting on stands 238/9 at the Nampo show, between 13 – 16 May.

If there are any commercially viable projects from the private sector or projects of interest to the public sector please contact VB Agri @ info@vbagri.co.za or 021 883 9595 for more detail.


LF1504
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From waste to energy

A recent study by GreenCape weighs up the potential of waste-based ethanol

The GreenCape study sought to understand the current situation with regard to the biofuels sector in South Africa. Thereafter it focused in particular on the opportunity to produce bioethanol from waste streams within the Western Cape.

During the course of the study, significant steps were taken by the Department of Energy with regard to the rollout of the national Biofuels Industrial Strategy. In October, the mandatory blending date was gazetted as being 1 October 2015.

At the same time, the multi-stakeholder Biofuels Implementation Committee was constituted to deal with the outstanding issues requiring resolution prior to this date.

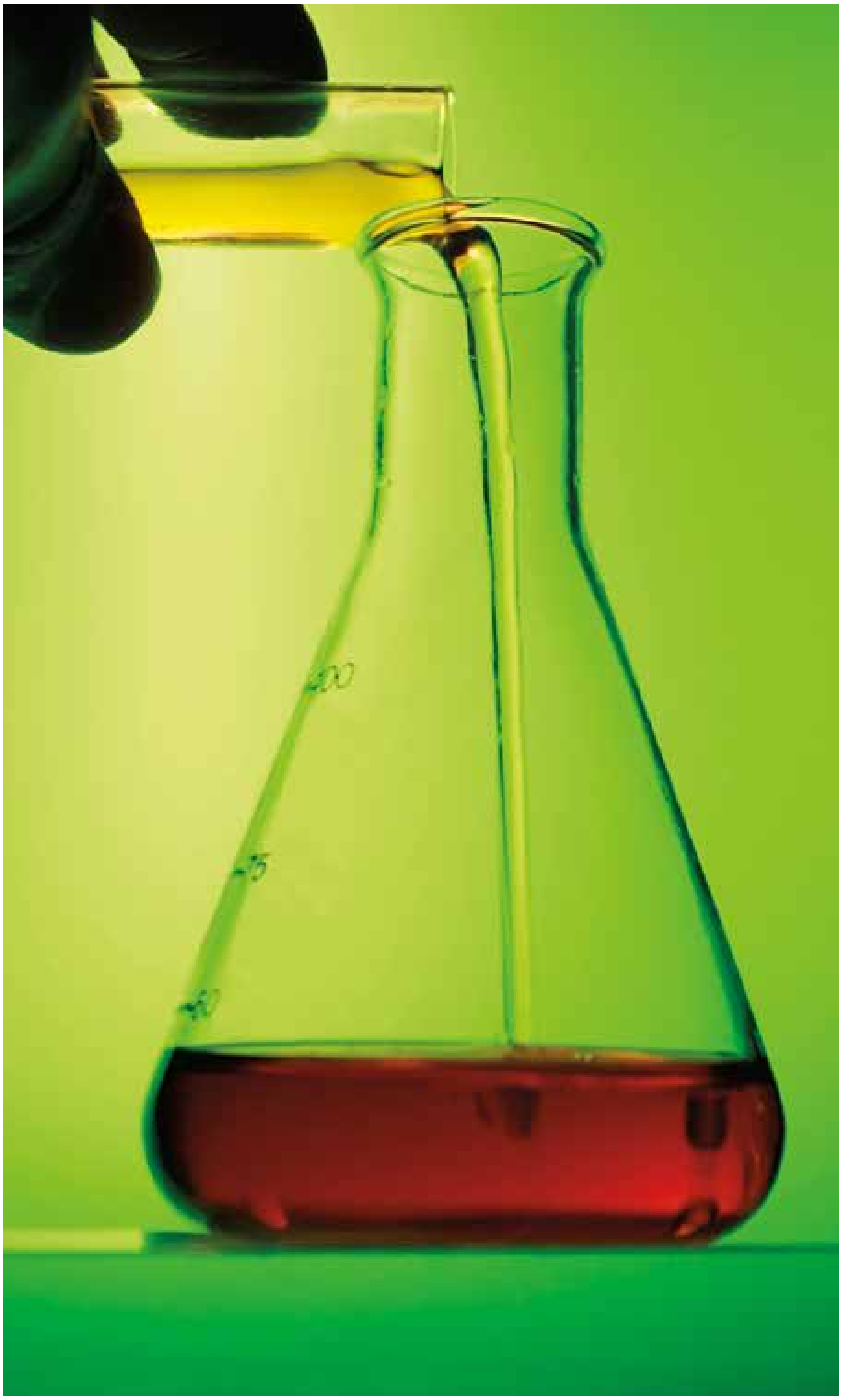
Two of the most important matters on which clarity is still awaited are the final biofuel pricing mechanisms and the production incentive scheme.

Neither is there finality yet on the criteria that will be applied to identify producers that will qualify for production subsidies, as there is no guarantee that the granting of a biofuel manufacturing licence will lead to automatic granting of the subsidies.

It is clear from close examination that the primary focus of the national strategy is the support of rural development and employment creation. Its focus is also only on the production of bioethanol and biodiesel for blending into the national fuel pool at 2% and 5% volumes respectively. It thus makes no provision for waste-based biofuels production, nor for any niche opportunities such as high-blend biofuels.

This study has focused on investigating the potential waste streams in the Western Cape which could be used to produce bioethanol. Findings are that the streams that are sufficiently aggregated, and can most easily be diverted from their current uses to bioethanol production, are grape pomace from the wine industry, citrus pomace from orange juice production, 10% of the total lignocellulosic agricultural wastes, and the carbon monoxide component of the off-gases from the steel mill in Saldanha.

Based on these feedstocks, using technologies that are currently commercially proven, it has been determined that a total



of 359 million litres per year of bioethanol could be produced in the province.

Furthermore, if crop-based production is also considered, a further 78 million litres/yr could be produced from small grains, and 12 million litres/yr from Jerusalem artichokes. This further production could be achieved without threatening food security, and while simultaneously creating employment opportunities and stimulating rural development.

On the demand side, current liquid fuel consumption in the Western Cape, including petrol and diesel for transport, and paraffin for household use, amounts to just over 5 billion litres/yr of ethanol equivalent. In other words, the potential bioethanol production, from the waste streams discussed above, could supply over 7% of the annual fuel needs in the province – and if the crop-based production were to be included, this would rise to nearly 9% of the demand.

However, the development of a biofuels industry in the Western Cape is not without challenges, and there are numerous factors that need to be considered.

In the mid-2000s, the Western Cape Government appointed an interdepartmental task team that examined the potential for such an industry, and found that the national policy and strategy was not conducive to its development. However, in the interim, there have been significant changes on the technical, economic and policy fronts, both nationally and internationally. The current context thus provides both new opportunities, and new challenges.

Despite the changes and advances at the policy level nationally, there is uncertainty as to whether the national Biofuels Industrial Strategy will meet its October 2015 biofuels blending targets, particularly as regards the 5% biodiesel blending level.

On the basis of this and the aforementioned, it is concluded that the business case for biofuels production in the Western Cape merits a detailed re-examination.

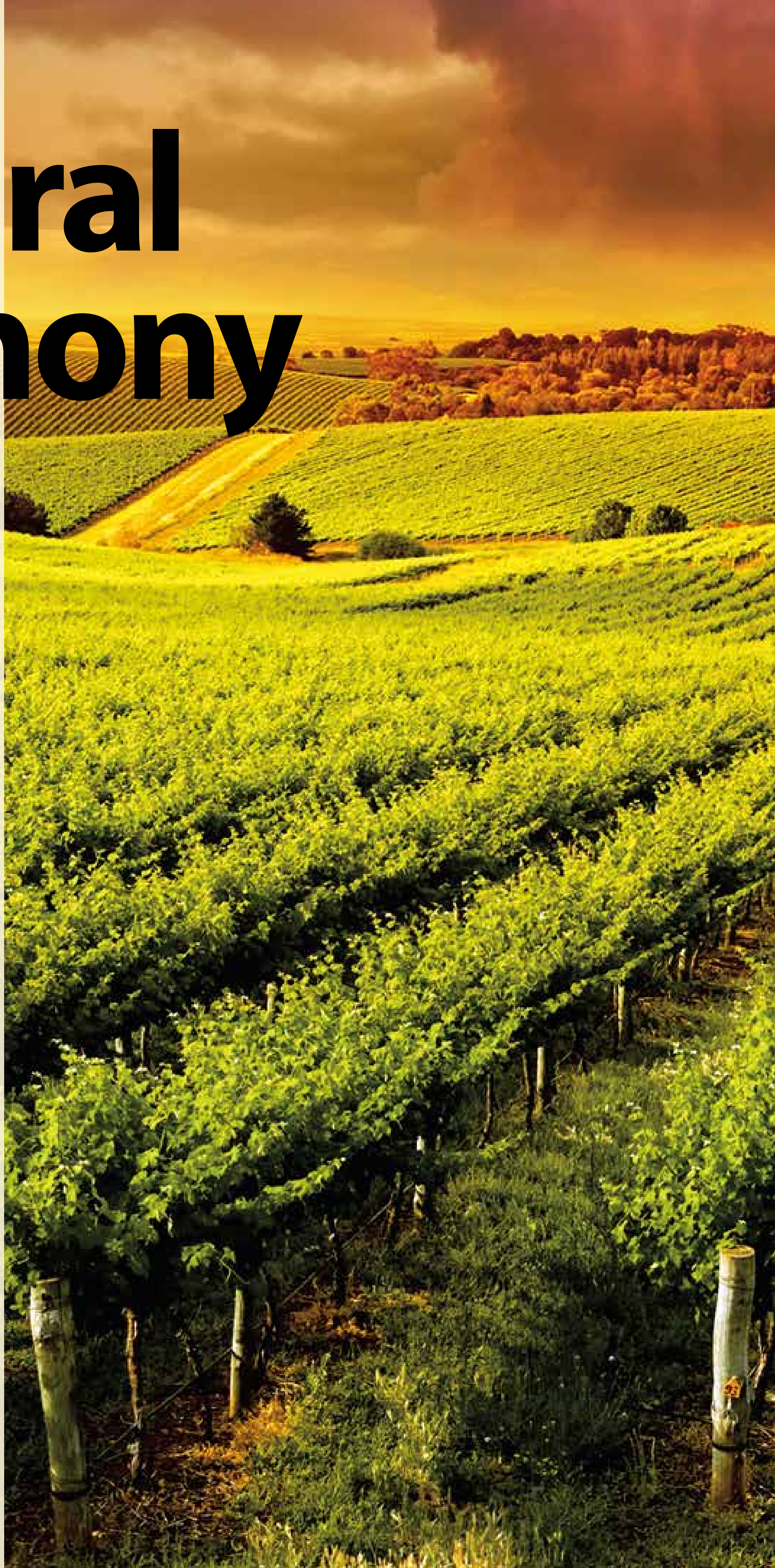
This investigation should build on the work done by the Provincial Department of Agriculture in the mid-2000s, prior to the finalisation of the national Biofuels Industrial Strategy in 2007.

It is of the utmost importance that this analysis:

- consider all waste resources as potential feedstocks, including agricultural residues;
- investigate fully the available biofuel conversion technology options;
- understand the potential of non-food crops as feedstocks, and the resulting land use change implications;
- quantify the employment creation and economic multiplier opportunities; and
- compare and contrast the business case for biofuels for blending versus biofuels as dedicated fuels, as well examine the use of bioethanol as a household fuel.

Find the full report on the Grain SA website.

Natural harmony



Dr Razeena Omar, CapeNature's recently appointed CEO and custodian of some of the Western Cape's most precious natural assets, opens up about striking a balance between nature and agriculture

Apart from conserving the unique natural resources of the Western Cape, with its rich flora and fauna, unique fynbos, animals and birdlife, CapeNature is also charged with significant environmental developments and the upgrading of its tourism infrastructure, notably ecotourism.

Ecotourism is, indeed, a vital component of the Western Cape economy and one of the main reasons the province is a popular destination for both international and local tourists.

Another important role played by CapeNature is in the area of agriculture. Farmers and landowners are committed to protect their properties according to sound conservation management principles and CapeNature supports this by providing advice, management plans and assistance in the clearing of alien species, fire management schedules and water conservation.

Dr Razeena Omar

Who better to lead this indispensable organisation than Dr Razeena Omar, CapeNature's dynamic new chief executive?

Dr Omar is no stranger to CapeNature. When the organisation was established in 1999, she was appointed to the board, while still working for South African National Parks (SANParks) and later the Department of Environmental Affairs.

We asked this sleeves-up CEO about the enormity of her task and how she plans to accomplish it.

Dr Omar explains that CapeNature is the protection agency for all the protected areas of the Western Cape – about 43 pockets of land that stretch over two million hectares across the province, as well as five marine protected areas. When it comes to size alone, even the Kruger Park itself has nothing on this.

"We take care of all the conservation aspects of this substantive area," says Dr Omar. "For example, we have been entrusted to take care of the Western Cape's floral kingdom, which is the smallest of seven floral kingdoms across the globe, but one of the most diverse".

She says the vast area under CapeNature's jurisdiction is home to approximately 10 000 varieties of indigenous plants, some of them endemic to the area.

"When the Namaqualand daisies bloom every spring, tourists from all over the country and the world flock to experience this spectacle," says Dr Omar. "When we talk about looking after nature, we can't just talk about biodiversity and conservation. We need to be realistic and also look at sustainability for the future".

She says since the Western Cape's economy hinges largely on tourism, publicity about the province's rich biodiversity and conservation practices enhances the area's reputation as a must-see tourist destination.

She emphasises, though, that CapeNature wants to keep the reserves under its control affordable for tourists from other areas of the country, and not just for overseas visitors.

"We work closely with Cape Town Tourism and they're looking at marketing and eco-tourism differential rates.

"At the moment, we have a 'Wild Card' whereby visitors can pay one rate for access to all our reserves; not just for stayovers but also for daily access.

"We have little gems like De Hoop, Kogelberg and the Biosphere Reserve etc., where we can't keep up with requests from people wanting to visit. In fact, we have a public-private partnership with De Hoop Collection, which manages the tourism facilities of the De Hoop Nature Reserve, one of our flagship reserves."

But it's not all about nature reserves and wild open places. Indeed, agriculture is also integral to the Western Cape's economy.

CapeNature, says Dr Omar, works in partnership with agricultural businesses, private landowners, other stakeholders such as the World Wide Fund for Nature, the Endangered Wildlife Trust and communities to ensure biodiversity survives in a changing climate outside protected areas, with tangible benefits for all concerned.

She explains that CapeNature has a stewardship programme, which was initiated in 2003. "Spread in and among the protected areas we care for, are farms with great biodiversity value," says Dr Omar. "We call these stewardship areas, and we work closely with the farmers involved, with whom we have formal agreements. We assist them in terms of clearing their land of alien vegetation and we also help them develop a conservation management plan so that they can manage their land in a conservation-wise and sensitive manner."

The programme, says Dr Omar, also allows for private landowners to benefit more from biodiversity through ecologically sensitive, income-generating avenues such as eco-tourism or green labelling of agricultural produce.

The programme's outstanding success is evidenced by the fact that it has now become a model used for similar initiatives in other parts of the country.

"In terms of co-existing with farmers, we have to strike a delicate balance, especially with damage-causing animals like dune rats, which destroy crops," says the CEO. "This is one of our big headaches. We issue permits, but very carefully and sensitively, in terms of managing these animals. It is something we try and control by assisting farmers in terms of management, especially if their land is under stewardship protection. If not, then we always have a problem in terms of monitoring and looking at compliance and enforcement, which we need to develop and strengthen. Although we don't have sufficient capacity, we would like to improve our dealings with farmers. After all, we're neighbours."

It goes without saying that water is vital to agriculture, and Dr Omar says CapeNature works with the Department of Environmental Affairs and is closely involved in integrated catchment management, taking care of estuaries, "which is the interface between sea and river".

"We also work with the Department of Agriculture, Forestry and Fisheries because the breeding spaces for fish are estuaries.

"Also, the Western Cape is regarded as a water-scarce area, and one issue that is very dear to us concerns drinking water. When we talk of the whole sequence of catchment areas, we talk about the estuaries, the rivers, the flow… and to have them pollution-free, so that people living in the Western Cape can have healthy, clean, drinking water. This is another huge challenge we face."

Dr Omar is passionate about her work and the role she plays as CEO of CapeNature. As is her nature (pardon the pun), she ascribes much of her organisation's success to the dedicated people with whom she works.

"We want to take conservation to another level, fully resourced and with a government that will back us in terms of our mandate. I am fortunate to have been given the opportunity to work for CapeNature. I love what I do.

"And the people who work with me, on all levels, are passionate about what they do. I just hope I can enthuse them and provide them with the resources that would make their lives easier. We have many challenges, but I know they are fully committed. We have a fantastic, highly skilled management team and dedicated staff in all areas. We all do the work with a song in our hearts!"

With Dr Omar at the helm, who could doubt that CapeNature will continue to play a crucial role in protecting and conserving the natural environment we call home, and which we hope, one day, to bequeath to our children, and our children's children after them?

Interview: Tony Sanderson
Writing: Mario D'Offizi and David Capel

THE IMPACT OF NITROGEN FERTILIZER FORMS AND USE ON THE ENVIRONMENT

- Dr J J Bornman: General Manager, Strategic Agricultural Services, Omnia Fertilizer

The use of nitrogen fertilizer has been essential to the doubling of global food production in the past 50 years. This implies that today substantially more nitrogen circulates through the various compartments of the global nitrogen cycle. In fact, it is foreseen that 117 million tonnes of nitrogen will be used by 2020 to feed the world. In some cases this is also connected to increased nitrogen transfers to water and air with associated potential environmental effects.

In South Africa there are several sources of nitrogen available. The most common sources are ammonia gas (83% N), urea (46% N, imported), limestone ammonium nitrate (LAN) (26-28% N) and ammonium sulphate (21% N). Other forms of nitrogen are used on a lesser scale. These forms are used in bulk blends and chemically granulated products. In South Africa, urea is not used in chemical granulation.

Some nitrogen sources, especially those in the ammonium or nitrate form, are immediately available to the plant, while a product such as urea has to first be converted to ammonium by soil organisms. If the application of urea is not carefully managed, it can lead to losses of ammonia gas by volatilisation. Some forms of nitrogen are quite mobile in the soil, especially urea and nitrate. Well managed application of these forms is therefore critical.

Urea is the nitrogen source most commonly available at a relatively low price per unit of nitrogen. More expensive nitrogen sources containing ammonium and nitrate do not carry risk of loss due to volatilisation and perform better agronomically. Scientific review articles recently published show that ammonium nitrate-based fertilizer has an agronomical efficiency of, on average, more than 20% better per unit nitrogen than urea.

Certain basic nitrogen sources are differentiated in the market place by the addition of secondary nutrients such as sulphur, micronutrients, micro-organism activity inhibitors or coatings for slow release. Some of these additions ensure a dramatic improvement in performance, while others do not make a difference at all, despite a large premium in cost.

Over-fertilization of nitrogen, especially from urea or ammonia, leads to soil acidification. Indiscriminate application of urea and nitrate can lead to leaching into soil water. Mismanagement of nitrogen also leads to losses from run-off and erosion to surface water.

Most nitrogen products contribute to greenhouse gases from production to application by emission during production or through volatilisation on field. Nitrogen gases have an impact on the CO_2 footprint of 300 times more per unit than carbon dioxide itself. The climate change influence of urea is for example 12.5% higher than that of ammonium nitrate. The latter has a low effect, especially under optimised modern production.

Over the last two years, more information has come to the fore regarding the role of fertilization, especially nitrogen fertilization, on water use efficiency. At the recent NewAg Conference in Warsaw, several papers were delivered proving the beneficial effect of nitrogen management (in the form of nitrate) on cereals to enhance water use efficiency. Increases in water use efficiency of between 60% and 216% were reported. Initial trials in the greenhouse, conducted locally by Omnia Fertilizer using maize as test crop, showed enhanced water use efficiency improvements of between 40% and 90%, provided nitrates are used.

From the above, it is clear that the correct management of nitrogen sources can prevent a negative influence on several environmental parameters and will contribute positively to sustainable agriculture. Omnia Fertilizer has committed itself to enhance nitrogen and water use efficiency by developing and applying several measures, from technology to management and from factory to field, to treasure and preserve the environment.

Town and country

The Royal Agricultural Show, held annually in Pietermaritzburg, is the oldest and largest mixed agricultural and commercial show in South Africa and, indeed, in Africa. *Harvest SA* speaks to CEO Terry Strachan

Fondly known as 'The Royal', the show has an impressive pedigree and this year marks its 164th 'birthday'. It is part of a 'family' known as the Royal Agricultural Society of the Commonwealth. Annually, 52 Royal Shows take place around the world.

The Royal is largely volunteer-based and a non-profit making body. It is a significant player in KwaZulu-Natal and, through its multiplier effect, its contribution to KZN's economy is determined to be in the vicinity of R500 million. In recent years, the number of visitors has peaked at around 220 000.

The show is a popular drawcard not only for its agricultural and other commercial components and exhibits, but because it is a place of fun for the whole family, with its numerous activities, music, concerts, displays and a children's funfair. It is also about 'old friends, new introductions, long established traditions and stimulating fresh ideas'.

Royal Agricultural Society chief executive, Terry Strachan, oversees the show's facilities and activities and his passion for The Royal is almost palpable: "The Royal Show is a mix of plant, livestock and equipment and the country's largest agricultural event. It is run by a handful of paid personnel, but each year around 300 volunteers give of themselves to bring this event together for the love of

agriculture and the activities in which they're involved, to the benefit of the community.

"The Royal is a national show and draws exhibitors from all over the country, from as far afield as the Cape, the Northern Cape, Vryberg and moving north, virtually to the Zimbabwean border. People and farmers participating come from areas such as Phalaborwa, Gravelot and Louis Trichardt (Makhado). About 15% of our visitors come from outside KZN," he says.

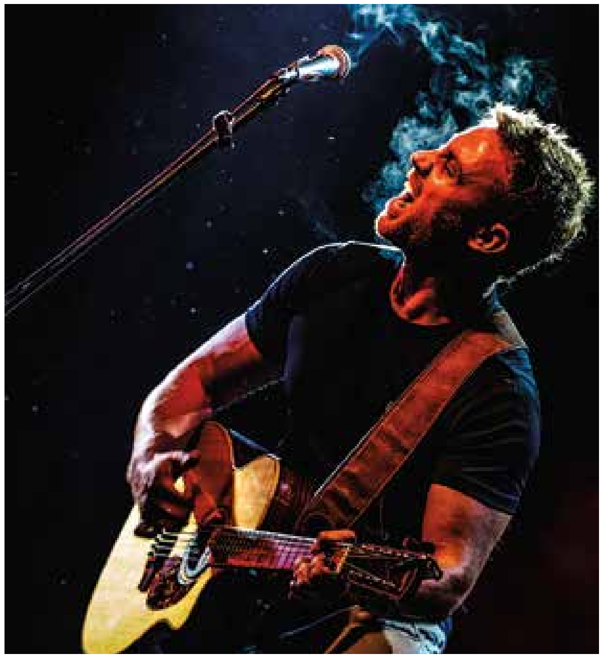
"Every year, without fail, we have a few hundred visitors from Tanzania, Kenya, Mozambique and Uganda, but very much the old East Africa which is made up of Tanzania, Kenya and Uganda; they seem to form the bulk of our foreign visitor mix and come to see the latest trends and to learn," Strachan adds.

Impact education

One of the aims of The Royal is to introduce and educate people who would otherwise never interact with the country, its produce, livestock or the many other commercial offerings on display. As Strachan says, "Part of our focus is to introduce town to country!"

He explains that the primary component of agricultural support comprises livestock farmers – cattle, sheep and goats – but grain farmers and other ground-type operators and land farmers take part as well.

"In terms of livestock, we have many exhibitors, and a competitor section where



farmers bring in their best animals to compete against each other to determine the 'top of the breed', whereafter we move on to the inter-breed, which is the best of each category and, ultimately, into a Gold Cup Grand Champion, which is the best animal on site during the show. So there are competitions within competitions, culminating in one pinnacle of excellence."

But, Strachan adds, "Apart from competitive livestock categories, we also have what we call 'expos'. We have a large sheep expo where the focus is on education.

"It's about imparting new information even to those who are seasoned farmers. Whether you are 14 or 85 years old, living in the city or even on a farm, and you want to know more about a particular breed of sheep or cattle, there will be technical experts on hand at every expo held."

The noble steed

We touch on horses and equestrian events that are integral to any show of this nature. Strachan tells us that throughout its history, The Royal was viewed as probably the most prestigious equestrian event in South Africa, but that things have changed a little.

"Our facilities are made up of sand in the practice arenas and beautiful lawns in other areas. The tendency now among the Grade A equestrian fraternity is to go for special fibre surfaces where there's special grip, padding and special insulation to protect these multimillion-rand stallions and horses from injury and for them to achieve maximum performance.

"Unfortunately, we do not have these facilities. However, we're still viewed as a major role-player from a equestrian perspective, but our focus is more on what's known as 'showing classes' – showing the various horse breeds and comparing their characteristics – and on emerging young riders."

Big exhibit

Agricultural activities constitute about 40% of The Royal Show. The balance is commercial, industrial and service sector-orientated. The show hosts one of the largest construction and materials handling exhibits in the country, with the presence of major brands such as Dell, Caterpillar, John Deere and Komatsu, among others. Strachan emphasises that brands of this type will only participate in a show that is deemed to have critical mass – and The Royal Show meets this requirement.

He adds, "Most of the country's leading commercial motor vehicle manufacturers take part in The Royal and there are home, industrial and commercial exhibits ranging from guttering to swimming pools and flooring."

Fine dining

An impressive aspect of the infrastructure is the food hall, which occupies around 21 000 square metres of the showgrounds.

"In line with The Royal Shows around the world, part of introducing 'town to country' is to educate the public, guide them and show them what happens to food and produce in the process from field and farm to the dining table. The intention here is not to sell food. Major players, like Spar and Checkers and others, use the show as a partial marketing and branding experience where the public is introduced to the latest brands. Not so much to sell their products, but to create awareness for future consumption.

"Of course," he adds," there are a large number of direct catering outlets which sell anything from biltong to ice cream, but that's catering."

Child-friendly

One aspect Strachan holds dear is the youth. "Children are a priority. We have around 30 000 children who visit the show. Schools from all over the province have been attending The Royal Show for well over a century," he says, adding, "Although in the recent past we halved the fairground in size, it still provides a lot of entertainment for the children, and our arena entertainment programme is second to none. We have many activities ranging from stunts, vehicles and motorbikes through to some wonderful musical events."

A musical feast

On the topic of music, Strachan gives us a sneak preview into some of the musical highlights happening at this year's Royal.

"This year's show runs from 23 May to 1 June. On the first Saturday afternoon or evening, there'll be a major rock concert featuring some fairly big South African artists like Prime Circle, Watershed and Gangs of Ballet, among others. On the Sunday morning, a two-hour symphony concert performed by the KZN philharmonic orchestra will be followed by a concert for the Afrikaans-speaking community, hosted by Radio Sonder Grense and involving Steve Hofmeyer and others.

"On the following Saturday, we'll be holding a concert for the Asian community and on the Sunday, the final day, a very large concert for our Zulu community.

"We try to take care of every facet of the demographic spectrum so no one feels excluded – young, old, black, coloured, Indian or white – we want everyone to feel and be part of The Royal Show."

Agriculture and government join forces to save the Colbyn Valley Wetland

Wetlands play an important role in primary agriculture and it is imperative to preserve them

The Agricultural Research Council (ARC), in partnership with the Water Research Commission (WRC), Centre for Wetland Research and Training (WETREST), Friends of Colbyn Valley, South African Wetlands Society and City of Tshwane celebrated World Wetlands Day 2014 at the Colbyn Valley Wetland in Pretoria on 15 February 2014. The theme and slogan for the 2014 World Wetlands Day was 'Wetlands and Agriculture: Partners for Growth' – placing a focus on the need for the wetland, water and agricultural sectors to work together for the best shared outcomes.

The ARC wanted to raise awareness of the importance of wetlands by promoting interdisciplinary discussions on key wetlands issues. Various information-sharing events that ranged from a two-day 'Back to Basics' wetland course and a wetland talk and pompom weed control exercise at the Colbyn Valley Wetland took place.

The wetlands course and the information-sharing event at the Colbyn Valley were a huge success. The Back to Basics course was well attended by government officials, students and consultants.

The event focused more on school learners and comprised mostly youth from organisations such as Die Voortrekkers and Scouts as well as learners from schools in the area who were accompanied by their parents. Members of the general public who read about the event in the press also attended.

A young girl from Die Voortrekkers youth organisation who participated in the pompom weed hack

The Colbyn Valley Wetland

In keeping with the theme for this year's wetland celebrations, Althea Grundling, a senior researcher from the ARC-Institute for Soil, Climate and Water, said: "The various policies and legislation on wetlands and agriculture established in the last decade or two are considered as movements in the right direction. However, gaps exist that are not addressed in legislation such as the Conservation of Agricultural Resources Act regarding communally owned land, non-point source pollution, as well as the protection of the total water system.

"Recommendations from a discussion paper on wetlands in agriculture suggest the appointment of a legal adviser or inter-departmental body on which national, provincial and local departments need to serve. A Memorandum of Agreement should be established between different departments to define their role and responsibilities, and a wetland policy should be developed that can be used by all."

Future workshops are planned with the WRC to identify research needs in terms of wetlands in agriculture.

South Africa is the third richest country in the world in terms of biodiversity and has over 120 000 wetlands, covering about 7% of the country's land area. A total of 20 sites are designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 553 178 hectares.

Wetlands provide significant economic, social and cultural benefits. They are important for primary products such as pastures; support recreational and tourist activities; and are important sites for biodiversity. They help reduce the impacts of storm damage and flooding, maintain good water quality in rivers, recharge groundwater and store carbon.

However, the pompom weed is a threat to this biodiversity, as it invades natural grasslands, open savannah and even temporary and seasonal wetland areas.

Pompom weed is rapidly becoming the most serious threat to the conservation of grasslands in South Africa. Infestations become conspicuous when the plants are in flower between December and March, transforming the veld from green to pink. The plant initially establishes itself in disturbed sites such as roadsides.

This weed displaces native species, reducing both the biological diversity and carrying capacity of rangelands.

The Colbyn Valley land was donated to the Tshwane Municipality by the University of Pretoria and is in the process of being declared a nature reserve. The Colbyn Valley is both a wetland and a peatland. The wet land is vulnerable to a number of impacts due to its urban location, but remains a valuable biodiversity and water resource.

The Colbyn Valley Wetland has recently received much attention in the press due to concerns over greater storm water flow from increased development in Hatfield and the proposed park-and-ride facility mentioned in the Hatfield Spatial Development Framework.

On 15 February 2014, a short introduction to the Colbyn Valley Wetland was given by Philip Calinikos from the Friends of Colbyn Valley.

Piet-Louis Grundling from WETREST explained the role and importance of wetlands.

Dr Alan Urban from the ARC, holding a container with twigs and thousands of insects (thrips)

"Can these small insects make a difference?"

Piet-Louis Grundling from the Centre for Wetland Research and Training

Hildegard Klein, weed expert at the ARC

Hildegard Klein from the ARC Plant Protection Research Institute gave a presentation on the pompom weed that has invaded the wetland and how it can be controlled.

In an interesting and entertaining way, Grundling – a renowned wetland expert – shared his knowledge about wetlands in the field where everyone learnt about the soils, plants, birds etc. in the Colbyn Valley Wetland.

Everyone was eager to participate in the biocontrol release after they were shown how to tie a twig – received overnight by courier from the ARC's offices in Cedara – with hundreds of thrips (the insect used for biocontrol) to a pompom stem. The reason the pompom weed has to be uprooted meticulously was clearly explained by Klein before participants got the opportunity to dig out plants.

The 118 pompom weeds removed in the approximately 20 minutes available in the field may seem small but, taking into account that each pompom plant can give rise to 1 000 in the next season, it is noteworthy!

A bring-and-braai was followed by the afternoon session where the learners worked in groups to demonstrate their newly gained knowledge, and built models of the wetland in a light-hearted but competitive way.

The participants were pleasantly surprised to learn about the research on wetlands and invasive weeds done by the ARC, and the good attendance at the event clearly demonstrated the need for such information-sharing sessions.

Adri Laas
Public Relations Officer
Agricultural Research Council

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BRAZseed

BRAZseed sorg vir 'n omwenteling in weiding

BRAZseed is die alleenverskaffer in Afrika van die handelsmerk FACHOLI. Die reeks weidingsgewasse wat ons verskaf, is ongetwyfeld van die beste gehalte wêreldwyd en superieur in kwaliteit en suiwerheid. BRAZseed kan met trots verkondig dat daar tans nie 'n produk in Suid-Afrika beskikbaar is van gelykstaande gehalte nie.

Ons kan onomwonde sê dat daar tans geen weidingsgewas in Suid-Afrika is wat BRAZseed kan klop nie – nie in tonnemaat, proteïene of groeivermoë nie. Ons mikpunt is om teen November vanjaar nagenoeg 75 000 ha in volle beweiding in Suid-Afrika te hê.

Facholi voer saad na 19 lande uit en is die grootste weidingsaadverskaffer in Suid-Amerika asook die derde grootste in die Verenigde State van Amerika. BRAZseed verskaf sekerlik nie 'n wondergras nie, maar wel 'n gras met enorme potensiaal en 'n konsep wat sukses waarborg.

Willie Rossouw (Weidingskundige: Animal Nutrition and Health ['n maatskappy wat in dierevoeding spesialiseer]) sê dat hy baie beïndruk is met BRAZseed-grasse se geweldige opbrengspotensiaal en uitsonderlike hoë voedingswaarde. Hy bevestig ook dat as BRAZseed-weidings reg bestuur word, diereprestasie in só 'n mate kan verhoog dat produsente selfs in tye van swakker en laer vleispryse steeds 'n wins kan maak.

Hieronder volg 'n kort samestelling van die resultate en terugvoer oor BRAZseed-produkte.

ONDER DROËLAND MET BRACHIARIA MARANDU EN BRACHIARIA PIATA

- Beskik oor 'n proteïeninhoud van 10% - 12%.
- TDMP van 14 ton/ha in gebiede waar 'n 400 mm-neerslag per jaar ontvang is en 20 ton/ha in gebiede waar 'n 700 mm-neerslag per jaar ontvang is.
- Vanweë 'n sterk wortelstelsel, wat tot soveel as 1,5 m binne die eerste drie maande ná vestiging in die grondprofiel versprei, is die grasweidings nie net baie beter teen mini-droogtes verskans nie, maar lewer ook 'n bogemiddelde bydrae tot grondvrugbaarheid. Daar bestaan 'n baie sterk korrelasie tussen bogrondse biomassa en ondergrondse biomassa.

ONDER BESPROEIING MET PANICUM MOMBAÇA

- Beskik oor 'n gemiddelde proteïeninhoud van 12%, hoewel 'n 18,7% proteïeninhoud al in onafhanklike toetse tydens blaarmonster-ontledings getoets is. Produsente moet besef dat sulke resultate wel haalbaar is wanneer die korrekte metodes (soos akkurate grondontledings sowel as effektiewe bemestings en weidingsprogramme) toegepas word.
- Volgens Lambert Theron van die plaas Carlam in die Groblersdal-distrik het hy sy weiding ongeveer 80 dae ná die eerste aanplanting gesny en 10,380 kg DM/ha afgehaal. Hy reken dat die vinnige hergroei wat die kultivar toon, hom in staat sal stel om gemaklik vier en selfs ses keer per jaar te kan sny en baal. Volgens hom is 'n geskatte TDMP van tussen 40 ton en 50 ton per jaar moontlik.

GEMiDDELDE DAAGLiKSE LEWENDiGE MASSATOENAME (GDT)

- Deur slegs van 'n fosfaatlek gebruik te maak, is 'n algemene GDT van 1,2 kg - 1,6 kg/dag moontlik, hoewel daar produsente is wat 'n GDT van tot 1,9 kg/dag op sekere groepe kalwers behaal het.

As 'n laaste gedagte is dit belangrik dat produsente daarvan bewus is dat BRAZseed se weidingsgrasse meerjarig is en dus tussen agt en tien jaar groeikragtig kan bly. Produsente investeer dus in 'n langtermynkonsep en verseker sodoende 'n suksesvolle voervloei asook 'n winsgewende boerdery.

Onthou, "weiding is wins" en indien jy nog nie deel is van die wenspan-produsente wat met BRAZseed vir 'n omwenteling in weiding gaan sorg nie, kontak ons onmiddellik.

NUWE GRAS, INTEGRASIE VAN WEIDING

BRAZseed is tans besig met proewe op eenjarigge grasse wat teen Oktober beskikbaar sal wees in die mark.

BRAZseed is ook betrokke by integrasie van weiding met gewasse soos soya en mielies. Dit is hier waar die eenjarige grasse beproefword met die "no till" konsep wat al vir meer as 20 jaar in Brasilië beoefen word.

Die grond word nie omgeploeg, en die gewasse word ook nieheeltemal tot op die grond geoes nie, maar eereder hoër teen die stam gesny. Die material wat oorbly word dan gelos om 'n mat organiese material te vorm. Die daaropvolgende gewas word dan direk in die mat geplant en sodoende word meer voedingsstowwe in die grond behou.

In 1990 het Brasilië 2,6% die direkte plant metode gevolg vir hulle gewasse, vandag word meer as 50% so geplant.

Mobility in agriculture

The MASDT mobile laboratory

A travelling lab will make life much easier for emerging farmers in Mpumalanga

Going to the lab to test their soil and water is a thing of the past for South African rural farmers in Mpumalanga – an innovative new initiative now means the lab will come to them.

The lab was recently launched by non-governmental organisation, Mobile Agri Skills Development and Training (MASDT), at the Kruger Mpumalanga International Airport outside Mbombela, with support from the Small Enterprise Development Agency (Seda), which spent R3 million to help establish the lab.

"The benefits of the lab are numerous and include bringing conformity assessment support closer to emerging farmers, giving them access to a testing facility that will help them in their farm planning and crop production," said Seda spokesperson Beverley Kgame, quoted on the website *www.SAnews.gov.za*.

Project manager Kevin Gambarana says the lab, with its cutting-edge range of equipment, is one of the most technologically advanced in the world.

"This is definitely the most advanced agricultural laboratory in the country and we are very proud to launch it after years of hard work."


MASDT
seda
MASDT
MOBILE AGRI LAB

Francois van der Merwe of the Tobacco Institute of Southern Africa visits a tobacco curing barn

One-stop support

He says in addition to laboratory facilities, the 20-metre Scania truck unit hosts a training facility with high-tech electronic equipment and a comprehensive one-stop support centre for small, medium and micro enterprises within the agricultural industry.

Two high-definition television screens on the outside of the truck relay what is going on inside, and all laboratory equipment, bar air conditioners, are run with solar power.

"There is an interactive training room on board and a top-of-the-range computer where research and analysis can be furthered," Gambarana explains.

Speaking at the lab's launch, MASDT chairperson Mathews Phosa said: "Today marks a momentous step forward for MASDT. This revolutionary Mobile Laboratory will strengthen MASDT's hand in accelerating the growth of emerging farmers into commercial producers and beyond."

The truck is expected to add to MASDT's fleet of vehicles that already visit projects and deliver seedlings and mechanisation to farmers across the country.

MASDT managing director Lynette Bezuidenhout, who leads a team of 30 full-time professionals at the NPC, explains that the lab will also be used for educational purposes.

"The plan is also to support rural schools by taking the laboratory unit to them and demonstrating experiments by using the television screens, making students aware of basic agri-science and demonstrating that agriculture is a worthwhile profession," she says.

Bezuidenhout adds that "more than 300 people were involved in the construction of the laboratory, which was hand-created and custom-made".

A 'koöperasie' on wheels

It's been a long journey for this determined MD. "I have been in emerging and rural farmer development for almost 9 years – and I love it!" she says. "I grew up in the rural parts of the Northern Cape on a farm, completed my Agriculture degree at Kovsies (University of the Free State) and am married to a farmer.

"Due to this background, I chose a model that is very expensive and difficult to manage, but one that creates the ideal opportunities to establish and empower successful black farmers. We try to provide all the necessary services throughout the agriculture value chain 'on wheels' – otherwise nothing happens. We are actually just 'an old *koöperasie* on wheels'".

And the most satisfying aspect of the work she does? Bezuidenhout doesn't hesitate: "The people in the rural areas are the most important," she says, and the impact and change that her work brings to their personal circumstances is the single most important reason she gets up every morning.

"Nothing is more fulfilling than to hear how thankful they are to find themselves in a better place than where they were prior to MASDT's involvement," she says.

But it's not all a bed of roses – not by any means. "The journey is bumpy, mainly due to managing funds for a non-profit company. We chose the most difficult and expensive model, but in my eyes the only one that can ensure successful establishment of black farmers," Bezuidenhout explains.

She says she manages the company like a professional company with high standards, but sometimes non-profit companies are seen as 'working for free' and therefore less significant.

Money in, money out

Donors and government departments that don't pay on time contribute to serious cash flow challenges as MASDT strives to work on a zero budget – money in-money out – to ensure return on investment for donors.

The management of assets spread across four provinces is challenging, she says. "We therefore fit our vehicles and tractors with car tracking systems to ensure we can electronically manage the fleet from the office."

In the short- to medium-term future, MASDT aims to expand its services to the country's other five provinces, where the existing model will be duplicated. "We also plan to launch more mobile laboratories and ensure we are successful in establishing huge commercial black farmers. It is also a goal to ensure empowerment of farmers in all aspects, rather than only farming operations," she says.

MASDT, says Bezuidenhout, "is extremely grateful to our donors, who ensure we live our dream." These include founder donor, Seda, BAT SA, Eskom Foundation and the Department of Trade and Industry.

When it comes to inspirational people in her life, she points to her personal and business mentor, Dr Piet van Zyl, an agricultural economist who is as passionate about the work MASDT does as she is, "maybe because he is also my brother and 12 years my senior!"

The staff and clients at MASDT are also her inspiration, as well as her husband, Fanie, who is an animal scientist and "who knows the sector thoroughly and supports me all the way!"

Bezuidenhout says MASDT can only achieve results with funding, and her message to companies that want to become involved in contributing to upliftment (enterprise or social economic development) is short and simple: "We have a proven, credible model, and they can strengthen our operations in ensuring we are successful in our vision to empower emerging rural farmers with sustainable business models throughout our beautiful country."

David Capel

Sun-cured Virginia tobacco production at a co-operative in Buffelspruit, Mpumalanga

Members of MASDT pose in front of the mobile lab

ENABLING AFRICAN REGIONAL DEVELOPMENT

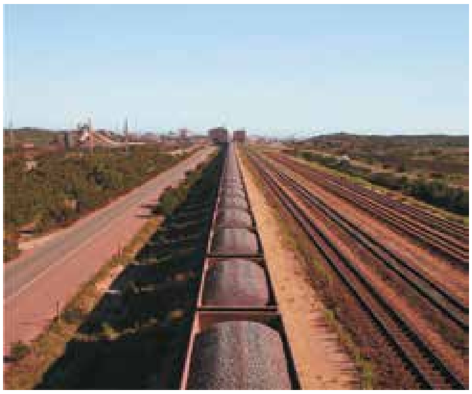
Transnet Freight Rail (TFR) is the largest operating division of Transnet SOC Ltd. It is a world-class freight transport company, transporting bulk, break-bulk and containerised freight on approximately 20 500 route km of railway.

TFR maintains an extensive rail network across South Africa that connects with other rail networks in the sub-Saharan region, with its rail infrastructure representing about 80% of Africa's total.
The company is proud of its reputation for technological leadership beyond Africa as well as within Africa, where it is active in some 17 countries.
TFR operates using a scheduled railway philosophy; this encompasses operating trains in accordance with an Integrated Train Plan (ITP) that is appropriately resourced to optimise capacity through careful deployment of assets to extract efficiencies. The aim is to significantly improve operational efficiency and customer service delivery with the help of the following six business units;

- Agriculture and Bulk liquids
- Coal
- Container and Automotive
- Iron Ore and Manganese
- Steel and Cement
- Mineral Mining and Chrome

We also have International Business, which is an interface between TFR, Ports and SADC railways. It enables African regional development through integrated planning and infrastructure development with – its over-border railway hubs and intermodal ports. It also co-ordinates and grows TFR's activities in the neighbouring states and identifies new markets in an effort to extend the company's operational footprint.

Our business is moved by our people



The African regional development has led to the establishment of Joint Operating Centres (JOC) with strategic intent of enabling regional integration – to be achieved through the institutional framework of JOC in Maputo, Mahalapye and Bulawayo. The railway operators in the African region will execute the scheduled railway philosophy seamlessly, eliminating existing country boundary complexities. This will align the railway companies in each of these corridors in order to execute one unified railway system. The primary objectives are to achieve operational efficiencies and improve real time communication in the African region. To give effect to TFR's Africa Strategy, the three JOC's will be operational by November 2013.

The very core of our business is in the movement of high-density cargo over long distances. We service a wide range of industries including, but not limited to; mining, coal, iron ore, manganese, steel, chrome, cement, granite manufacturing, agriculture, automotive, petroleum and chemicals.

The company has developed and is implementing a major new strategy which is part of the Transnet's greater Market Demand Strategy (MDS). The key element of the strategy is a shift of traffic from road to rail. In accordance with the strategy, the company has committed itself to railing more than 350.3 million tons of cargo a year by 2018/19, the financial year when the MDS will reach its maturity.

TFR has positioned itself to become a profitable and sustainable freight railway business, assisting in driving the competiveness of the South African economy. Through investment, TFR will be able to optimise its capital portfolio, build a world class capital execution function and leverage capital procurement and localisation. TFR is a customer focused railway company committed to delivering freight reliably.

Don't bite the hand that feeds

There seems to be so much I could say about the agricultural industry and Government, so much so one doesn't know where to start, let alone finish. Yet, a beginning must be found. Let us look at the current situation.

Right now we are in the 'silly season', a period when elections are concentrated on by just about every politician, supporter and detractor who endeavours to score brownie points with nonsensical statements, alluding to promises for the future.

What truly amazes me is the number of folk, including the so-called wise ones, who actually believe these false prophecies such as recently proposed for the second time by Minister Gugile Nkwinti, who said that 50% of all farms should be given to farmworkers. That really set the cat among the proverbial pigeons.

Good for ANC propaganda as their supporters leap up and down with shouts of derision and most of all mindless and thoughtless expectation. Come on guys, think about it. You would destroy the food basket, let alone the troughs that some feed from.

Believe you me, if the food supply even dropped by 10%, there would be thousands of starving supporters who would then be lying prostrate, bemoaning the fact that their government had failed them. An Arab Spring as seen in Egypt would be mild compared to an African winter of discontent.

As to the farming community, these scary fairy-tale promises cause havoc among those who should know better. Some leaders have tried to calm down their communities, pointing out the improbability of such an event.

Legal opinion has been sought in some cases. The erstwhile Honourable Advocate George Bizos (he of the late president Nelson Mandela's inner circle) commented, and I quote: "Such a proposal would be unconstitutional and the ANC in all probability WOULD NOT garner the necessary support and percentage to make such a change."

I humbly agree. So why, I ask, are such intelligent people succumbing to such nonsense?

The silly season always starts three months before an election (including, this time, April Fool's Day) and remains with us for three months afterward, then all will calm down. In some cases, new ministers will be appointed and require time to acquaint themselves with their new portfolios. This could be the case in agriculture if one is to believe parliamentary corridor gossip.

I am absolutely certain that the proposal of 50% land being given to farmworkers will end up on the garbage heap of political ploys, much as the fear of wholesale land grabbing gossip of the '90s and to some extent the early part of this century.

One thing is certain: no matter who the Minister of Agriculture may be, there comes a word of caution to the agricultural industry, namely that no section of the business world wants or needs Government to make changes or dictate terms to it. Rather those who can

make progress or, in fact, instigate change among the farming community should make these advances before they are forced upon them in terms they may find unacceptable.

Areas of probability that could be considered would be creating more employment especially among disadvantaged youth. This particular sphere is of great concern to South Africa in general, and agriculture must play its part. A restless unemployed youth sector is a disturbing situation for the future.

Assistance and co-operation to aspiring and small developing farmers is another area of grave concern, while this is a complex situation for existing farmers due mostly to the lack of financial input that is critically necessary to raise the developing farming community to a level that can be recognised by Government (which must assist and play its part).

In this regard banking, finance houses and the like must step up to the mark. Government and tribal land must be given over to black farmers rather than seizing land from established farmers whose input to food security is essential and cannot be reduced.

Such is the conundrum in this situation that a huge leap of financial faith must be forthcoming from the aforementioned players.

To be narrow-minded on this issue can and most probably will incur unwanted government attention.

With the world population increasing daily, we need farmers to feed the nation by increasing output – and not decreasing it.

Tony Sanderson

Land reform through partnership

The five Ntwashini Community Trust sugarcane farms are going from strength to strength, having increased output by nearly 500% through their partnership with Tongaat Hulett, the Department of Rural Development and Land Reform and the Department of Agriculture.

The Ntwashini Community received 600 hectares of farmland in 2007 as part of the land reform process and established the Ntwashini Community Trust, with nine democratically elected committee members representing the 248 households within the community.

Over 75% of the land was under sugarcane, which produced some 27 000 tons of cane annually at the time of handover.

Through the Department of Agriculture and Agricultural Development Agency's Comprehensive Agricultural Support Programme, R2.5 million funding was received in 2009, allowing for the gravelling of farm roads and the replanting of 70 hectares of sugarcane.

Skills shortages and financial constraints reduced output to 3 000 tons per year by 2011, but in partnership with Tongaat Hulett and government, this is expected to increase to nearly 15 000 tons this season, a remarkable improvement.

Having had pre-existing cane supply agreements with the five farms, namely Armadale, Ntuli, Riverside, Pureng and Coleraine and seeing the substantial drop in cane outputs, Tongaat Hulett approached the community in 2011 to offer assistance.

The company then approached the Department of Rural Development and Land Reform on behalf of the community to access funding assistance through the Recapitalisation and Development programme. R5,4 million funding was received, allowing for the replanting of 247 hectares of sugarcane and bush clearing.

Local contractors responsible for the daily farm work were hired. They and their almost 250 employees are from the local community, reducing unemployment while transferring sugarcane farming skills.

A working committee of representatives from the Ntwashini Trust and Tongaat Hulett meets regularly to review contractor performance, appointment of service providers, budgets and overall farm activities and performance. Although they receive assistance and guidance from Tongaat Hulett, the trust committee members retain their authority as decision makers.

Expertise, support services and sugarcane farm co-management services are provided by the company, as well as bridge finance for ratoon management, road upgrades and planting management. Tongaat Hulett also assists with financial management, paying suppliers on the trust's behalf and recovering the funds from payments due.

Two local community members have received additional training and development. Nosisa Dube, identified as the community's future farm manager, is currently working with a key Tongaat Hulett agent, Simamisa, to ensure comprehensive training and skills transfer, while Tongaat Hulett facilitated Nelly Khoza's attendance of a junior certificate in sugarcane farming course through the South African Sugar Association.

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