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Harvest SA

Securing South Africa's Food Resources

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Celebrating citrus The future is bright

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On the cover

Citrus is in season at *Harvest SA,* with a special focus on the fruit injecting vitamin C into the local economy

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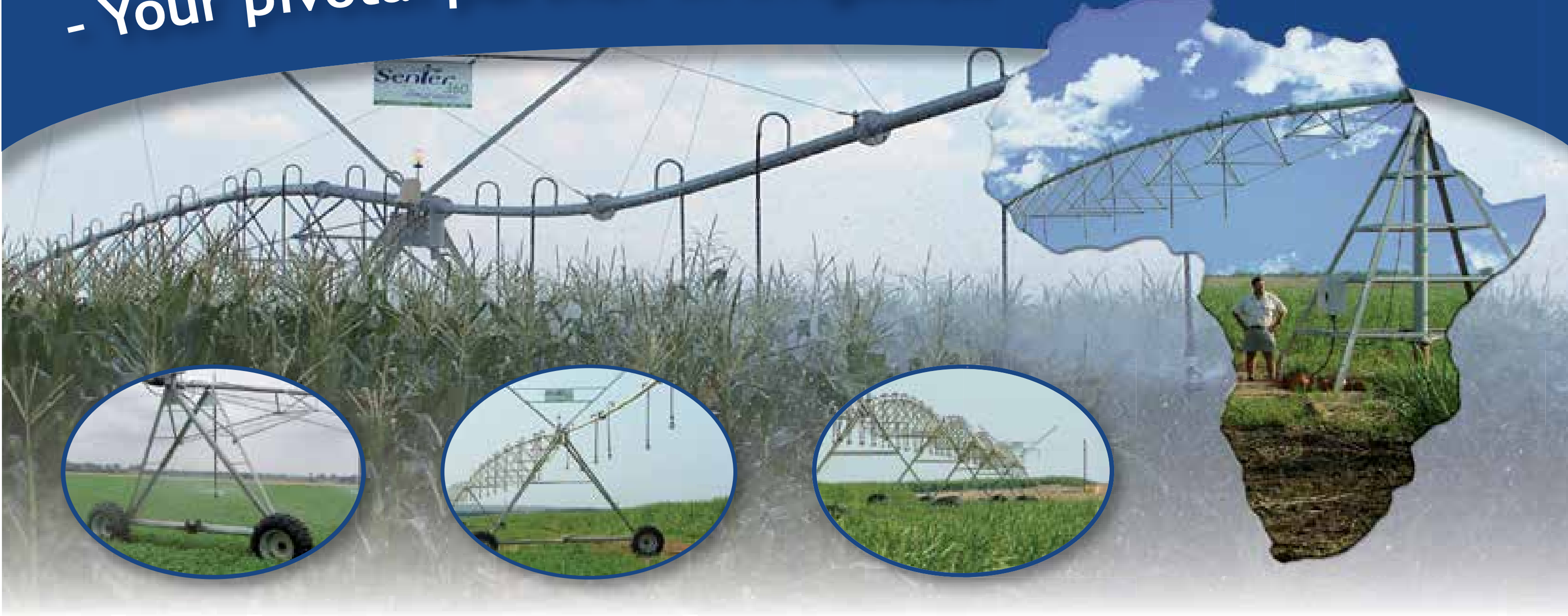

COMPANY PROFILE

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.

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FORE WORD

JANNIE DE VILLIERS
CEO: GRAIN SA

New season, new champion

In crop farming, we talk about the summer grain season (crops such as maize, soya beans and sunflower) and the winter grain season (wheat, barley and canola) – but politics has its own seasons. With a brand new administration appointed by our president, a new political season has commenced. The agricultural sector has welcomed new Minister of Agriculture, Forestry and Fisheries, Senzeni Zokwana, as well as General Bheki Cele as Deputy Minister.

Agriculture has two major hills to climb in this new political season: to provide food security to our nation and create jobs. In the process, we need to progress substantially with land reform and deal with the impact of climate change.

Balancing political imperatives and the hard realities of farming is a perennial struggle; not even top politicians can dictate to Mother Nature. Agriculture is desperate for a champion to lead us through the next season. Strong leadership and a sound connection and understanding of economic and scientific realities are desperately needed. It will not be difficult to gauge our success come the end of this political season. Agriculture needs a champion to direct the goodwill in the sector to ensure food security to the nation, despite all the challenges. Improved infrastructure (especially transport), better research (to weather off climate change) and protection of arable land (against mining) need a champion who can defend and improve the policy space to get agriculture growing to create the needed jobs and produce enough food.

All the necessary ingredients are there: we just need a conductor to get everyone to sing from the same hymn sheet. Agricultural people are known for their stamina and passion for the land; people who can live through drought and crop failure and try again: this is what the minister has to work with. The National Development Plan for 2030 stated clearly what is expected from agriculture—now is the time to deliver.

A particular challenge is to marry the political imperatives of land reform with economic realities. This is where the champion for agriculture is so desperately needed: perhaps an objective outsider who can see what we have missed. For the two parties to lock horns will not resolve anything. Our nation has a proud history of solving problems at the negotiation table. Let's do our children and grandchildren proud and preserve the work of many decades.

When I was assisting the Portfolio Committee with the drafting of the Marketing of Agricultural Products Act in 1996, a member said to me that it is more important to govern well than to govern effectively. If governing well means another round of consulting, then we should do it. My call to all involved is to have patience with each other and to govern well.

EDS NOTE

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The Act that caused all the trouble

History has judged the 1913 Natives Land Act as one of the most short-sighted, pernicious, destructive pieces of legislation ever penned. It was couched in terms absolutely devoid of moral affect: "... a person other than a native shall not enter into any agreement or transaction for the purchase, hire, or other acquisition from a native of any such land or of any right thereto, interest therein, or servitude thereover."

However, there was no mistaking its implications: overnight, the majority of people born in—native to—South Africa found themselves in a state of internal exile. As Sol Plaatje wrote in *Native Life In South Africa* (1916), "Awaking on Friday morning, June 20, 1913, the South African native found himself, not actually a slave, but a pariah in the land of his birth."

The consequences of this inhumane decision are known to all. Established and successful farmers were forced out of business; black tenant farming was made illegal; tenants and their families could not stay on white-owned farms unless they accepted employment as servants or farmworkers and surrendered their livestock to the white farmers. South Africa became a land of dire oppression.

The Struggle that overcame this oppression, and the leaders that waged it—Mandela, Sisulu, Tambo and many others—are celebrated throughout the world.

Now, nearly a century later, the moment has come when "established agriculture" and "developing farmers" have an opportunity to restore justice with meaningful land reform.

How will history judge their actions?

Challenge and reward

We are living in very interesting and somewhat challenging times when it comes to agricultural and land issues in South Africa. As Grain SA, we are committed to transformation in the agricultural sector: we want to have a united voice, household and national food security, food sovereignty, and sustainable production on every hectare of land in our lovely country. What is more, we believe this is possible.

If we are to succeed in our endeavours to create a 'united and prosperous sector', two things are necessary: the one is that we have a clear picture of what we are trying to achieve, and the other is a systematic removal of the barriers that are preventing us from attaining our goal.

What is the picture of where we are going? We would like to see sustainable production on every hectare of arable land—irrespective of the size of the land. There are farmers who have access to land, but who cannot use it as a result of the challenges they are facing. There are also farmers looking for additional land to use, as they have managed to overcome those challenges.

Land, tenure and soil

In our experience as the Farmer Development Programme of Grain SA, we have thousands of farmer members who have access to land that they are not able to use for various reasons. There are some problems around land tenure in the communal areas: while there is a lot of land lying unused, farmers are not always able to get permission from the authority to use that land. In some cases, when a farmer is doing well on a certain piece of land, that land is given to someone else.

It would assist greatly if farmers in communal areas could get access to the same land for a period of 10 years or more. This would also enable them to invest in the land and in infrastructure, as they would feel a certain degree of 'ownership'. This could be done relatively easily if the tribal authorities were involved in the broader plan to bring all the communal land into production; they could merely extend the period of the PTO (permission to occupy).

Where poor farming practices have been followed for many years, the pH and nutrient status of the soils can be very low. Particularly in the case of the communal farmers, they often do not have the financial resources to address the problem, as soil rectification can be very expensive. If this is not done, however, profitable and sustainable production will never be possible on these lands.

The reluctance to do the soil correction is also as a result of tenure insecurity, as the farmer is wary of investing in the soil if there is a possibility that he/she will not get use of the same land for an extended period. We require the Department of Agriculture to assist farmers with liming and soil correction in terms of the phosphate status of the soil—this is in national interest of food security.

Crop farming is done on the land and yet we are watching our soils degrade through wind and water erosion. It is essential that all land be properly contoured so as to prevent water erosion, and farmers must be encouraged to follow the principles of conservation agriculture so as to minimise the risks of wind erosion. Having a cover of organic material on the land not only limits wind erosion, but also assists the soil with the filtration of rain and even reduces soil temperatures. Again, the assistance of the Department of Agriculture is required to address these issues—waterways and contours have to be properly planned and constructed. Unless we address erosion, future generations will not have soil on which to produce food.

Not all soils are suited to crop production—this could be because of the type or depth of the soil, or because of the rainfall of a particular area. It is most important for an assessment to be done to see whether or not farmers can/should grow a particular crop in a particular area. It is possible to plant any crop anywhere, but that does not mean the yields possible will make that crop production sustainable and profitable. Unfortunately, where farmers are given their inputs as grants, they are not concerned about the actual profitability of production and therefore sometimes plant crops where they should not be planted.

Most of the land in communal areas is not fenced, which leads to a number of challenges. During the growing season, the livestock often get into the lands and eat the standing; during the winter months after harvesting, the cattle graze on those lands and thereby remove all the organic material that is so sorely needed for the health of the soil, and also cause large-scale compaction of the land. The costs of fencing all the lands are beyond the financial capacity of many farmers in the rural areas.

In addition to the cost of the fencing, there is an unwillingness to remove the livestock from the cultivated lands, as they do not have alternative grazing. The whole question of alternative grazing land (either natural veld or planted pastures, which could be part of the conservation agriculture initiative) would have to be investigated and followed by a realistic plan.

Extension support

Farming in general and crop production in particular is a complex field and requires years of experience to master. As a result of our regrettable political past, it was white people who had access to land and they are the ones who have developed the experience over years. Going to college and/or university will give you an excellent theoretical background, but it does not make you a farmer.

The Department of Agriculture has appointed a large number of graduates who have the theoretical knowledge but not practical farming experience. These extensioners struggle to assist the farmers on the land. We need to expose our extensioners to internships and practical training that would equip them to support the new farmers.

Mentoring of new farmers by experienced farmers is part of the recipe for success. These mentors, however, need to be part of a structure that monitors the work they are doing to ensure we all follow good modern production practices. When the farmer is being mentored, it is important that he/she should have access to the production inputs required, as well as finance for repairs etc. The mentor can advise and support, but the farmer has to be in a position to follow the advice and implement the plans. A lack of money limits the impact of the mentor.

Tractors and machinery

It is possible to plant in the region of 1 hectare by hand (and this is hard work), but as soon as a farmer has to plant more land, mechanisation has to be involved. There is mechanisation to suit every size of farmer – from hand-held tools right up to the most modern satellite-linked equipment.

Unfortunately, in the developing sector we are struggling with tractors and implements that are either very old, or in a bad state of disrepair. There are various reasons for this. In trying to address these problems, the State has bought tractors and implements. Some of these efforts have been well co-ordinated, whereas others have not served their purpose.

Firstly, there needs to be a clear understanding of the relationship between tractor power (kW) and the amount of land to be worked. We invariably find that although there may be some tractors available, they do not meet the requirements. They also have to be shared between numbers of people. If their capacity was adequate for the size of the land, sharing would be challenging enough, but due to the fact that the capacity is lacking, this leads to overworking of the equipment, and conflict between the farmers using it. There is also the question of who is responsible for the maintenance. Without proper maintenance on farm equipment, it simply does not last and turns into fruitless expenditure.

Unfortunately again, due to a lack of agricultural experience, often the equipment purchased is not entirely suitable for the work to be done—this has led to implements being parked under trees until they rust away.

The lack of tractors and implements in particularly the rural areas has led to the widespread use of contractors. Regrettably, this is not a sustainable solution for a number of reasons.

Firstly, the further you go into the rural areas, the higher the prices that are charged for the work. In most cases in the Eastern Cape, Mpumalanga and KwaZulu-Natal, the price the farmers (or government) pay for contracting is twice the going rate for the North West or Free State where there are more contractors available (the old question of supply and demand). The cost of the

contracting makes the production of the crop a total loss. This cannot be sustained.

Another challenge of using contractors is the timing of the operation. Our summer season is short, and when the rains fall every farmer needs to get into the lands. While waiting for the contractor, valuable time is lost and the farmer ends up not getting a good crop simply because he planted late. The contractor is usually paid per hectare: the more hectares he can cover, the greater his profit. This leads to the contractor being tempted to rush the job and not meet the required standards.

A further complication in the entire system is that people tender for contracting contracts although they do not own any equipment at all. This is what I believe is commonly known as 'tenderpreneurship': the person who wins the tender has to subcontract the work. This adds to the urge for the contractor to rush to get the work done—he is not receiving all the money, and is not accountable as he is not the contract holder. A solution to this would be for the government to insist that the person to whom the tender is awarded has to demonstrate they have the necessary equipment for the size of the tender.

We believe that if we are to get all the land into profitable production, we should make it possible for farmers to have their own equipment (where possible), or share with as few other farmers as possible (group-owned equipment). We would like to see contractors only being used for some deep ripping operations (when required), harvesting and transport. Clearly, there will always be some exceptions to this where weather conditions have been particularly challenging. Overall, however, we believe successful crop production requires 'owned' mechanisation.

Production loans

Most farmers require production loans for crop production—this is common in the commercial sector where farmers access loans from commercial banks, the Land Bank, as well as the agribusinesses. Unfortunately, these loans need to be secured—usually a bond is registered over the property. In cases where the farmer does not own the land (communal land, state land and PLAS farms), they do not have any assets to offer to secure the loan.

In the place of assets as security, the lending institutions are willing to give a loan against a grain marketing contract of the crop to be planted. Due to the fact that the crops are planted outside (risk of weather), and that a long time lapses between planting and harvesting, the lenders require insurance to cover the loan in case of a natural disaster (hail, drought, frost, fire etc). Unfortunately, to get this insurance the farmer has to produce production records for the past five years on that land (in most cases, the farmer does not have that). A further challenge is that the insurance only covers 60% of the cost, which means the other 40% is at risk – most farmers are not in a position to use their own money for the 40% and so this is another reason the production loan is refused.

We must remember that the National Credit Act has very strict criteria to prevent institutions from giving people loans that would put them at financial risk (this could be seen as reckless lending and the institution would forfeit the loaned money). Although the credit act is aimed at protecting people from reckless lenders, in the crop production environment, it has led to more stringent lending requirements and effectively made loans unavailable to most developing farmers.

A solution to this problem is critical if we are to get all land into production—we need a better insurance scheme so that the entire loan can be covered. The cost of this could possibly need to be shared between the private and public sectors.

Training, mentoring and on-farm support

The value of proper training, but experienced people with appropriate and relevant course material, cannot be overemphasised. It is essential that the farmers know what to do and why they need to do it. These farmers should be empowered to understand what they are doing and assisted to procure the inputs they need from local suppliers. Farming is not a 'one size fits all' operation and each farmer needs to assess his/her soil and climatic conditions and buy the correct lime, fertiliser, seed and chemicals for his/her own conditions. Regrettably, the government often assists farmers with the procurement of inputs—everyone gets the same, and it is often delivered too late for optimal production.

Crop production is a seasonal activity and if you miss the optimal season, you will not get a good crop. When farmers are taught to be self-reliant, they will do things at the right time. We are developing a tendency among our people to 'wait for the department'; if the department experiences any problems, the farmers plant a disaster crop. We must move away from this practice and get our farmers of all sizes to take responsibility for their own destiny.

There is modern technology available to all farmers large and small. We should expose the farmers to the appropriate equipment so that they can acquire it and use it effectively. Grants would be a blessing for the purchase of equipment as long as they are used for the right equipment.

Summary

In conclusion, a 'prosperous and united agricultural sector' is within our reach. Sustainable production on each hectare is quite possible if we address the real barriers we are facing. Land tenure and soil rectification, extension support, tractors and mechanisation, production loans, knowledge and mentoring – we have the solutions to the problems. If we could unite the sector, we could build the agricultural dream so many of us are hoping for!

Sappi: quality containerboard is their goal

Considerable innovation and investment is required to produce a reliable supply of sustainable containerboard

Have you ever stopped to think what goes into the making of containerboard boxes? These versatile storage units are used in point-of-sale displays it also, protects products throughout the supply chain and can be stored flat and/or in bulk before and after use. Advanced design technology makes it possible to develop and deliver customised packaging within days. But where does it all start?

In today's competitive market, paper packaging has to satisfy stringent industry demands and customer requirements to ensure that fresh produce stays fresh - from harvesting through to packaging, transportation, cold storage and merchandising. Sappi, a global pulp and paper packaging manufacturer, understands the need for a visually appealing paper packaging solution that offers the required strength, versatility and convertibility. They are as passionate about paper and packaging, as farmers are about their produce.

The company recently reaffirmed its commitment to customers by outlining their packaging strategy and the importance of the containerboard market segment. Their product portfolio was developed to meet the requirements for virgin liner, semi-chemical fluting, test liner, recycled liner and fluting, as well as barrier coated grades. These products are used for agricultural and industrial applications.

Latest innovation and investments

Driven by market trends and customer needs, continuous product innovation is a key aspect of Sappi's business, with the latest development resulting in a new lightweight product from its Enstra Mill in Springs. "This lightweight product offers converters greater packaging flexibility and a cost advantage," says Richard Wells, General Manager Commercial at Sappi Paper and Paper Packaging.

In fact, customers can look forward to more paper combinations that offer yield gains and easier convertibility. Capital investment projects at the company's Ngodwana Mill will see a further increase in linerboard capacity. The combination of additional production, and a strong focus on local sales, is set to make an additional 45,000 tons of Virgin Linerboard available to the market.

In addition, the Sappi Technology Centre in Pretoria offers a value-added service to the industry by carrying out specialised packaging tests. These include box compression and strength tests, as well as paper-to-box combinations. The boxes are exposed to varying conditions of cyclic humidity to ensure that they maintain their form and do not collapse during the supply chain.

Reliable supply of a sustainable product

Local seasonal requirements and increased export opportunities for citrus, stone fruit, grape and tropical fruit farmers ensure a continuous demand for paper packaging products. "To this end, we understand that compliance with quarterly contractual volume commitments is essential for a regular and reliable supply," says Richard. "As a company, we value partnerships and collaboration, and are therefore working closely with customers to cater for peak demand periods."

Another important aspect is a product's environmental credentials. The packaging material supplied by Sappi guarantees a recyclable, biodegradable product that is made from renewable resources. This means the fibre used in Sappi's pulp and paper production processes are derived solely from sustainably managed plantations; never from indigenous or rain forests.

The company's mills, worldwide, uses wood fibre from internationally certified sources that have gone through a rigorous Chain of Custody® (CoC) certification process that carries the stamp of an internationally recognised body such as the FSC (Forest Stewardship Council) in South Africa, PEFC® (Programme for the Endorsement of Forest Certification Schemes) in Europe, and SFI® (Sustainable Forestry Initiative) in the USA.

This makes the choice for paper packing an easy one. If you're looking for an environmentally sustainable product, from a company that values quality, innovation and the specialised needs of its customers, Sappi is your answer.


strength
Durable packaging that ticks all the boxes
When it comes to meeting today's stringent demands for a strong paper packaging solution that has the necessary strength, versatility and convertability for use across a range of applications, Sappi Containerboard ticks all the boxes.
As an added benefit, Containerboard is made from sustainable, renewable resources and is completely biodegradable.
So make the responsible choice.
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Citrus power

Harvest SA met up with Dr Hennie le Roux, of Citrus Research International, and asked him about the current state of the citrus industry in South Africa

When the European Union recently announced it would not ban South African oranges and other fruits, the move saved thousands of jobs and resulted in a collective sigh of relief echoing through the country's massive citrus industry.

The EU is South Africa's most lucrative market for its multibillion fruit exporting industry, so the decision by its standing committee on plant health—following an outbreak of a fungal infection, citrus black spot (CBS), last year—was crucial to the wellbeing of the sector. CBS is a disease that leaves unsightly black spots on the skins of oranges, but is not harmful to humans.

The organisation's decision may not be the end of the matter, though. The EU said it would impose stricter conditions on the import of South African fruit and a full ban could be enforced if South Africa does not abide by them.

As an indication of how important the EU market is to South Africa, suffice it to say the country exports about R8bn worth of citrus fruit to the EU annually, sustaining no fewer than 120 000 direct and indirect jobs in the sector.

Dr Hennie le Roux, Extension Manager at Citrus Research International, says South Africa's citrus industry is the largest exporter of fresh fruit, at least 45% of which goes to the EU.

The Brits love us

"The EU has traditionally been our biggest market. We are sending fruit to about 50 different markets all over the world, but the fact that we used to be part of the British Empire meant that the first exports were always to the UK," he said in a recent interview at NAMPO. The British, he said, "just love our fruit, and so do the Europeans."

Citrus, he says, is a seasonal market and South Africa fits in very nicely in the export scenario in the northern hemisphere when citrus is in great demand.

He says CBS was a big concern for the local industry, despite the fact that it has not resulted in any losses. "It hasn't hurt us too much, because up until now we've got all the fruit into the market that we wanted to get in, but we are concerned because the whole thing is a cosmetic issue. All our scientific data—and this includes data from the United States, Brazil and Australia—shows the disease cannot establish itself in the EU because of its Mediterranean climate, and CBS has never established itself in any country with a winter rainfall climate, which is why we believe it's not a threat to the EU."

He says South Africa's largest citrus growing area is in the Limpopo, followed by the

Dr Hennie le Roux

Eastern Cape, Mpumalanga and the Citrusdal area of the Western Cape.

"It's climate-related and, for example, the Western Cape is an area which is free of CBS because it has a Mediterranean climate, so we've never had any black spot in that area. We also didn't have any in the Northern Cape, but that's because it's so dry up there," he explains.

Le Roux says there are about 2 000 citrus farms in South Africa, employing approximately 120 000 people and sustaining about 600 000. This is a further indication of just how valuable the citrus industry is to South Africa's economy.

Referring to the Citrus Symposium at Champagne Sports Resort in KwaZulu-Natal between 17 and 20 August, Le Roux says this important gathering on the citrus calendar provides feedback on the previous two years' research conducted by the CRI Group.

"It doesn't only involve researchers within CRI , but also experts from the universities of Pretoria, Stellenbosch, Rhodes and KZN, as well as private researchers doing research for the citrus industry, with money that comes from the citrus growers," he explains.

Focus on growers

He says the focus of these symposiums is normally on the growers themselves – "the growers and the industries that service the growers, such as the agri-chemical industry and the people who supply the irrigation equipment".

Concerning the use of agri-chemicals in agriculture, Le Roux says the citrus industry is "extremely responsible" in this area. "We have been using an integrated pest management principle for the last couple of decades. For example, we have the citrus improvement scheme, which is producing disease-free trees. They do not need chemicals to control root rot and other problems. Through this scheme, we have also ensured, over the past 30 years, that no citrus nematodes have entered into any of our new orchards.

"We cannot live without agri-chemicals, especially not with the EU wanting to ban us if they get five oranges with a single spot on them – so we must make use of them, but in a responsible way."

He says the citrus industry has been growing steadily over the past 30 years. Thirty years ago it was exporting 30 million 16kg cartons, and this figure is now up to a whopping 130 million, which makes South Africa the second largest exporter of citrus in the world, after Spain.

One thing the industry urgently needs from government, says Le Roux, "is for the Registrar to come to the party to make sure that there are not so many difficulties when it comes to registrations".

In addition, the industry wants more controls at the country's borders to ensure people are more aware of the diseases they may bring into the country and its citrus industry.

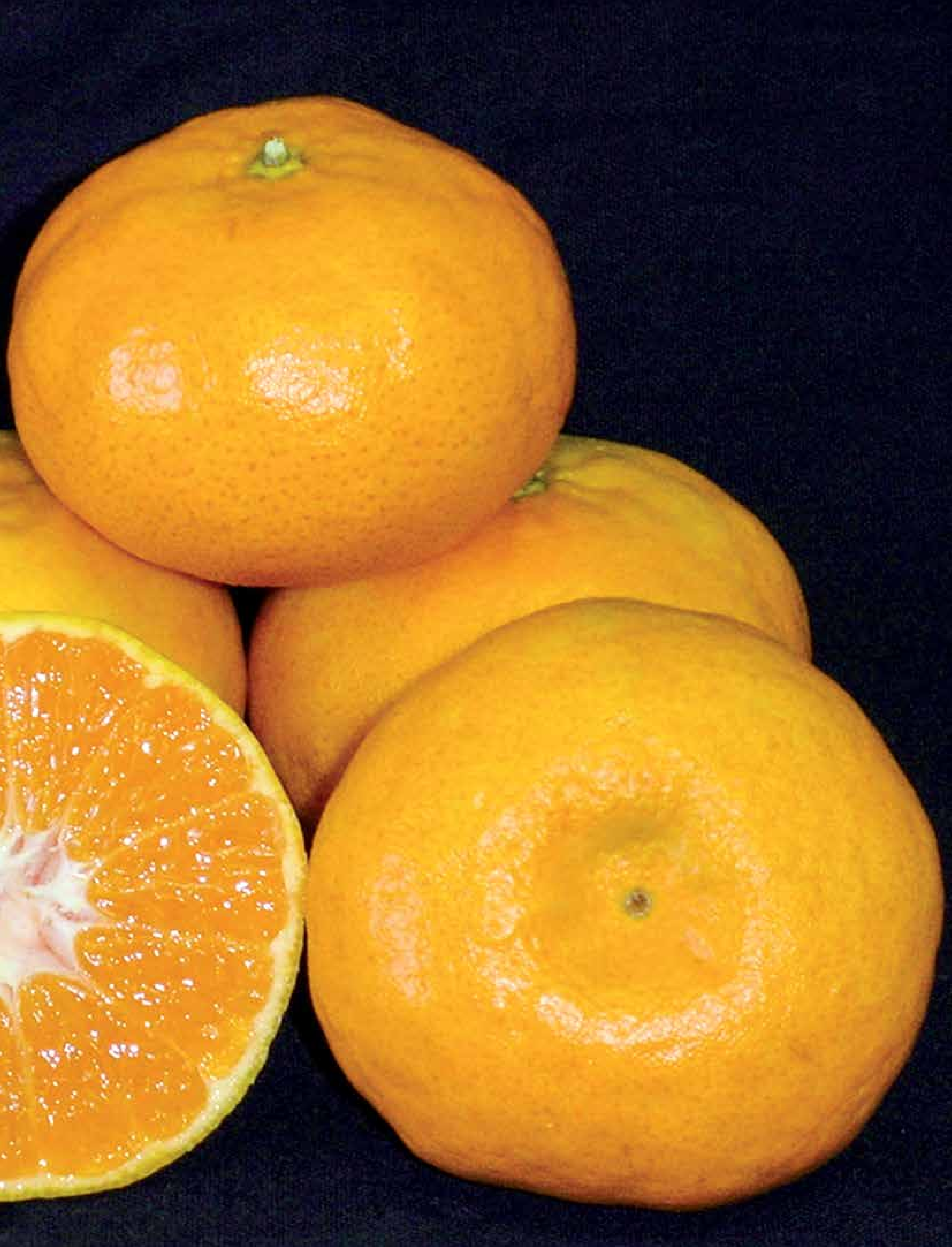
The bottom line, though, is that South Africa's mighty citrus industry is alive, thriving and with big plans for the future.

Tony Sanderson and David Capel

Supporting citrus

The Agricultural Research Council has developed three new mandarin cultivars

The Valley Gold cultivar



Part of the mandate of the Agricultural Research Council (ARC) is research and development. The Institute for Tropical and Subtropical Crops (ARC-ITSC) with its main campus in Mbombela, Mpumalanga, is mandated to conduct research on all tropical and subtropical crops in SA. Citrus is one of the crops on which there is major research focus and for which there is a dedicated breeding and evaluation programme.

The focus of ARC-ITSC's citrus breeding programme is on conventional diploid crosses as well as induced mutations and triploid development. Breeding activities are located at two sites: the Addo Research Farm in the Eastern Cape and Mbombela Research Farm in Mpumalanga. Breeding at Addo is mainly directed at improving mandarin cultivars. At Mbombela the focus is on breeding oranges, grapefruit, lemons and rootstocks through conventional and mutation breeding techniques.

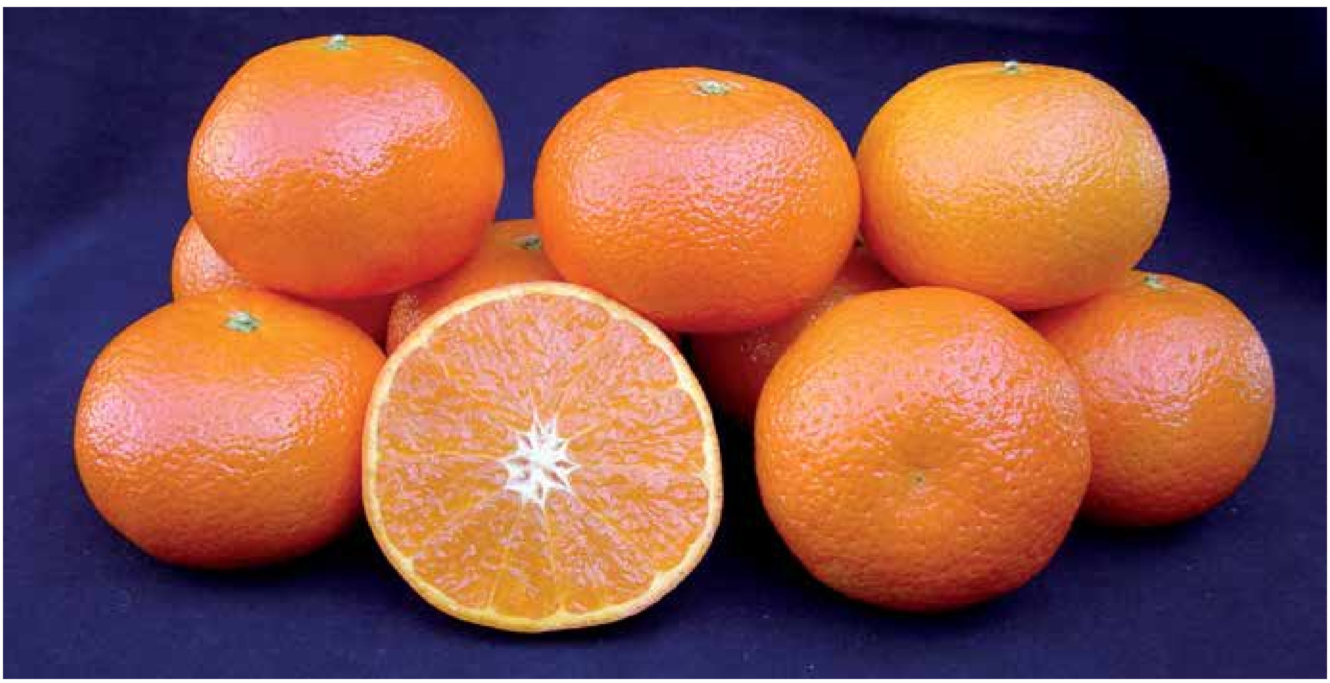
The citrus breeding programme utilises biotechnological tools to support the breeding process, such as development of tetraploid breeding parents, ovule and embryo rescue, DNA fingerprinting and finding markers for fast screening of seedlings.

Recent achievements include the establishment of a molecular citrus genotype reference database for citrus cultivar verification within the Citrus Improvement Scheme, the release of three new mandarin selections, and the development of a technique to mathematically determine the actual genetic contribution of the scion and rootstock to the phenotype of a single plant. The technique will enhance breeding progress in a conventional breeding programme as well as identify citrus cultivars that are resilient with regard to the impact of climate change.

The three new mandarin cultivars are Sonet, Valley Gold and African Sunset. Sonet is characterised by its high quality fruit and early-season ripening. The novel characteristics of Valley Gold under local conditions reside particularly in the late onset of maturity of the fruit, as well as in a tougher rind with a darker orange external colour. African Sunset, under local conditions when compared to Ellendale, is particularly novel with regard to the early onset of maturity of the fruit (mid-late June) as opposed to July/August for Ellendale. African Sunset is also distinctive in having a more pebbled rind and lower acid content, and is almost seedless, even in mixed blocks. All three new citrus cultivars of the ARC are protected by the Plant Breeders' Right Act 15 of 1976 (amended), which prohibits illegal multiplication.

The ARC, in all its activities, contributes toward national priorities as outlined in the Medium-Term Strategic Framework. The citrus breeding programme is therefore focused on the needs of the commercial sector to maintain a competitive edge on global markets and is directed by a proactive and innovative research agenda. Of great significance is the fact that smallholder and emerging farmers benefit from the research programme, as they have direct access to the products of research such as new and improved cultivars. In this regard, these farmers are being supported through a specially designed technology transfer initiative.

To ensure sustained production of citrus into the future, the ARC has revised its research programmes and is in the process of implementing the strategic plan to achieve strategic objectives. One of the key issues to be addressed is the effect of climate change on agricultural production and the mitigation of associated risks. In analysing past experiences and current trends and future scenarios, it is clear that all farmers of South Africa can rely on the research programmes to find scientific solutions to the challenges faced by the agricultural sector. Sustained and stable investment in agricultural sciences is required to improve productivity. Cultivar improvement in particular is key to the achievement of goals.



The African Sunset cultivar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Transnet Freight Rail's Agriculture & Bulk Liquids business unit is focused on transporting Grain, Fast Moving Consumer Goods (FMCG), Petroleum products, Chemicals and Fertilizers. The key agricultural commodities are maize and wheat amongst others.

The Agriculture and Bulk Liquids business unit is geographically dispersed, with depots and yards widely spread across South Africa: Bellville, Worcester, East London, Beaufort West, De Aar, Upington, Voorbaai, Bloemfontein, Kroonstad, Bethlehem, Pretoria, Sentrarand, Springs and Isando. Trade is also conducted with African countries such as Mozambique,Botswana and extending up to the Democratic Republic of Congo.

Critical train flows for grain are from Kroonstad to Durban, Kimberley to Cape Town and Klerksdorp to Polokwane.

Transnet Freight Rail is currently embarking on branch line revitalisation and has successfully opened up the Orkney – Vierfontein branch line. Accessibility to export maize in the Klerksdorp area has become simpler as a direct result of the re-opening.

www.transnetfreightrail-tfr.net

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All aboard the reefer train

Transnet's award-winning rail-freight solution is back and on track

The reefer train project was started in 1998 when tests were done, under the watchful eye of the Perishable Products Export Control Board (PPECB) with a small generator that was used to supply power to two 12-metre reefer containers loaded with export avocados from Tzaneen to the Port of Cape Town. The same genset was used for the transportation of stone fruit in 12m reefer containers from Westonaria (outside Johannesburg) to Cape Town.

In 1999 a generator was built to supply electricity to 32 12m reefer containers. The reefer train has two motors to provide the power to the containers—only one motor is running while the second motor is on standby.

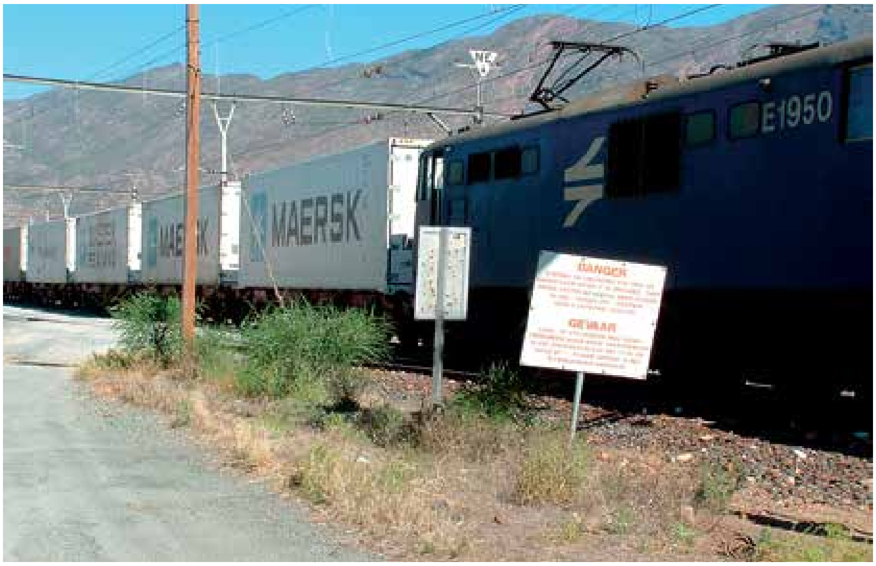
The first containers were railed from Kakamas in December 1999 with export table grapes to the Port of Cape Town. The reefer train was then moved to Tzaneen in May 2000 for the avocado season.

The train is currently busy with her 15th season of citrus fruit from Tzaneen to Durban.

The thinking around this project was to supply an unbroken cold chain to the industry.

The process works as follows:

1. Empty containers are railed from a container park in Cape Town/Durban to Tzaneen.



2. Empty containers are off-loaded at loading area and road-freight to cold store/pack house.
3. Full containers are sealed by the customer under the watchful eye of PPECB and transported back to the loading area where they are loaded on the train. If the train is not at the loading area, containers are placed on the ground and are plugged in (there are 64 plug points at the loading area).
4. Full containers are railed from Tzaneen to Durban/Cape Town under constant monitoring and power.
5. A qualified technician has been assigned to this train and is traveling with the train at all times. During scheduled stops, container temperatures are checked and recorded—any deviation is reported immediately to the relevant shipping line.
6. At the port, containers are taken to the reefer stack and plugged in or directly to the vessel.
7. The reefer train runs as a dedicated unit and has a custom-designed schedule – determined by joint planning between the growers, their agents, the shipping line, Transnet Port Terminals and Transnet Freight Rail.

Benefits of using the reefer train

- Establishment of the cold chain at source.
- Fruit arrival in a superior condition to that being conveyed through alternate channels.
- Less bruising and damage due to rail forces being less than road.
- The reefer train service has been proven very successful in the conveyance of table grapes from Kakamas and Hex River Valley to Cape Town and Cape Town to Port Elizabeth; avocados and citrus from Tzaneen to Cape Town; and citrus from Tzaneen and Marble Hall (via Pretoria) to Durban.
- The train runs on a fixed schedule to meet vessel stacks.
- There is no double-handling of fruit: containers are packed and sealed on the farm and are only handled again by the receiver in the overseas market.
- Less exposure of the product to environmental factors.
- The process is approved by the PPECB.
- There is always a buffer stock of reefer containers on hand at the loading area so that customers can continue loading while the train is still en route.
- Peak season pressures are alleviated from the cold stores in the port area, as reefer containers are moved directly to the port.
- The reefer train project received GOLD in the Logistics Achiever Awards in Johannesburg two years ago.

Terason Carbology®

UNLOCKING PLANT PRODUCTION POTENTIAL

Terason developed the Carbology® technology concept over the past 15 years and it creates a solution quite unique to plant nutrition. In this holistic approach, the combination of bio-stimulants and plant nutrients are applied to ensure high yields and excellent quality fruit. Another very important benefit in the Carbology® technology approach is the impact on alternative bearing cycles. It is clear that the alternative bearing cycles are minimized where the concept are applied.

The Carbology® program is designed to enhance every phenological phase in the growing season in order to stimulate green flower, fruit-set and fruit development, thus maximizing fruit bearing capacity.

Francois Dillman, citrus grower on the farm Noordgrens in Limpopo, with the guidance of Arthur Lilford, Terason's crop solution specialist, applied the Carbology® technology concept for the past 4 years starting post harvest in 2010. The results for the bearing Deltas Valencia and Star Ruby orchards are shown in figure 1. It was also very clear that the fruit size during this period was in the popular middle to large sizes.

Figure 2 shows the results of Terason's Carbology® young tree program followed at Noordgrens, consisting of controlled release fertilizer (CRF), applied once at the beginning of the season, supported by a foliar program designed for optimum growth and tree structure formation. As illustrated, a good yield was already present from year 3, that is very positive from a return on investment perspective. The internal quality of the fruit harvested in 2014 was excellent and was exported to special markets in China. On other conventional blocks, the first good yield was only obtained in year 5, giving a gain of two years earlier production on the Carbology® young tree program.

Figure 3 and 4 gives a visual illustration of the Star Ruby trees described in figure 2 and figure 5 is an illustration of the uniformity of a 3 year old Delta block that was planted using the Carbology® young tree program.

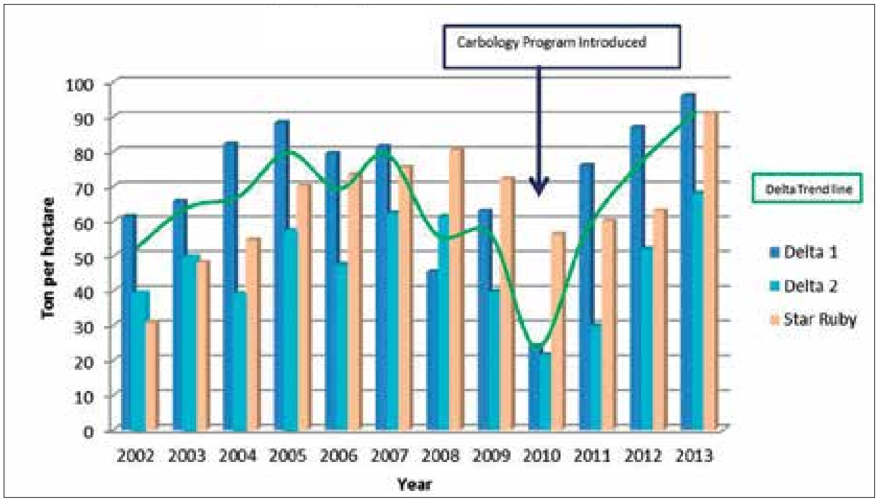


Figure 1: Noordgrens Citrus applying the Carbology® technology

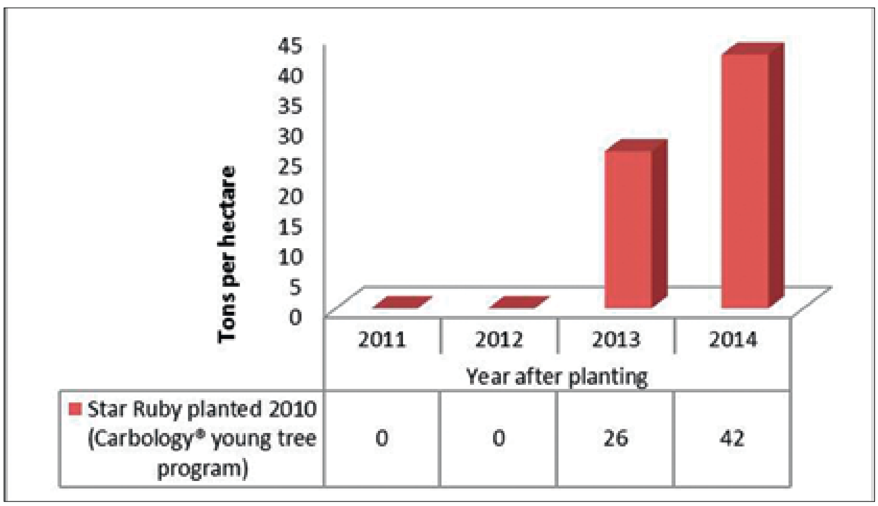


Figure 2: Noordgrens – Star Ruby young tree yield

Figure 3: Star Ruby – 4 year old, stem diameter

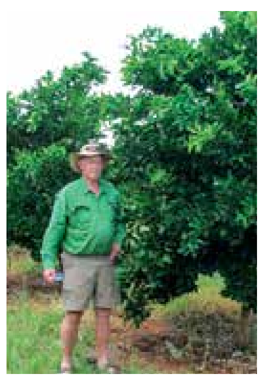


Figure 4: Star Ruby – 4 years old

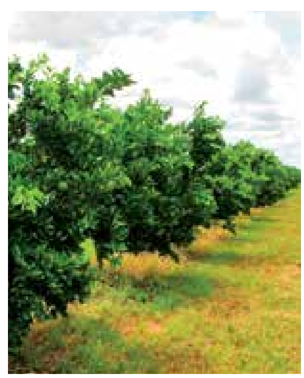
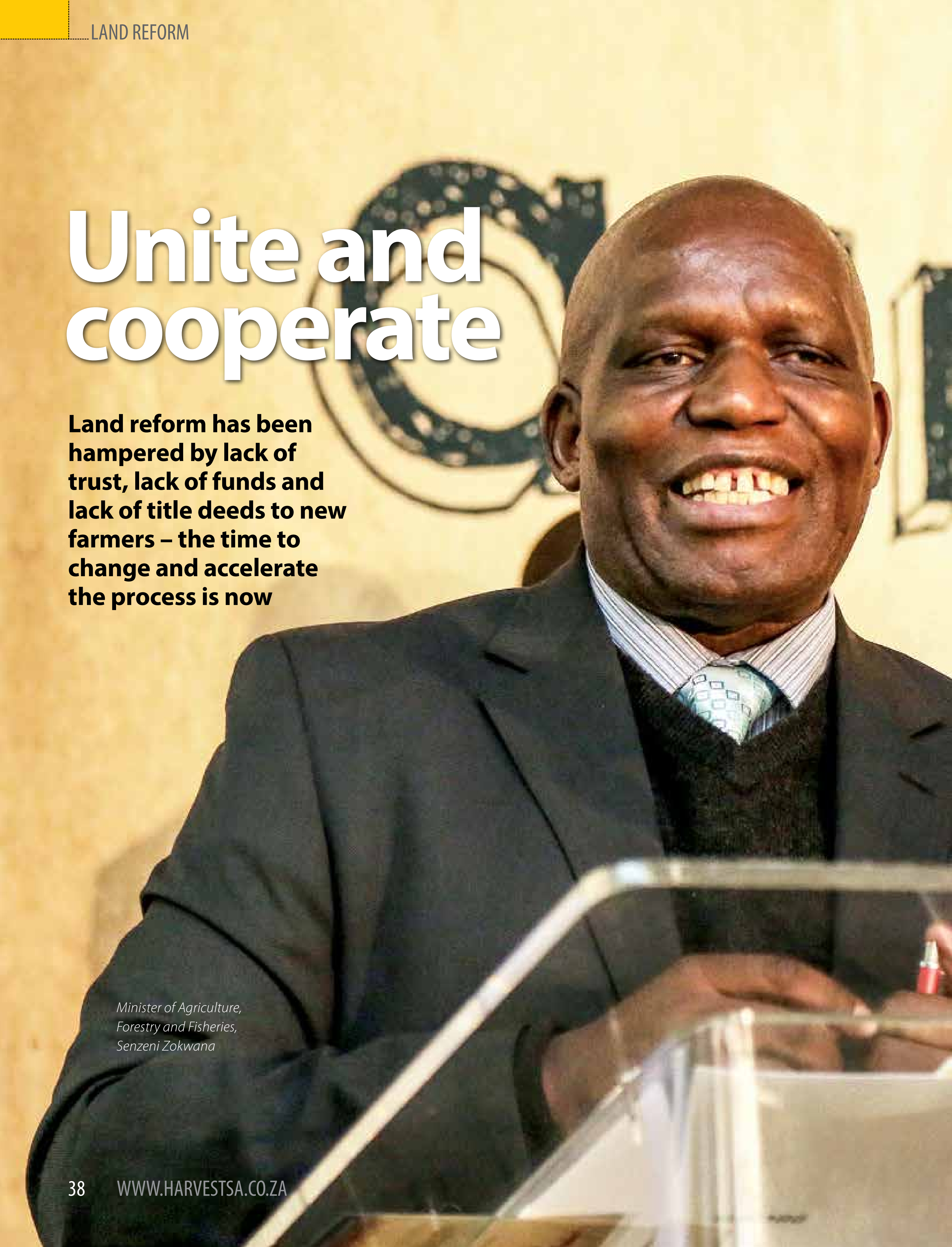


Figure 5: Delta Valencias – 3 year old

Unite and cooperate

Land reform has been hampered by lack of trust, lack of funds and lack of title deeds to new farmers – the time to change and accelerate the process is now



Minister of Agriculture, Forestry and Fisheries, Senzeni Zokwana

It must be said that the Land Act of 1913 and the subsequent rule of apartheid, an abomination, denied the majority of South Africans a stake in this sector. It denied them their dignity and denied them the right to own land, which deepened the poverty that prevails today. However, pronouncements made by politicians oversimplify the reasons as to why land reform was – and still is – such a dismal failure.

The Constitution is blamed, current landowners are blamed, and this in itself detracts from the true reasons why thus far land reform has been such a failure. We need to return to the inclusive premise that was handed down by our late President Nelson Mandela, who set the example of an inclusive process that South Africans of all professions need to reimplement. For only by a deepening of all the co-operation will we reach the necessary success rate.

Of equal importance, we need to address the levels of corruption in our society that are undermining not only the success but also the sustainability of our economy.

Grain SA would like to warn civil society about the vulnerability of our food security in South Africa, in this very summer grain production year in which our food security was balanced on a knife's edge. One weather phenomenon—a cyclone that developed over the Indian Ocean and pushed the low pressure cell further to the west then resulted in abundant precipitation—saved the food security of South Africa. For if that weather phenomenon had not developed, the resultant drought would have destroyed our food security within the following week, our crops already stressed.

Is it not apt that in January 2014 we exported 250 000 tonnes of maize to Zimbabwe to stave off the hunger that was experienced by the citizens of that country?

Food security in itself is not a right but a privilege, enjoyed by all South Africans—it should be coveted as a national asset.

The time has come for South Africans to unite and co-operate in the face of the challenges we have as a nation. For our inability to do so will simply destroy the fabric of our society, for hungry people are ungovernable. Food imports will further exacerbate the trade deficit, which we can ill afford. The dialogue between all interested parties must start in earnest, for there will come a time when the weather will dictate that we cannot produce enough food for ourselves, and it will have a direct bearing on all agricultural foodstuffs – their unavailability and cost.

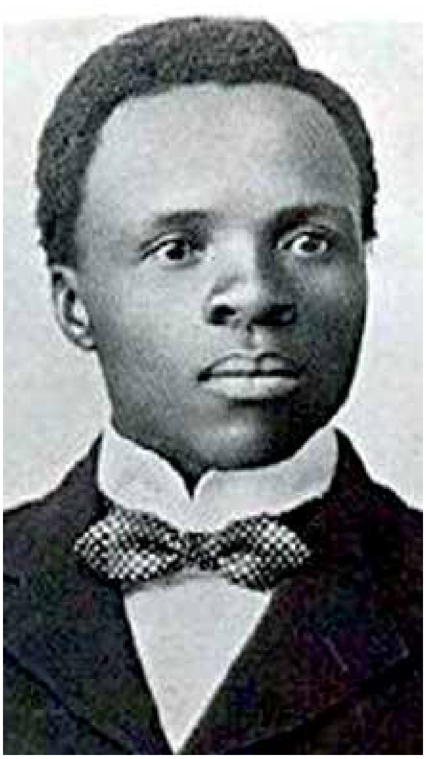
We, Grain SA, appeal to all South Africans to close ranks, for only then will we be able to deal with these challenges, to ensure the imperatives are met and, in doing so, uphold the letter and spirit of our Constitution that is regarded by many as the finest liberal constitution in the world.

Grain SA is a willing and responsible participant in the land reform negotiations via the African Farmers' Association of South Africa and AgriSA, two of the national agricultural unions. We have noticed that the debate has moved to the media and would like to give direction as to our viewpoint as well as a more realistic outlook from our experience.

We would like to state clearly that we do not support the proposal of Gugile Nkwinti, Minister of Rural Development and Land Reform, to give 50% of each farm to the workers without compensation to the current owners. We are convinced that such a decision will immediately not only put food security at risk, but also lead to massive food price increases, higher inflation, increase in interest rates and eventually manifest in slower economic growth. Slower economic growth will put more people out of a job and poverty will become a stark reality for many. South Africa can ill afford to destroy wealth by irresponsible government intervention into a free market system which, in actual fact, has produced cheap food and fibre for consumption of its people.

The three-month strike at the platinum mines was a good indicator as to what will happen if farmers are not allowed to exercise their constitutional right to produce food in a free market environment. In this case, it will last much longer and could lead to anarchy as we experienced in North Africa and the Middle East in 2008. It all started with food prices and food shortages.

Grain crop production is financed by the commercial banks and agribusinesses, and the land is used as collateral to secure the necessary funds to procure seed, fertiliser chemicals and diesel. Without the title deeds


Sol Plaatje, early critic of apartheid land policy

of the land, there is no finance. Without finance, there is no production.

The greatest impediment for black grain farmers is access to finance, by virtue of the fact they do not hold the title deed of the land that they work. Most of the land belongs to the state; by affording them the title deed, you enable them to acquire financing from commercial banks and agribusinesses.

The minister's implementation proposal will logically reduce the hectares under crop production by at least 50%, which could curtail the production capacity with immediate effect. By implication, a shortage and massive price increases will be the order of the day. Prices will increase by virtue of international price determination, from export to import parity. The maize price will logically increase by about R1 400 per tonne (70%) and will accelerate by the demand exceeding the supply – that in turn will raise general inflation above the Reserve Bank's targets.

South African ports are not geared to import huge quantities of grain, and food shortages will become a reality. Food shortages throughout the world also have the ability to create political instability, which South Africa can ill afford.

There is enough research to indicate there is a strong correlation between high food prices coupled with food shortages, and absolute anarchy. This could surely not be on the minister's mind! Every political imperative has its consequences. These consequences are not desired outcomes as per the Constitution of the Republic of South Africa and, for that matter, the Freedom Charter.

We as South Africans should give careful consideration to the socio-economic consequences thereof to be experienced by all, especially the poorest of the poor, who spend—as a percentage of their income on food—more than other income groupings. This would compound their plight to a far greater extent than any other income group.

"This is not a wage negotiation!" said Louw Steytler, Chairperson of Grain SA. "We are dealing with the future sustenance of our nation."

Grain SA supports land reform in a way that maintains food security and political stability. A totally unrealistic proposal such as this would further complicate these imperatives

Blacks had been "bending over backwards" on land reform and restitution, but no longer, Rural Development and Land Reform Minister Gugile Nkwinti said in June. "It is unsustainable. We cannot go on like this," he told MPs in the National Assembly.

Nkwinti recently tabled land reform proposals which, if enacted, would see farmers giving half their land to their workers.

Earlier, Freedom Front Plus MP Pieter Groenewald labelled the proposals as "irresponsible", and said his party had been hearing from farmers that they were looking at emigrating to farms elsewhere. The proposals had caused great uncertainty, he said.

Responding, Nkwinti quoted ANC founder member John Langalibalele Dube on the passing of the 1913 Natives Land Act. "The white ox has got all the pasture; the black ox has nowhere to graze."

He said not much had changed since then. "We have been bending over backwards as black people, particularly African people…It is time that all of us took responsibility for progress…for South Africa belongs to all who live in it, black and white," he said to loud applause.

The minister's latest policy paper on land reform and restitution, finalised in February this year and titled "Strengthening the Relative Rights of People Working the Land", has sparked alarm and uncertainty among farmers.

The document proposes that farm labourers assume ownership of half the land on which they are employed. This would be "proportional to their contribution to the development of the land, based on the number of years they had worked on the land".

The "historical owner" of the farm "automatically retains" the other half.

According to the proposals—with a deadline for feedback of April next year—government "will pay for the 50% to be shared by the labourers". This money would not be paid to the farm owner, but "go into an investment and development fund (IDF), to be jointly owned by the parties constituting the new ownership regime".

"The government will deposit its contribution into the IDF, not to the farmer, for that would be double compensation. He/she will benefit, like all others, from dividends allocated by the IDF.

"With that contribution, the government earns the status of ex-officio member of the management of the fund, and should be entitled to a single representative on it."

The fund would be used to "develop the managerial and production capacity of the new entrants to land ownership", to further invest in the farm, and to "pay out people who wish to opt out of the new regime".

Nkwinti's proposal appears to apply to those workers who have worked and lived on a farm for 10 years or longer.

Groenewald criticised government's land reform and restitution efforts to date, many of which had failed.

Nkwinti conceded that, four years ago, 95% of the land restored to black farmers was unproductive. "But today, 27% of that land is productive. In fact, over the past three years, we've produced at least three millionaires, people who have cash in the bank.

"We're actually rekindling the class of black commercial farmers that was destroyed by the 1913 Natives Land Act," he said.

Sapa

and lead to racial polarisation rather than the aforesaid aim of deracialising the rural communities/economies, and will lead to a deepening of the poverty experienced by so many South Africans currently.

"Trade union-style tactics and constant farmer bashing are outdated in a liberal constitutional democratic dispensation, in our fledgling democracy of 20 years," Steytler said. Sustainable land reform is an imperative and we support food security as an equally important imperative, both of which are of cardinal importance if we, as responsible South Africans, would like to see poverty alleviation as the logical consequence of these actions.

Grain SA, with the financial support of the Maize and other Grain Trusts, has been actively transforming the grain farming sector for more than ten years. More than 200 black commercial grain farmers are now in the position to produce agricultural grain commodities economically and sustainably. The training of almost 700 farmworkers this year has enabled them to become more economically sustainable. We further enhance their capacity by training, to address household food security, and many producers will have a surplus to sell profitably into the marketplace. While the wages of farmworkers are in the media, we confirm that Grain SA pays R3 189 per month, plus a 13th cheque to our employed farmworkers at the NAMPO farm.

Grain SA's membership of black farmers has grown to more than 4 000 and has now exceeded the number of white members. We need to finance those who work the communal and state-owned land, who do not have collateral by virtue of the fact that they do not receive the title deeds of the land they work.

We have been very successful in establishing many commercial black farmers and were crestfallen when government scaled down the recapitalisation programme. Currently, we have nine regional Grain SA offices throughout grain production areas, exclusively focusing on rendering extension services and training black farmers. We fail to understand why this programme of highly successful assistance in maintaining food security and supporting land reform is not regarded by government as important and an integral part of successful land reform.

The speed of this way of land reform is limited by the lack of trust, lack of funds and lack of title deeds to new farmers. Once the title deed is issued, the market will perform its work and production will take place in this enabled environment. Grain SA is not just debating land reform – we are practising it successfully. "We are delivering the very result government and civil society desire: successful black farmers and food security," Steytler said.

Disregarding the property rights of individuals in SA will have major implications for the whole economy, not just the agricultural sector. Every seed planted by a grain farmer is an investment against poverty. We believe in South Africa and want to see her prosper, and our children secure and well-nourished. "This is what we want to achieve, and would like to contribute toward this dream. Now let us all make it happen," Steytler concluded.

Louw Steyler, Chairperson: Grain SA

Further enquiries:
Jannie de Villiers, CEO: Grain SA
Tel: 086 004 7246

Gossamer: the front runners

Mechanization in agriculture – globally seen as the way forward

"The only way to stay ahead as a fruit farmer in the South African Agricultural Market today is to lower running costs. The simplest way to do this is to mechanize production, starting at the picking of produce, right up until the filled container leaves the pack house." This is the opinion of leading analysts, as well as the most affluent fruit farmers in the South African Agricultural Market.

The Gossamer PP-Twin Citrus Packer packing lemons

Gossamer Machinery provides solutions that place our customers in the best possible position to benefit from the global trend toward mechanization. Our products range from orchard equipment , automated fruit packing to carton erecting, covering a wide range of the agricultural production needs.

An excellent example of our packaging equipment is the **Gossamer PP-Twin Automatic Citrus Packer**. This machine can pack up to 350 cartons per hour using only 2 personnel instead of 14, thereby freeing up valuable personnel for other tasks. A benefit of this ingenious design is that this machine has the unique ability to do 2 different counts simultaneously by means of two packing heads. An additional design feature of the Gossamer PP-Twin is the ability to efficiently pack lemons.

Gossamer is renowned for its corrugated carton erecting equipment. The latest in this line is the **Gossamer Greenlock**™ range of tray erectors. These machines have the ability to fold certain hand-fold trays at a speed of up to 20 trays per minute using only 1 operator and no glue.

The **Gossamer Front Runner** is a prime example of how mechanization in the orchard benefits harvesting. This machine transforms bin-on-the-ground harvesting by being a forklift and bin trailer in one. Up to 15 empty bins can be transported into the orchard and up to 5 filled bins can then be lifted and transported out of the orchard. The Front Runner is available in 4- and 5-bin configurations, both with a narrow width, resulting in easy manoeuvrability in the orchard. Additionally our high floatation tyres result in minimal ground compaction. Bin-on-the-ground harvesting provides the opportunity to leave the filled bin on the ground in the orchard for the required fruit stabilization period, preventing possible transport damage due to fruit vulnerability directly after picking. Changing to bin-on-the-ground harvesting has realised harvesting efficiency increases of up to 60%.

To maximize the efficiency of ladder pickers, the **Gossamer Plukmann** picking platform is worthy of your serious consideration. The Plukmann is essentially a hydraulically operated platform which replaces ladders and places pickers and bins on a safe mobile platform. The machine moves up, down, in and out as required, while pickers harvest the orchard. Because the pickers do not have to spend their time moving and climbing ladders, they can spend more time picking. This also means not having to use personnel fitness as criteria for selecting pickers.

Finally, an important consideration is that all Gossamer machines are custom designed to satisfy the unique South African conditions. We provide unparalleled after-sales back-up service, through our well-trained and experienced team as well as a well-stocked warehouse.

With more than 1300 machines in the market place attesting to our philosophy of providing optimal solutions, our position as the top designer and manufacturer of superb quality equipment, is assured.

To discuss your unique mechanization requirements, contact us at 021 851-2464, and visit our website at www.gossamersa.com.

Reaping the **benefits**

Smallholder farmers selected for the USDA Cochran Fellowship

Six South African smallholder maize farmers have been selected by AfricaBio to take part in the United States Department of Agriculture (USDA) Cochran Fellowship biotechnology programme. The group departed for the US on 5 July. The purpose of the programme is to expose smallholder grain farmers in the US to the latest biotechnology developments in agricultural practices that will allow them to grow into commercial farmers and to contribute to achieving food security. They will visit various research projects and farmers.

During the past couple of seasons, AfricaBio assisted the farmers with expert agronomical advice such as planting procedures and biotech (GMO) know-how as these farmers all planted biotech crops—making use of existing technology to control stalk borers and to manage their weeds.

Monsanto contributed to make this visit possible.

The farmers are:

MRS BUBBI APHANE

Mrs Bubbi Aphane from Cullinan, Gauteng, a former teacher and board member of a reputable research institution, has been a vegetable farmer for the past ten years. She farms with her son, Solofelang (Solo), an agricultural student at the Tshwane University of Technology, majoring in crops. She planted GM maize the first time for the 2013/14 season, 2ha DKC78-45BR GEN. As refuge, she planted DKC78-35R.

Her plant population was 35 000/ha. Fertilisation application at planting was 200kg 3:2:0 (25) followed by 250kg/ha LAN (28) six weeks later.

"I am very impressed with my maize. It looks very good and I expect a yield of more than 4t/ha. I think this is the way for smallholder farmers to go. No problems from stalk borer or weed infestations. The fact that a herbicide can be sprayed over the crop without killing the crop, but destroying the weeds, means a big saving on labour cost. We are planning to plant 10 hectares next year," said Mrs Aphane.

Pictured is Mrs Bubbi Aphane, proudly showing her first excellent GM maize crop
Photo: Hans Lombard

DR MAMABOLO RAPHESU

Dr Raphesu, who has a doctorate in philosophy and is a former lecturer at the Limpopo University, gave up his academic career for full-time farming. He plants 120ha of GM maize on dry land.

He started farming with GM maize five years ago. "It keeps my maize free from stalk borer infestation, and weeds are easily managed with the Roundup Ready technology. GM maize is a jump-starter for smallholder farmers who want to achieve food security and a better living," says Raphesu. His average yield over the years has been 3-4t/ha

For the 2013/14 season, he planted DKC78-45BR GEN and DKC78-35R as refuge on dry land. Plant population was 30 000/ha. He planted in November 2013 and harvested in June 2014. Fertiliser application during planting was 200kg/ha 3:2:0 (25). This was followed by 250kg/ha LAN (28). His yield for this season was 4-5t/ha.

Dr Raphesu has great ambitions to expand his plantings to 200ha. "The problem is that at the moment I don't have the equipment for expansion. A major problem is that I do not have title deeds on the land, and no financial institution is willing to advance me any capital for expansion. This is a serious problem facing all smallholder farmers, and until this is rectified we are not going to develop," he emphasised.

In addition to his crops, he also has a mixture of 70 head of Simmentaler and Bonsmara cattle, selling weaners at auctions and out of hand.

Dr Raphesu is a past president of the African Farmers' Association of South Africa (AFASA) for the Gauteng province.

Pictured is Dr Raphesu, right, in his excellent stand of DKC78-45BR GEN. On the left is Lesley Mabasa, Project Assistant: Biotechnology at AfricaBio. Photo: Hans Lombard

A view of the weed-free crop of Dr Raphesu, treated with Roundup PowerMAX. Photo: Hans Lombard

Ms TEPSY NTSEOANE

Ms Tepsy Ntseoane, a former teacher and business consultant to various institutions, is the president of AFASA for the Gauteng province. She farms on 539ha with cattle, maize, vegetables and a small piggery. She obtained the land from the government through the Land Reform Strategy.

She plants 40ha of Bt maize dry land. Some 24ha is planted to DKC78-79BR. Plant population was 25 000/ha. Her yield the past season, suffering severe drought spells, was 5.37t/ha.

In 2011 AfricaBio introduced her to Bt maize. "I planted 2ha dry land. My yield was 7t/ha compared to 2-3t/ha with conventional maize, which I first planted, due to stalk borer damage. Last year my yield was also 7t/ha. The past 2013/14 season, I planted 40ha of Bt maize. I am so impressed with having no stalk borer damage and no weed problems that I plan to increase my plantings to 100ha.

"GM maize, from my own experience, is certainly the answer to food security, hunger and poverty alleviation for smallholder farmers," says Ms Ntseoane.

She also runs a herd of 135 head of Bonsmaras and a piggery of 60 mixed breeds. She sells meat and vegetables to the local community. She has a staff of seven labourers, contributing to job creation.

Pictured are Ms Tepsy Ntseoane and Dr Bongani Maseko, Project Manager at AfricaBio, in her excellent stand of GM maize
Photo: Hans Lombard

MR FRANS MALELA

Mr Frans Malela from Matlerekeng, near Groblersdal in Limpopo, planted on dry land 1ha DKC78–45BR GEN and 1ha DKC78-35R as refuge. He also planted 1ha of the new cultivar DKC78-79BR and as refuge 1 ha DKC78-83R.

He has been planting Bt maize since 2002. "Previously I planted conventional maize. The stalk borer destroyed so much of my crop that my yield was only 1t/ha. With the Bt maize, my yield has increased to 3t/ha. This is the survival for smallholder farmers," says Malela.

His plant population was 35 000/ha. Fertiliser application was 200kg/ha, 3:2:0 (25) at planting. Later he followed up with a top dressing of 250kg/ha LAN (28). "For weed control, I applied Roundup PowerMAX® only once at 8-leaf stage and suffered no further weed problems. I have not suffered any harm from using Roundup Ready herbicide," he emphasised.

To help the local community and contribute to job creation, Frans hires ten labourers to harvest his maize by hand.

He is also a highly successful GM cotton farmer. The past season he planted 12ha DP12BRF. The Bt cotton, he says, has reduced labour expense and the number of sprays – only twice against sucking insects – and his yield has almost doubled.

Pictured is Frans Malela in his excellent stand of GM maize with Clara Mohashoa, Marketing Communication Assistant at Monsanto
Photo: Hans Lombard

MR MOTLATSI MUSI

Mr Motlatsi Musi was introduced to Bt maize by AfricaBio in 2004. "My yield on dry land increased by 34%, from 5t/ha with conventional maize to 6.36t/ha for Bt maize. Following from the financial benefits, I gradually increased my planting from 7ha to the current 20ha. My average yield over the past nine years, without any stalk borer infestation and during some critical drought periods and floods, has been 5.5t/ha–7t/ha.

"During the 2012/13 season, I planted DKC78-45BR GEN on 1ha trial and as refuge DKC78-35R. My yield was 5.5t/ha," says Musi. He applied 200kg of 2:3:2 fertiliser/ha at planting and followed with top dressing 100kg/ha LAN (28).

"Since I have adopted Bt maize, I have enjoyed a better quality of life. I believe that GM crops are the best solution for South African agriculture. What has been good for me can be good for millions of smallholder farmers in other countries. From surplus maize which I harvested, I donated six bags of mealie meal to an old-age home and an orphanage in Soweto" says Musi.

In 2008 he was invited by the Brazilian Council for Biotechnology Information to address the Show Rural Coopavel in Paraná State on the benefits of GM crops. He has also addressed several European institutions on the benefits of GM crops, including the European parliament in Brussels.

Mr Musi showing off his DKC78-45BR GEN maize. Photo: Hans Lombard

VINCENT RAPETA

Mr Vincent Rapeta from Dendron, Limpopo has been planting conventional maize for the past 11 years. For the 2013/14 season, AfricaBio advised him to adopt GM maize. He planted half a hectare of DKC78-45BR GEN, stalk borer resistant and tolerant to Roundup PowerMAX®. His yield was 2.61 tonnes (5.22t/ha). He also planted DKC 78-35 R as refuge. Due to high infestation of stalk borer, the refuge yield was only 1 tonne, which was also his average yield previously with conventional maize.

"With the good crop and excellent yield I achieved the past season, I plan to plant 15 to 20ha the next season," said Rapeta.

Pictured is Vincent Rapeta, all smiles, with his excellent yield. Photo: Hans Lombard

Clara Mohashoa, Marketing Communication Assistant at Monsanto, with a healthy Bt maize cob helping to achieve food security for smallholder farmers. Photo: Hans Lombard

For further information, contact Lesley Mabasa, Project Assistant: Biotechnology at AfricaBio: Tel: 012 844 0123 or email: lesley@africabio.com

Agroprocessing technology

The greater Tzaneen area, known for growing fruit such as mangoes, bananas and guavas, both commercially and on a small scale, is reaping the benefits of innovative agroprocessing technology.

For small-scale farmers and their commercial counterparts, the agroprocessing factory initiated by the Department of Science and Technology (DST) has injected new life into the region's economy.

The Nkowankowa Demonstration Centre in Nkowankowa Township, outside Tzaneen in Limpopo, was launched by the DST in 2011. The Centre is one of several DST projects that apply innovative technology to create sustainable employment in rural areas, using local natural resources.

The Centre is an agroprocessing facility that pulps and dries bulk quantities of fruit produced in the area. It also produces dried fruit rolls and sweets for sale as confectionary.

A market gap for the pulping and drying of fruit produced in the area was identified some years ago. Uptake agreements were entered into with potential buyers, and good quality products are sourced from local suppliers, who have agreed to supply the centre at wholesale prices because purchases are made in bulk.

The Centre's commitment to procuring 20% of its fruit from informal economy suppliers allows new entrants into the market. Previously, these suppliers were not able to provide fruit to commercial agroprocessing companies because of food hygiene and safety requirements. However, the Centre's business analyst proposed adding another step to the processing (washing the mangoes in a chlorine solution), which satisfied the Hazard Analysis and Critical Control Points (HACCP) requirements and opened a new market for informal suppliers and small-scale farmers. With HACCP accreditation, the factory will also be able to export products in future.

Such innovations resulted in 280 small-scale farmers and informal economy fruit suppliers benefiting alongside commercial farmers in having

boosts Tzaneen's economy

a buyer for their produce. In addition, several community members have obtained employment at the centre.

The fruit is supplied by Communal Property Association (black) farmers, commercial farmers, "bakkie traders" and local householders who grow fruit in their gardens.

For Mr Ishmael Sekatane, a black small-scale farmer, the Centre provided a market for his produce. "I have been farming with mangoes since 1984, but I had no market. Then I discovered the Nkowankowa Demonstration Centre. They buy my mangoes and give me cash instantly. This is a big relief, and it encourages me to farm intensively," he said
The Nkowankowa Development Centre draws on the expertise of ChemCity (Sasol's small business incubator) as an implementing and technical partner.

The end-product commodities produced by the Centre enter the formal economy via commercial business (e.g. pulp for making fruit juice) and the informal economy via small-scale entrepreneurs. These entrepreneurs purchase products from the Centre in quantities they can afford and sell the products to their customer bases at affordable prices. In this way, the entrepreneurs are able to make a living and underprivileged locals are able to buy nutritious products they could not afford before.

The Minister of Science and Technology, Naledi Pandor, has welcomed these pro-poor innovative technological solutions that result in job creation and boost local development. "The inclusiveness of this initiative gives expression to the DST's focus on innovation for inclusive development," she said.

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In safe hands

We caught up with Springbok rugby legend Victor Matfield and chatted about rugby, life and finance

Down on the farm, so to speak, at the recent NAMPO Harvest Day in Bothaville, giant Springbok lock and captain Victor Matfield is talking business. Not the business of lineouts – or the disruption of them, for which he is so famous – but the business of finance.

Everyone's favourite Bok recently joined the Efficient Group as brand partner, and was attending the big Harvest Day with the company's Director and Chief Economist, Dawie Roodt.

Roodt is a nationally renowned economist who specialises in government finance and monetary policy, and enjoys excellent relations with various role-players in the South African economic and financial environment.

He says the farming community is among the group's most important clients. Indeed, the majority of traditional farmers in South Africa are on the group's books.

For his part, besides almost always winning his own lineout ball, Matfield is known for his exceptional skill at disrupting opposition lineouts—a cornerstone of the Boks' 2007 World Cup success, where he was crowned IRB (International Rugby Board) Player of the Tournament.

Attractive partnership

Matfield, though, is no financial boffin. He admits to making his fair share of financial mistakes in the past, and the company says it is exactly this background that makes the partnership so attractive. "A low level of financial literacy in South Africa is pervasive, and to help change this, Matfield will follow a rigorous introductory programme over the next year to build his financial capability to eventually empower him to be financially independent," a company

Bok legend Victor Matfield with Efficient Group Director and Chief Economist, Dawie Roodt statement says. "This education process will be shared and reported on continuously in social media and on the company's websites, and anyone keen to participate can simply follow his progress."

The robust educational programme planned for the Bok captain includes an introduction by the Efficient economics team to the importance of global and local economies and the impact thereof on the investment environment.

An analysis of Matfield's own financial needs will be conducted and a comprehensive financial plan will be compiled for the Matfield family, covering various aspects of personal finance such as, among others, cash flow management, education, retirement, investment, insurance, tax and estate planning, as well as risk management.

Says the statement: "Finally, Matfield will join the Efficient Select team, our award-winning asset managers, for an introduction to asset management. During these sessions, he will be introduced to the quality investment philosophy and processes followed by Efficient Select. In fact, he will have the opportunity to obtain first-hand experience by having his own funds managed by Efficient Select."

Heiko Weidhase, Efficient Group's Chief Executive Officer, says the company's brand partner programme focuses on answering all the questions about financial services which we are most frequently asked. "With this approach, we aim to introduce our company's products and services to as many people as possible and also to enhance people's understanding of basic financial concepts that could help them take control."

Roodt, meanwhile, says globally as well is in South Africa, traditionally agriculture has been categorised as a so-called primary industry. "That is not really applicable anymore because you can't be; there's no space for a farmer anywhere in the world anymore. You must be an entrepreneur and that means you have to have a grip on things like IT and genetics. This is a highly sophisticated business and it is getting bigger and bigger all the time".

In fact, adds Roodt, there is no space left in South Africa to be a farmer, unless you are a businessman as well. "So the guys who are left today in the agricultural industry in South Africa are really, really good. Let's call them farmers, but they are excellent businessmen as well."

Matfield says he has been involved in rugby for many years and has seen how players mismanage their money. "When Dawie and Efficient came to me and asked me to be brand ambassador for the company, it was a no-brainer for me. I said the most important thing for me was to learn their business as well."

He says many players today are earning vast sums of money at the tender age of 21, and they need proper advice on how to look after it. "What do you do with your money? Where do you place it, how do you plan for one day when you want to retire? I think that when they asked me to take on this job, it was a no-brainer to come and join them and learn their business as well and hopefully I can help other players to really have an input into what they do with their money."

Matfield says bad investments are the cause of many rugby players' downfall. "When you get to a group like Efficient, things are regulated. They know what they are doing, and they have all the experience, all the expertise."

He has been tempted to get involved in a business that would double one's money within two years but, he says, that simply doesn't happen. "So rather go somewhere else," he advises. " You can't be involved because you are too busy with rugby, so make sure you get people who know what they are doing to invest your money."

Roodt says it's hard to think of a better brand ambassador than Matfield. "He's a very, very sharp guy, let me tell you. This morning we spoke about the yield curve, for instance, and I explained to him how this works. But what really attracted me about Victor is that he's a leader of a team. He has a game plan, he has certain players in his team and they are responsible for certain things—and that is what we do at the Efficient Group as well."

Is a farming future on the cards? Sadly not. Matfield says he is a city boy and doubts he will be farming "anytime soon".

"This (being a brand ambassador) is more my type of thing, but again, I think, being successful takes the same steps, no matter what area of life you are talking about. If it is a business, a farm, a rugby team—you need to have a vision, you need to have a strategy, you need to go through certain steps to achieve what you want."

The good news is that Matfield has no intention of giving up rugby. Indeed, he says he is aiming directly for next year's World Cup in the United Kingdom. "For me to just come back for a year is stupid. The ultimate for me is to come back and put my body through this again. I really believe we can win the World Cup and after that I have already signed a two-year deal as a coach – that will probably be my main thing when I stop playing".

Tony Sanderson and David Capel

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Dow AgroSciences started in the 1950's as the agricultural unit of the Dow Chemical company. In 1989 Dow entered a joint venture with the Elanco Plant Sciences business of Eli Lilly and Company, to form DowElanco. In 1997 the Dow Chemical company acquired 200% ownership of the joint venture, and renamed it Dow AgroSciences. Today, after nearly 60 years, Dow AgroSciences is a wholly owned subsidiary of The Dow Chemical Company. Dow AgroSciences today is one of the world's leading agricultural companies with more than 8000 employees worldwide. We have R&D and manufacturing facilities in more than 40 countries and our products are being sold in more than 130 countries.

Dow AgroSciences is working hard to support the food production needs of the world's growing population. We are committed to develop agricultural solutions to make farming more profitable, productive and sustainable. The only way we will achieve these aims will be through innovations in crop production technology.

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Because of these solid foundations, Dow AgroSciences has received numerous awards through the years, including four U.S. Presidential Green Chemistry Challenge Awards, eleven Agrow Awards, as well as the first prize in the Good Agricultural Practices category of the XIV Andef Awards.

Dow AgroSciences is also committed to the responsible and sustainable management of our agrochemical and biotechnology products throughout their life cycles. As such, Dow AgroSciences was one of the founding members of the American Chemistry Council's Responsible Care initiative, and a founding member of the plant biotechnology industry's Excellence Through Stewardship programme.

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Johan Janse van Rensburg
Marketing Specialist
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Gateway to African agriculture

NAMPO Harvest Day 2014 proved a marvellous showcase for the best that the agricultural sector has to offer

Held for the very first time at NAMPO Park in 1974, the NAMPO Harvest Day – which took place just outside Bothaville in the Free State from 13 to 16 May 2014 – once again proved a huge success. With a proud heritage spanning more than 48 years, and organised annually by Grain SA, NAMPO (Nasionale Mielieprodusente Organisasie) is the largest privately organised agricultural event of its kind in the southern hemisphere.

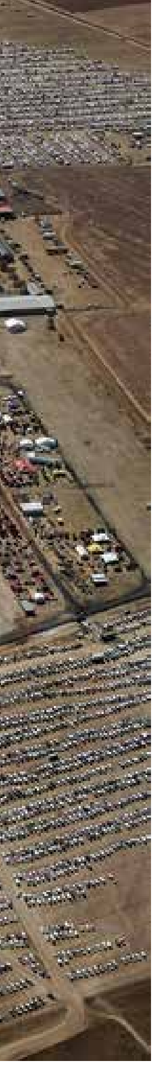
The almost 70 000 visitors – including a wide spectrum of stakeholders in farming, government, supplier industries, media, international markets and education institutions, among others – enabled young and old to enjoy this prestigious agricultural event and ensured exhibitors ample networking opportunities.

NAMPO Harvest Day provides a unique opportunity to all manufacturers and distributors of agricultural machinery, products and services to exhibit as well as demonstrate their vast range of products to their targeted customers – the farmers of South Africa. The grounds accommodated over 650 exhibitors ranging from local agricultural producers and manufacturers, motor companies, financial institutions and livestock breeders, further complemented by more than 52 foreign companies and 13 participating countries including French, Argentinian and American pavilions.

One-stop agri shop

NAMPO Harvest Day provides a platform enabling agricultural producers to see – on the same grounds and at the same time – everything that has an impact on farming. Interactive tractor and implement demonstrations is a unique feature of the show, which allows farmers to view interactive demonstrations of a comprehensive range of machinery and implements, establish their performance and effectiveness and use this knowledge for product purchases in future.

Visitors to the show are treated to a range of activities and the 4x4 programme provides for some excellent entertainment on a daily basis, whereas the women's programme is packed with exciting demonstrations including table setting and decorating,

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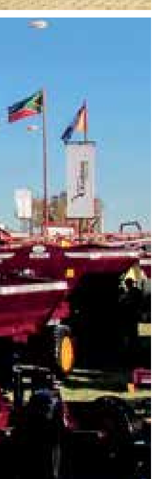


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fashion shows and wardrobe planning as well as an interactive cooking experience with the Kyknet Kokkedore.

As an educational experience and a petting farm, NAMPO Harvest Day provides school children with an agricultural learning encounter and ample opportunity to interact with and touch some of the livestock. The more than 492 school children who visited this year's show were able to experience the softness of angora fur to the smallest lambs and naughtiest goats.

Grain SA members were this year greeted by the newly unveiled member's hall. This exclusive facility was set up to improve each member's NAMPO experience, provided daily access to the live SAFEX markets in addition to the popular Nation in Conversation broadcasts. Members also had the opportunity to rub shoulders with a couple of celebrities including some of the Cheetah rugby players.

According to CEO of Grain SA, Jannie de Villiers, it was a privilege for Grain SA to receive its fully paid-up members in the new facility. This meeting is part of the character of Harvest Day and connects to the convivial atmosphere that prevails on the grounds all the time. Grain SA also invited retired veterans from agriculture as guests to recognise their contribution to the industry.

Partnering in the popular Nation in Conversation initiative, hosted by Senwes and presented by the economist Theo Vorster, these daily panel discussions covered topics including the producer value chain; the historic lay of the land for agribusinesses; organised agriculture as commercial organisations; and a future-focused approach to the role of multinational organisations in the development of the agricultural sector.

Grain SA showcase

This year's Grain SA exhibition theme, "Food Security—Feeding the Next Generation", focused on showcasing how the organisation supports grain producers to ensure sustainable and profitable operations, while contributing to household and food security.

Premier of the Western Cape and leader of the Democratic Alliance, Helen Zille, visited the Grain SA exhibition and showed considerable interest in its Farmer Development programme. During the subsequent press conference, she said she was "tremendously impressed" with the size of the show and was confident that South Africa's farmers are at the forefront in the use of technology.

Zille stated that agriculture was both science and skill, and thus vitally important to the country. "Africa is a continent with arable land, and if we are ahead with technology, knowledge and the ability to transfer skills, the continent will open up for us," she said.

Furthermore, discussions with diplomatic dignitaries and governmental representatives encompassed the concept of growing more food with fewer resources. Likewise, Grain SA's discussions with delegations from Sudan, Eritrea, Botswana, Kenya, Mozambique, the Republic of the Congo and Ethiopia centred on food security and the sourcing of investors in each country's agriculture sector. Discussions with local role-players centred around who would be responsible for financing land reform in South Africa.

The conclusion of several debates during the Harvest Day was that organised agriculture will have to switch from influencing to implementing. "The time has arrived for the private sector to start assisting with the implementation of activities because the government apparently does not have the ability," said De Villiers. He reiterated that "overseas exhibitors, other countries on the continent and even local prospective buyers of 'black' grain for empowerment purposes already realise the value of Harvest Day", adding "we will have to work harder in the future to involve more politicians and academics—particularly those who regard themselves as the drivers of food security".

NAMPO living up to its promise

The expansion of NAMPO Park in the direction of the southern parking area enabled the creation of 25 new exhibiting spaces as well as a kiosk and additional ablution facilities. A new parking area with double access gates was also established on the grounds, which assisted with the heavy traffic volumes characteristic of the Harvest Day.

NAMPO, as a display window for agriculture, a discussion forum and a network opportunity for role-players in agriculture in southern Africa and further afield, lived up to its promise and positive feedback from exhibitors confirmed the Harvest Day is a platform conducive to trade and a sought-after place to convey information and build networks.

Accommodating 293 light aeroplanes and 41 helicopters on the NAMPO airstrip over the four days is further indication of the show's popularity.

To keep abreast of current affairs, Grain SA Radio—aired exclusively for the duration of NAMPO and broadcasts in a radius around NAMPO Park—kept visitors informed of what was happening on and around the grounds.

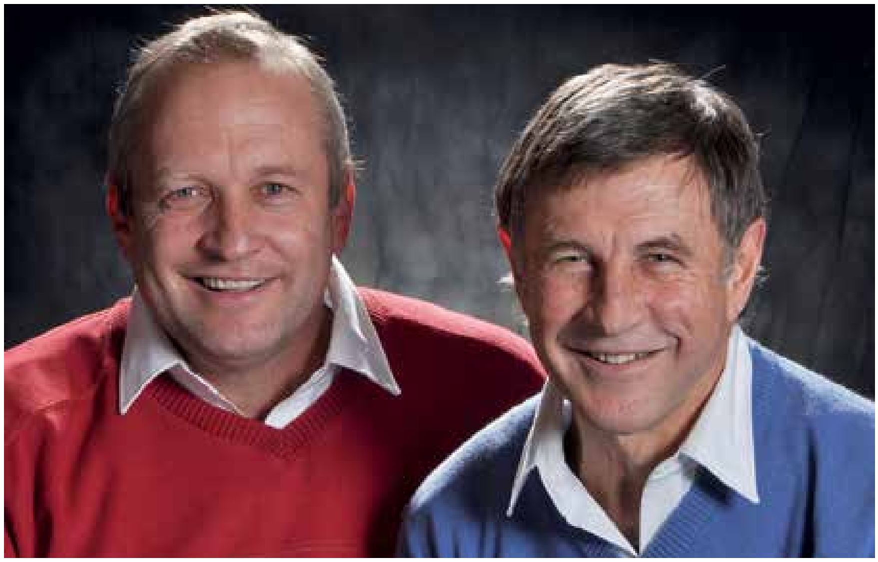
Staying with the theme of "The New Generation Agri-Partner", everyone on the grounds could download the terrain plan on their cellphones. "NAMPO's target in 2014 was to be a new-generation partner for the farmer, and I think we have succeeded. The new technology and farming methods presented by exhibitors—and the good business resulting from this —confirmed why this is regarded as one of the top agricultural shows in the world," said Cobus van Coller, NAMPO Harvest Day Chairperson.

The dates for next year's NAMPO Harvest Day are 12 to 15 May. Visit *www.nampo.co.za* for more information.

Kishugu goes global

A new South African-based services industry giant with a global footprint was launched in Mbombela (Nelspruit) on 9 May 2014.

Kishugu, which has its roots in forest and wildfire fighting, suppression and prevention, is set to light up the global stage with its international experience and strategic approach to Integrated Fire Management (IFM) and a wide range of related services provided by 11 aligned divisions.



Chris de Bruno Austin (left) and Johan Heine Co-Managing Directors of Kishugu

Kishugu is internationally acknowledged as the implementers, for over a decade, of the award-winning South African Government's Working on Fire Programme (WoF). With a complement, in South Africa alone, of more than 5000 wildfire fighters drawn from the ranks of the previously unemployed, WoF is South Africa's most successful job creation and skills upliftment programme ever.

The National Veld and Forest Fire Act 101 of 1998 (NVFFA) has changed the face and market for Fire Management in South Africa. Land owners are required to have trained and equipped personnel to implement fire management practices on their owned or leased properties. Failure to comply in the event of a fire spreading from their properties and causing damage to a neighboring property would result in prosecution. The vast majority of land owners within South Africa have limited capacity and experience in the implementation of fire breaks, fuel load reduction using prescribed fire and the suppression of wildfires. WoF Commercial Services and Training Academy have developed capacity and products to assist land owners with developing their own potential as well as the supply of integrated fire management services to rural land owners within South Africa.

A new identity

Explaining the need for rebranding and restructuring, Kishugu co -founder and co-managing director, Johan Heine says that the FFA Group had expanded rapidly since its inception over a decade ago: "Corporate and staff structures that evolved during this steep growth curve have become outdated and in certain cases are no longer as cost-effective as they should be.

"The Group has also reached a level of corporate maturity and has embarked on a process to attract additional investment to fund future growth."

Says co-founder and co-managing director Chris De Bruno Austin: "Ours is a humble-beginnings story. We started as a small business in Nelspruit and we are now going global with a distinctive brand and identity."

The name Kishugu, selected to reflect the industriousness of ants, is a perfect example of a broad collective that works for the common good.

Far more than simply a wild fire fighting company, Kishugu offers a full range of services deployed globally. Some of the new divisions include Kishugu Integrated Fire Management Services and Working on Fire including WOF International with contracts in Chile and Australia; Kishugu Aviation; Kishugu Integrated Forestry Services; Kishugu Oil and Gas; Kishugu Training; and Kishugu Manufacturing and Sales.

Kishugu also supplies and manufactures fire-fighting equipment and operates fire management and health and safety training academies in Angola, Mozambique, Brasil and Chile, where it also provides fire management services to the forestry industry.

Kishugu and its divisions will retain and expand the Group's core integrated fire management operations in South Africa and internationally while seeking to diversify into new markets.

The tide is rising

Climate change poses an extreme threat to food security, but farmers are fighting back

Rising temperatures and volatile weather conditions are not only affecting agricultural production, but influencing farming methods and practices. Farmers are tackling these challenges head-on and are being forced to adapt to changing weather conditions. In part two of our series on climate change and agriculture, we deal with southern Africa and what agricultural stakeholders are doing to mitigate the effects of shifting weather conditions.

The International Food Policy Research Institute (IFPRI) states the southern region of Africa could be the hardest hit by rising temperatures from climate change, and understanding what this means for agriculture is crucial. Will previously fertile land become dry and unsuitable for farming? Will yields decrease? Another major concern is the threat to food security.

"There are several changes visible in the weather like rainfall patterns, temperature fluctuations, maximum and minimum temperatures that have been dramatically volatile in some areas," says Marinus le Roux, Agriculturist with FARM Agricultural Enterprise Management (FARM). "There are already effects that have had a major impact on South African farms. Just by the shifting rainfall patterns, farmers have to plant in a shorter time period. The first rains always fell in September; we have in recent years seen first rains only in the second half of October. Furthermore, the intensity of the rain is much harder, larger quantities and less scattered."

In the United States, research by scientists suggests farmers may have to change their farming practices in order to adapt to changing weather conditions. "Farmers might choose to grow different crops that fare better in drier conditions and require less water," explains Rob McDonald, a senior scientist of sustainable land use.

In McDonald's analysis, he assumed crop switching possibilities based on past trends. "Consider how settlement of the US Midwest totally changed the agricultural economy of New England. New England used to produce corn and wheat, which it doesn't now, since it is uneconomical. We shouldn't be surprised if climate change also drives a large process of crop switching. There are reports, for instance, of the Midwest drought of recent years pushing farmers to switch forage production from corn to sorghum," he elaborated.

Adapting to climate change in Africa

There is an urgent need to adapt to the impacts of climate change for the African continent. The Africa's Adaptation Gap Report (2013) estimates that Africa will have to face very significant adaptation costs: it cites up to $7-15 billion per year by 2020.

Findings of the IFPRI research stipulate that maize and sorghum yields, on average, will decline, yet some areas are bright spots and will see a rise, such as southern Mozambique. Crop yields may struggle to keep pace with anticipated population growth, but this could be offset by a projected doubling of incomes across the region. Lastly, migration patterns could change as people migrate out of areas hard hit by climate change to cities or to areas favoured by climate change.

"Successful agricultural adaptation to climate change is not just about better seeds and practices, but building better roads and education systems, which give farmers greater access to markets and the background necessary to make fully informed decisions about new agricultural practices," the research indicates.

Le Roux says moisture conservation is going to play a very important role in the success of a farmer in the future. "Soil conservation and conservation tillage practices aimed at sustaining moisture will have to form part of a farmer's management practices."

What is being done to mitigate effects on agriculture in southern Africa?

"Africa is a drought-prone continent, making farming risky for millions of smallholder farmers who rely on rainfall for crop production. Drought leads to crop failure, hunger and poverty – and climate change will only worsen the problem," explains Kingstone Mashingaidze, crop scientist.

Maize is the most widely grown staple food crop in sub-Saharan Africa, he says. "The high sensitivity of maize to drought stress discourages smallholder farmers growing maize under rain-fed conditions, from risking investment in best management practices, including quality hybrid seed and fertiliser."

In sub-Saharan Africa, approximately 20 million metric tonnes of potential maize production are lost each year due to drought. Because over 90% of sub-Saharan Africa's cropland is rain-fed and is likely to remain so, identifying ways to mitigate drought risk, stabilise yields and encourage investment in best management practices is fundamental to realising food security and improved livelihoods for the continent.

Agricultural role-players are combining powers to fight climate change in southern Africa. One such project, the Water Efficient Maize for Africa (WEMA) project, is a public-private partnership aimed at enhancing food security and improving rural livelihoods among smallholder farmers in sub-Saharan Africa through development and deployment of drought-tolerant and insect-protected maize varieties (hybrids).

The WEMA project will, in particular, benefit smallholder farmers and their associated rural communities, as their crop farming is done almost exclusively under rain-fed conditions and often in arid regions.

The evidence of this project recently harvested great results with the African Agriculture Technology Foundation (AATF) announcement in May promising initial results for the first harvest of seed developed conventionally through WEMA.

"After a six-year development process, we are very encouraged by the results of the first DroughtTEGO harvest," said Denis Kyetere, executive director of AATF. "The WEMA partnership is an excellent example of what can be accomplished when public and private organisations work together for a common good, providing powerful new tools to help farmers overcome challenges of climate change, and increase food production."

"Besides paying attention to technology like drought genes, farmers are going to have to look at variable application of fertiliser and plant population so that farms can be optimally managed. Crop choices will also play an important role in crop systems as well as precision farming practices with lime to improve soil fertility and improve drought tolerance and water management of the crop. These practices go hand in hand and should be seen as an overall approach," adds Le Roux.

Introducing crops that are more tolerant to drought, such as sorghum, is going to form part of many farmers' objectives.

International aid organisations are donating funds to projects in Africa for regions that are becoming more arid so that there can be a shift in focus. The US Agency for International Development has pledged almost $5 billion to a scientific laboratory working with new genomics tools to develop drought-resistant, tolerant sorghum hybrids.

Conclusion

The reality of climate change goes far beyond global social and environmental concerns and could potentially have a major effect on the economic sustainability of vulnerable developing countries in Africa.

The introduction of improved agricultural techniques based on informed choices is desperately needed to ensure food security in the southern African region. The improvement of infrastructure to assist farmers with better access to markets and an active buy-in from relevant stakeholders could prove the difference for many food producers along the tip of the continent.

Rudi Massyn
Twenty-Two Media

Cummins: acumen in agriculture

Cummins has been recognised as a trusted provider of reliable diesel power equipment to the South African agricultural industry for more than 60 years, with a service offering that includes pumps, engines and generators used in almost all farming applications.

From sowing wheat and harvesting corn, to shaking fruit trees and breaking new ground, Cummins boasts a comprehensive range of engines from 23 kW up to 597 kW, to ensure the efficient operation of farming equipment such as harvesters, threshers, tractors and bakkies, to name a few.

In addition to power and durability, the full range of diesel engines are clean, fuel efficient, and backed up by unrivalled after sales and technical support on an around-the-clock basis. Engines in the Cummins agriculture portfolio include the following.

B Series

With over three-million Cummins B Series engines in operation around the globe today, there is no question that these engines are proven performers. Available in a range of ratings from 59 kW to 127 kW, these midrange engines deliver strong reliable performance with minimum maintenance. Reliable rotary fuel pumps deliver a steady stream of pressurised fuel for strong performance.

The Cummins B3.3 engine features a compact footprint for easy installation. It has a ratings range from 45 kW to 63 kW, with both naturally aspirated and turbocharged versions. The four cylinder Cummins B4.5 boasts ratings from 60 kW to 74 kW. The Cummins B3.9 delivers 82 kW to 93 kW, while the 6-cylinder Cummins B5.9 produces 112 kW to 129 kW.

C Series

The Cummins range of C Series engines have proven to be highly reliable in the local farming market to date. Due to the advanced design and excellent manufacturing processes of Cummins, fuel consumption of the Cummins C Series automotive engine is 20 per cent lower than other competing engines. What's more, the Cummins range of C Series automotive engines have a better service life, lower maintenance and overhaul cost, when compared to similar engines.

QSB Series

Cummins four cylinder and six cylinder QSB engines with full electronic controls ensure that every item of farm equipment work more efficiently, for prolonged periods of time. Ratings range from 82 kW to 205 kW, with both charge air cooled and turbocharged versions that deliver strong performance at every start.

QSC Series

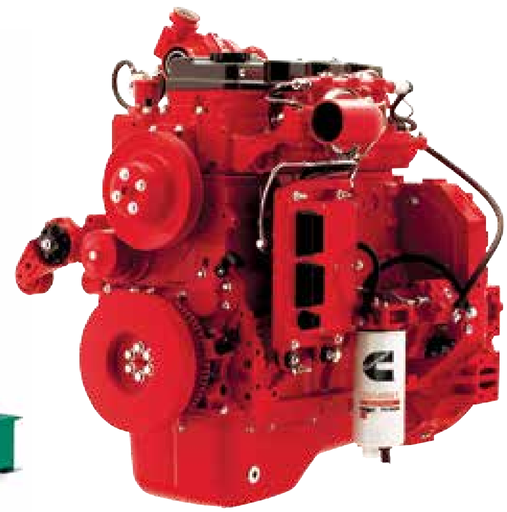
A high pressure common rail (HPCR) fuel system delivers strong performance at every rpm for power ratings varying from 179 kW to 254 kW. Quieter operation significantly improves operator comfort, while the heavy duty design of the engine block and components add to reliability and durability.

QSL Series

With a torque rise of up to 50 percent and a peak torque of 1 627 Nm, the Cummins QSL Series handles the toughest pulls and operates in the most hostile working conditions with ease. It also delivers better fuel economy, has better cold starting capability and is up to 50 percent quieter in operation than the previous model. Ratings of the QSL Series range from 209 kW to 272 kW.

QSM Series

Advanced combustion technology and responsive wastegated turbo deliver the power required to operate agricultural equipment more cleanly, efficiently and dependably. Available in a range of ratings from 216 kW to 298 kW, the QSM was the first engine to be certified to EPA Tier III and Euro Stage III A environmental standards.



QSX Series

A unique dual overhead cam design optimises combustion efficiency and pulling power to ensure that 4x4 tractors can handle the largest rippers and tillage tools with ease. Available in a range of ratings from 268 kW to 474 kW, the QSX not only meets EPA Tier II emissions standards, its advanced design enables it to reach advanced Tier III requirements with minimal adjustments.

Power generation

The Cummins Power Generation division is recognised as a world leader in the design and manufacture of pre-integrated generator sets, ranging from 8 kVA to 3 300 kVA. The company's 'Power-of-One' technology is an innovative way to ensure the equipment in a power system works in synergy from the start. Under this concept, all major components including engine, alternator, transfer switches and control systems are designed and manufactured according to the highest standards of quality set by Cummins.

Service and support

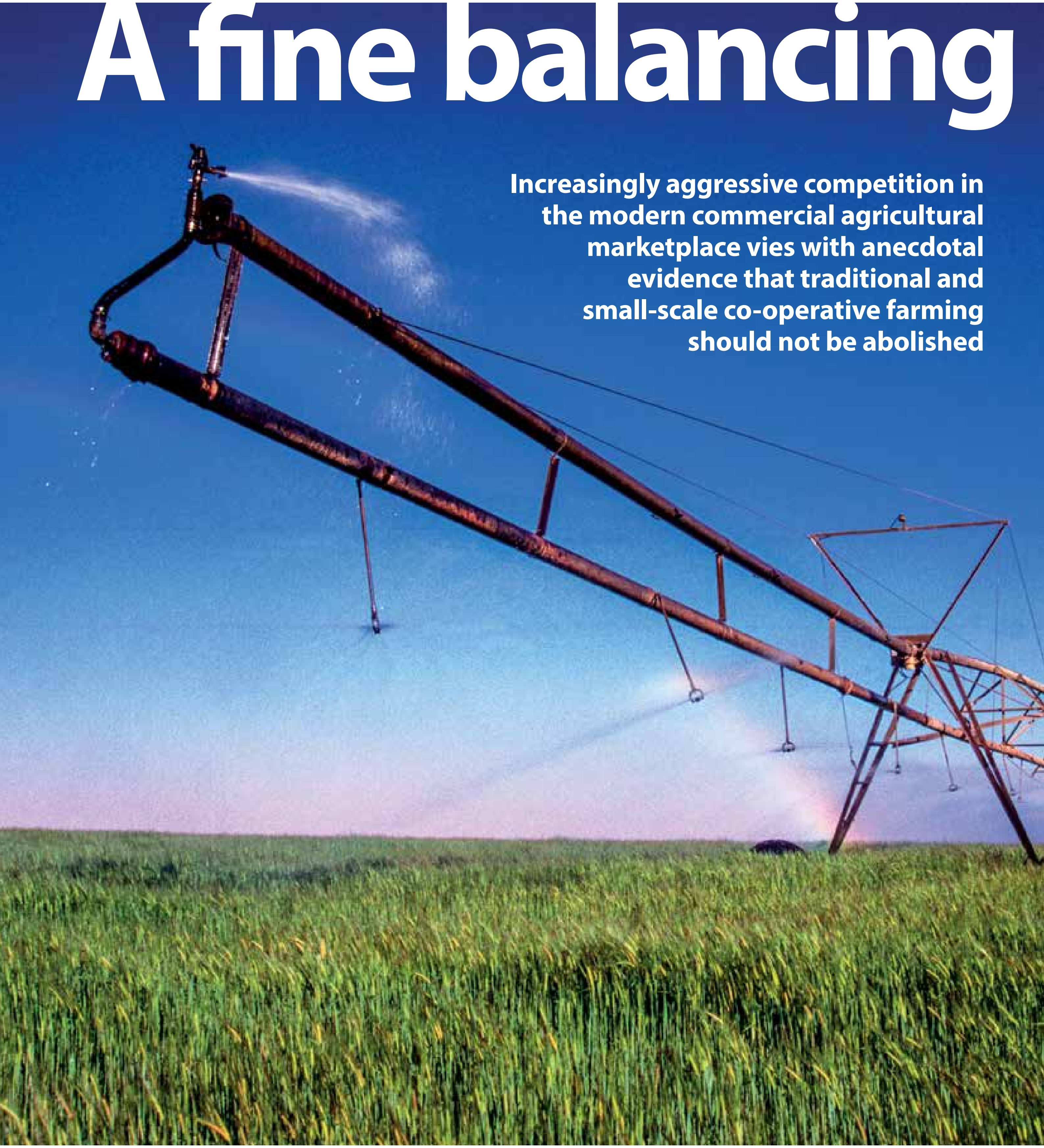
Cummins SA has parts and service outlets in Bloemfontein, Kimberley and Kathu, and provides 'technician-in-the-van' for onsite breakdowns and smaller repairs. Our engine experts work closely with original equipment manufacturer (OEM) installation engineers to ensure optimised performance in each and every piece of equipment.

Our commitment to the local agricultural sector is evident in the fact that we are regular exhibitors at the NAMPO Harvest Day, which is hosted annually in the Free State by Grain South Africa. NAMPO constitutes one of the largest privately owned and organised exhibitions in the world, in addition to being the largest show of agricultural machinery and livestock in the Southern Hemisphere.

In addition to agriculture, Cummins engines are used in a wide variety of applications, including; mining, trucking, marine, power-generation and construction. Cummins SA is headquartered in Johannesburg, with branches in Longmeadow, Bloemfontein, Cape Town, Durban and Port Elizabeth.

Established in 1919 in Indiana, USA, Cummins employs more than 45 000 people worldwide, and has an annual turnover of over US $17-billion. Cummins has a global network of 500 company-owned and independent distributor facilities at more than 5 200 dealer locations in over 190 countries.

A fine balancing



Increasingly aggressive competition in the modern commercial agricultural marketplace vies with anecdotal evidence that traditional and small-scale co-operative farming should not be abolished

As water shortages add pressure, the upstream and downstream industry impacts on agriculture are also becoming a hot button begging for bridging collaboration among resource competitors.

Although less than a third of the planet's freshwater is available to sustain life on Earth – the remaining two-thirds being on ice at the poles – water-cooler exchanges about H_2O scarcity have not yet reached the level of popularity they deserve.

Industry, on the other hand, is acutely aware of how the uneven surface distribution of this constant affects not only the bottom line, but also the sustainability of mining, agriculture and manufacturing futures.

Eye-watering predictions

Sunny South Africa, meted out less than half the Earth's 985 millimetres of rainfall annually, is water-stressed – increasingly so as you move west. Adding a tinge of rouge to this bleak picture, the warming planet will amplify floods and droughts, with higher evaporation rates and soil degradation.

While South Africa carries an extensive albeit ageing system of water catchment, damming and man-made transfer tributaries, freshwater quality labours under swelling pollution, wetland and river catchment abolition, and deforestation – as mining, agriculture, manufacturing and energy companies scramble to meet the diverse demands of Africa's growth trajectory amid urbanisation.

When I attended the Gauteng Water Summit in Johannesburg pre-COP17, the Department of Water and Environmental Affairs confirmed that 2015 would be the year Gauteng's water demand would outstrip supply, while in 2025 the buck would stop (drinking) in the rest of the country.

Although about 36% more South Africans can access potable water today as opposed to 1994, a hazardously similar percentage of our water is today unaccounted for –that is, R11 billion or half the water in the Vaal Dam wasted annually. In a country where we spend one-and-a-half times more on clothing than on education, with a corresponding premium on DStv subscription over retirement annuities, a shift in thinking to conservation wisdom means a shift in attitude rather than amplitude.

Same issues, different industry

Resource cost and supply reliability, the pace of technology advances and knowledge transfer, worker rights and compensation, waste management and regeneration, and fluctuating market demographics play devil's advocate across industries heavily reliant on one another for stability.

The trick here is for each industry to invest now in the latest clean and resource-efficient technologies available to market, to ensure their operations do not affect each other adversely. After all, industries are competing for the same scarce resources, while time is agile and balance the golden mean.

Also dominating dialogue at the country's first Industrial Resource Efficiency Conference earlier this year, cleaner production and improved resource use needs to be balanced with employment creation if we are to ensure South Africa's sustainable global competitiveness.

Food for thought: yielding the axe

Although the US Department of Agriculture's latest World Agricultural Production report puts South African commercial agriculture productivity safely ahead of our sub-Saharan cousins, we are far behind the yields per hectare achieved further up the continent and in the European Union.

Aside from output per hectare, our productivity is also benchmarked against capital, labour, fertilisers, irrigation, fuel, access to markets and insurance.

Interdependence: agriculture and water

Agriculture, including irrigation, requires 60% of the country's water resources, while mining/industrial and urban/domestic users each require only a tenth of our precious water reserves – the remaining fifth in environmental application, the Water Research Commission reports. To make common sense of agriculture's mammoth share, consider that affluent households spend nearly half their water just on watering the garden.

Although downstream users may use substantially less water, the irreversible damage of acid mine drainage, effluent discharge (especially from non-compliant wastewater treatment works) and inefficient distribution systems highlight the murky fact that water services can't be provided without clean water resources.

However, the management of our water resources (rivers, dams, wetlands and groundwater) and water services (access to potable water and sanitation) are dealt with separately in the Constitution and legislation – and perhaps therein lies the problem.

Tomorrow's 'hydrogarchs'

Rand Water alone provides 45% of the South African headcount and 60% of the economy with water it sells to local authorities, mines and factories, distributed over an area of 18 000km^2 that includes Gauteng, parts of Mpumalanga, the North West, Free State and Limpopo provinces. Indirectly, this supplies 12 million homes, schools and businesses with clean water.

As chief water consumers, farming and agro-processing communities are natural water custodians. Poorly operated and overextended wastewater treatment works hold material risk for farmers, as water becomes unfit for irrigation, recreational or livestock watering uses – which directly and severely impacts downstream users.

Conversely, commercial farming increases soil erosion through ploughing, overgrazing, logging and road building – creating murky water and raised salt and mineral content; while fertiliser use compounds nitrate and phosphate levels, resulting in algae blooms and eutrophication, and the downstream harm in pesticides.

Upstream, pollution due to industry chemical, consumer sewage, mining waste and infrastructure breakdown related to urbanisation and industrialisation adversely affect the pH, colour and murkiness, temperature, as well as nutrient, mineral and salt content of water sorely needed for agricultural use.

Whose problem is it, anyway?

Poor water management in the North West Province this year afflicted 237 local authorities and was brought on by a high concentration of industries and factories with a correspondingly high concentrated water demand – which brings me back to the importance of a balanced approach. In the province, business was left to mop up a problem that rightfully belonged to a district council (water management) and municipality (distribution).

While industry, climate change and management inefficiencies vie for blame, the truth is alternative decentralised solutions need to be unearthed without delay. Because among the millions affected by the North West crisis are subsistence farmers, already dealing with the pinch of more frequent droughts of the past two decades – which not only depletes their livestock but also exacerbates stock theft, veld fires and animal diseases.

Urban tolling crisis

Potchefstroom residents had to survive on 40 litres of water each earlier this year, while metropolitan municipality Ekurhuleni's 3 million residents receive 340 million kilolitres annually – yet the City will spend an additional R1.3 billion over the next decade just to halve its water waste!

Fair trade: a dietary or subsistence issue?

A decade-old Worldwide Fund for Nature report identified sugar cane, rice, cotton and wheat as the world's 'thirstiest' crops, accounting for 58% of the world's irrigated farmland. Yet, half the world depends on rice as food and income source; cotton is a vital cash crop for African, Asian and Latin American SMEs; and sugar is too lucrative a cash cow for the EU and US to pass up.

Looking at South Africa, where 1.5% of the landmass under irrigation requires 63% of the country's available freshwater to produce 30% of our crop yield, PR alone will not save these farmers, should a tug of war over water spill over into their fields.

Yet, only 12% of our land is considered arable and only 3% abundant for crop farming, with 69% of South Africa's surface area given over to grazing and livestock farming. Of course, the budding, better off population demands more animal and fish proteins, fresh fruit and vegetables – exacerbating demand and supply complexities.

Light at the end of the causeway

While farmers grapple with higher input costs and expected yields on smaller tracts of arable land using less water and harmful chemicals, they are also challenged to rethink old farming methods and tools – ears close to the ground, so as not to miss news of a tested or proven novelty.

Globalisation has brought to our shores the definite advantages of technology and farming practice knowledge transfer to the benefit of local agricultural industries.

Water-wise agriculture

'New' farming models, such as terracing and reforestation to combat soil erosion and improve carbon sinking, improved weather forecasting and insurance, conservation and no-tillage farming, wetland restoration, co-operative small-scale farming practices, animal manure biogas fuel generation and repopulation of mono-culture grassland, are begging local attention by virtue of their proven commercial and environmental benefits.

Innovations in soil and water regeneration, seed and fertiliser, and irrigation technologies will be reviewed in depth in the next issue to see where and how we may be missing the boat that's certainly out there!

Lani Botha

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In agriculture even a few days without irrigation can be devastating.

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Feathered friends?

The ARC's new decision support system for integrated management of quelea bird control is eco-friendly and efficient

The Agricultural Research Council (ARC) has developed a Decision Support System for the Department of Agriculture, Forestry and Fisheries (DAFF), aimed at minimising the ecological impact and increasing the efficiency of quelea control operations in South Africa.

For most members of the general public, birds are there to admire for their beauty and to enjoy in nature. However, for small grain farmers in some areas of South Africa, the beautiful red-billed quelea (Quelea quelea, Linnaeus, 1758) is arguably the most damaging vertebrate pest they have to deal with. The ARC, through sponsorship from DAFF, has been conducting research to minimise the ecological impact of quelea control operations.

The quelea is an endemic African bird species with an estimated annual population of more than 3 billion within the sub-Saharan African region. They are related to weaver birds (family Ploceidae), although they are occasionally referred to as finches. Some call the red-billed quelea the 'feathered locust of Africa', since its potential to cause devastation to grain crops is similar to locust plagues. When natural grass seeds become depleted, quelea attack small grain crops as a readily available alternative food source. A flock of 2 million red-billed quelea may consume and waste up to 20 tonnes of grain in a day. This could result in input and production losses of up to R93 000 per day for the producer at the current rate of R3 800 per tonne of wheat. Quelea are especially active on the Springbok flats region, but occur as far south as Upington.

Red-billed quelea are gregarious social birds that may occur in swarms of up to 8 million or more, and which rest in vast roosts or breeding colonies in trees or shrubs. Quelea are granivorous, and forage mainly on grass seeds.

Their natural habitats (savannah, grassland and bushveld) have been invaded by farmers cultivating small grain crops (e.g. wheat, sorghum, millet).

Various raptor species and cattle egrets prey on quelea chicks, nestlings and adult birds. The breeding cycle of quelea is relatively short and, from the start of nest building to the appearance of independent juveniles, takes only 32 days. The quelea may have more than one breeding attempt in a single year, depending on the ecological condition of their habitat and the availability of insects and other invertebrates used to feed the hatched chicks and nestlings during the first two weeks of life. The average clutch size is between 2 and 4 eggs.

The DAFF Directorate: Climate Change and Disaster Management annually controls between 100 and 200 million red-billed quelea to prevent damage to small grain production systems in South Africa. The birds are controlled by aerial organophosphate pesticide poisoning and fuel-air bombs within roosting sites and breeding colonies. Unfortunately, such quelea control operations have also had very serious effects on wildlife and the environment, since their roosting sites and breeding colonies normally occur in natural veld and bush areas located outside cultivated farmland. The agro-ecosystems also represent the last refuge for biodiversity, which exacerbates the ecological effects of these quelea control operations. Primary, secondary and tertiary poisonings of non-target organisms have been observed.

In collaboration with the ARC-Institute for Soil, Climate and Water (ARC-ISCW) and ARC-Plant Protection Research Institute (ARC-PPRI), efforts are made with the Department's Decision Support System for Integrated Quelea Management (DSSIQM) to provide and record spatial operational, as well as ecologically relevant data to facilitate decision support for the quelea control officers.

This would lead to minimised ecological impact and increased efficiency of control operations.

The synchronisation of the various control operation data and essential decision support information relating to control costs and relevant eco-toxicological information, such as non-target bird and mammal species, is being developed within the DSSIQM. In addition, a data capture tool was developed to assist control officers to monitor quelea outbreaks, and a centralised database system is currently being developed.

The information captured includes the following.

Quelea notification information:

- Report information;
- Inspection information.
- Quelea control data:
- Ecological sensitivity;
- Control method information;
- Control decision information;
- Post-control and inspection information.

The ARC-PPRI quelea research programme has been investigating the eco-toxicological impacts of both explosion and pesticide quelea control operations in southern Africa (Tanzania, Botswana and South Africa), and this information is utilised in the development of the DSSIQM.

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Investing in food security

Harvest SA caught up with Mohammed Al Falasi, CEO of Abu Dhabi-based concern, Jenaan Investment, and General Manager (Projects & Operations) Khalil Al Shammari, at Nampo

Al Falasi describes this big South African agricultural gathering as "a very important exhibition in Africa and the biggest in the entire region".

His company, he says, has big agricultural projects in Africa, particularly in Sudan, Egypt and Ethiopia. "We come here to meet our partners, one of whom is (water irrigation company) Floppy Sprinkler, and it's very important for us to be here every year," he says.

Al Shammari says the company also has a strategic partnership with the United Arab Emirates government, represented by the country's food control authority.

"We are supplying between 500 000-600 000 tonnes of forage to the government on a yearly basis. We are producing that huge quantity of forage from south California in the US, as well as from Spain, Egypt and Sudan, and we are establishing a new business in Ethiopia," he explains.

Strategic objective

He says farming is not big in Abu Dhabi , but the UAE government has a strategic objective to secure the food its people need, "and you cannot do it in our country. We don't have water in our country; the weather is not good for agriculture and so investors like ourselves are encouraged to invest in major agricultural projects elsewhere.

"We are one of the big players in agriculture in our country and our aim is to go out there and invest, and not only be traders buying forage from the US and Spain. Rather, we go and invest in big pieces of land in Sudan and in Egypt," he says.

He says the company's target in Egypt and Sudan is to cultivate at least 700 000 hectares and produce all the necessary crops from this. "And that's for vegetables only, but we are talking about forage, we are talking about rice, we are talking about livestock and we are talking about fruit, too".

The company, he says, has spent more than 100 million US dollars in Sudan, preparing the infrastructure, water, electricity and equipment on various projects.

A wonderful country

In South Africa, Jenaan Investment has developed almost 6 000 hectares, and it aims to eventually develop a minimum 70 000 hectares per year.

Al Falasi, meanwhile, says this is his first visit to South Africa and he is amazed at how big infrastructure is in the country. "It's really a wonderful country and, when you look at the other things, like the fields, and all the green around you, you realise it's a country you want to visit with your family".

Al Shammari says he is impressed with the work ethic he has seen in South Africa. "The people I have met in South Africa are so loyal to the work they do. Work that other people do in 10 hours, they can do in seven, because they are so good at what they do. They love what they are doing and many are multi-skilled, doing many things at the same time. This has impressed me very much".

Khalil Al Shammari (GM: Projects & Operations) and Mohammed Al Falasi (CEO) of Jenaan

Breaking the cost barrier

The Chevrolet Trailblazer has opened up the 4X4 market, writes John Elford

Up until recently, outdoor enthusiasts had to pay a fortune for a real 4X4 to venture into the bush. The market was controlled by brands such as the Land Rover and Toyota Land Cruiser, which were very expensive.

Then along came the 4X4 double-cab variants, with off-road capabilities – but certainly not very comfortable for rear seat passengers. The next type of off-road vehicle was the so-called 'soft roader', which is extremely comfortable and can be used to travel on dirt roads and into the bush, but is not a true 4X4, lacking the ruggedness required for true off-road expeditions.

Next came the Toyota Fortuner. This vehicle has become the icon of off-road bush travel, matching comfort and ruggedness in a great package. Over the last few years, there have not been many competitors in its price range which could compete with the Fortuner.

That was until recently, when General Motors introduced the Chevrolet Trailblazer. This superb vehicle can take the rough with the smooth as a comfortable mom's taxi, luxury executive vehicle during the week or a true off-road 4X4 over the weekend and on adventure trips into the bush. The full-size Trailblazer with its multitude of 4X2 or 4X4 driving features compares with the best in the market at an affordable price.

The 2014 version of this vehicle has a host of additional features, adding value to the product. Top-of-the-range LTZ models feature a reverse camera to help parking in tight situations. All models now feature side air bags mounted in the seats.

A new multi-information central LCD display features the trip computer as well as new menus for additional information. This display shows critical information including battery voltage – important if a second battery is fitted for a refrigerator and other accessories. Transmission fluid temperature (vital for off-road driving) as well as engine hours and an oil life indicator are featured. Fuel consumption data over the last 50km is also shown.

Another new feature is the Chevrolet MyLink Infotainment system, which is now standard in all Trailblazer models. The MyLink system uses smartphone technology with a 7-inch touchscreen. This user-friendly system includes a host of media capabilities including video playback and a full audio sound system with six speakers as well as USB and AUX setups.

At the business end of the Trailblazer, there is a choice of upgraded 2.5 and 2.8 Duramax diesel engines as well as a 3.6 petrol engine. The models include a 2.5 Duramax LT 4.2 manual, a 2.8 Duramax LTZ 4X2 automatic, as well as a 2.8D LTZ 4X4 in manual and automatic. The 3.6 LTZ 4X4 is the 2.5D LT, recording a fuel consumption of 8.0/100km and the 2.8D LTZ models recording 8.5l/100km. The two Duramax diesel engines are both Euro 2 compliant, ensuring the high pressure common-rail fuel injection systems are extremely fuel-efficient and clean-burning.

In the wild, the large 7-seater SUV comes into its own. With its body on frame bakkie architecture, the Trailblazer is a perfect vehicle for the off-road adventure. With plenty of space for luggage, as well as outstanding comfort, this rugged 4X4 has all the attributes of a tough SUV. The drive modes can be changed at the turn of a dial, from 4X2 to 4X4 or 4X4 low-range instantaneously.

The high ground clearance and the critical angles ensure the Trailblazer takes the bush in its stride. Excellent towing capabilities also ensure off-road trailers can be hauled with ease.

Climate control is a must-have feature when travelling in Africa and this system is faultless, ensuring the comfort of the driver and passengers. The 11 cup holders, cruise control, four 12V power sockets and multi-info trip computers all help with the overall experience.

Safety features include ABS with EBD, panic brake assist, hydraulic brake fade assist, a limited slip diff , six air bags and ISOFIX child seat anchors as well as a collapsible steering column and auto locking doors to ensure the occupants are safe. The LTZ models feature electronic stability control, traction control system, hill descent control, trailer sway control, and engine drag control. The LTZ auto models also feature hill start assist.

All in all, a well-rounded and extremely capable SUV that can handle anything that is thrown at it – on and off road.

The first step in sunflower success

Joubert Swanepoel
Agronomist, AGRICOL

After a few seasons of severe drought and the uncertainty of future weather conditions, the importance of sunflower as a rotating crop should not be underestimated. Regarded as an excellent drought-resistant crop, sunflower can produce good yields even under very stressful conditions. Aided by a potent tap root, sunflower can utilise available moisture much more effectively than maize, with its fibrous root system.

When evaluating sunflower hybrids it seems that two very important characteristics should be considered for profitable sunflower production: good agronomic traits and long-term yield stability. Sunflower hybrids with good yield stability are profitable even in unfavorable conditions.

Through in-depth research and a wide variety of products, Agricol has become the market leader in sunflower hybrids with excellent yield stability.

One of the 'in demand' hybrids synonymous with Agricol's success is AGSUN 8251. After celebrating a decade of success AGSUN 8251 is still one of the sunflower hybrids with the highest long-term yield average over all the yield potential areas in the national cultivar evaluation trials. Agricol also has a new entry to the market. AGSUN 5278 needs no introduction and has identical stability and agronomic traits to set a new benchmark in the South African market.

Another hybrid which has made way with its high yields and agronomic traits is the very popular AGSUN 5264. A very popular choice for late season planting dates, this hybrid is in a class of its own when it comes to versatility. AGSUN 5264 planted in combination with AGSUN 8251 and AGSUN 5278 can only add to a farmer's success.

For effective risk management and a successful yield, the following planting combination is recommended:

- 50% AGSUN 8251
- 30% AGSUN 5264
- 20% AGSUN 5278

With excellent yield stability, Agricol's AGSUN range is the first step in sunflower success. Contact an Agricol branch for more information: Potchefstroom (018) 294 7470, Kimberley (053) 841 0675, Pretoria (012) 813 8079.


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Food for thought

In negotiating the political minefield of agriculture, a sense of humour is an invaluable instrument of survival

On many occasions, when walking the inevitable tightrope across the great divide between the agricultural sector and government, I have come to appreciate both sides have lost the use of subtlety and, like a bull in the proverbial china shop, they charge in head first without considering alternative methods.

Recently I came across a very humorous work of written jocular art in the very simplistic fashion. I have called it "Food for Thought". I do hope this is taken with the good intent meant.

An old man of Italian birth was living in New Jersey, New York. The years had taken their toll and he was approaching his last.

He wrote a letter to his son, Vincento, who was in prison:

My Son,
I am so upset that this will be the first year that I don't get to grow my tomatoes in my backyard. The ground is so hard I cannot dig the earth over at my age. You help me, my son, every year and I am saddened that you are not here to help me.

The son wrote back:
Papa, whatever you do, do not dig up the backyard – that is where the bodies are buried.

The next day, the FBI arrived with a search warrant and dug the backyard up. Finding nothing, they apologised and left.

The old man wrote and told his son of the occurrence.

Two days later, a letter from his son came:
Papa, I am sorry I could not be with you, but that was the best I could do under the circumstances.

Sadly, I feel the irony of this will be lost on both sides of the fence.

When will the government learn they are not farmers, and farmers realise they are not the government?

Both need each other and, surely, as in the rest of the world, they should accept this. The art of a go-between in other countries appears to be the answer. However, from my experience, this is not understood in South Africa.

But on to other matters of a more serious nature, such as increasing food production.

At this year's Sustainability Week held in June at the CSIR International Convention Centre in Pretoria, focus was once again on food security.

In my opinion, for what it is worth, we pay lip service to this mounting imminent certainty. Once again, much was said at this conference that has been said before, yet there was no talk of advancement of a major solution.

If we are to believe the prophets of doom: in a mere 36 years' time, we will need 70% more food production just to feed ourselves – and that is without exporting food, thus no earned external income.

Tony Sanderson