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Harvest SA

Securing South Africa's Food Resources

Growing prosperity

Agro-processing investment trends to follow

Cause for hope

Could El Niño really be winding down?

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CONGRESS OVERVIEW

The Agbiz Congress, hosted biennially by the Agricultural Business Chamber (Agbiz), is one of the major events on the food, feed, fibre and wine sectors' agenda in South Africa. It is seen as a premier agribusiness networking opportunity where local and international speakers, business leaders and policy makers meet to shape the future of the broader South African agro-food industry.

Congress delegates consist of the CEOs, senior executives and board members of most of the major South African agribusinesses, including, for example, the agribusiness divisions of all the major banks, insurance companies, development finance institutions, agribusinesses/co-operatives, as well as agro-processors. More than 200 delegates are expected to attended the congress this year.

Main focus areas of the congress:

- Managing South Africa's economic crisis
- Land reform status
- BEE and black youth expectations
- Economic outlook - Local and global
- Trade developments in SA
- Water security and supply
- Energy solutions
- Socio-economic scenarios for South Africa

31 May 2016
Pre-congress workshop on transforming leadership in the agribusiness sector.

3 June 2016
Agbiz/Obaro post-congress tour to Bergkelder in Stellenbosch.

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CONTENTS

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EDS NOTE

GREG PENFOLD
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It's May 2016, and everyone is still talking about the ongoing drought, which has devastated so many farmers. Crops have failed and animals have died off, contributing massively to the rampant food price inflation affecting the entire population of South Africa. However, it seems that at long last there may be some light at the end of the tunnel.

Recent studies by the Agricultural Research Council (ARC) cautiously suggest that the notorious El Niño phenomenon may be approaching the end of its cycle, with indications that rainfall patterns in parts of Africa are beginning to stabilise.

Although the time hasn't come to pop the champagne yet, celebrations could nonetheless be on the horizon. Read all about it in our lead article this issue, contributed by the ARC.

If better times are coming, then those who stand to benefit the most are those farmers who have succeeded in riding out the tough times through weeding out inefficiency and adapting to the harsh realities of drought.

It is perhaps an unfairly Darwinian situation, but nature has never been known to be particularly kind. In any event, agriculture has come increasingly under the spotlight as a strategic investment, with banks and financial institutions developing products and services tailored to agricultural commodities.

Consequently, the canny agriculturalist will seek to be apprised of these developments, with a view to aligning production with the interests of institutional investors. If that sounds like the sort of farmer you are, then you will be very interested in our article on trends in agro-processing investment.

We wish all our readers the strength and ingenuity to make it through these times of trouble and emerge with the skill and experience that will enable them to prosper in the future.

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THE BEGINNING OF THE END

Is drought nearing a turning point?

Drought over South Africa reached severe to extreme intensity levels over parts of the country during the last few months. Significant impacts on agricultural activities as seen in crop failures and animal die-offs occurred in most provinces.

The negative climatic impacts had been foreseen as early as winter 2015, based on the seasonal forecast products of climate modelling groups across the globe. The strong indication of possible drought emanated from the well-known relationship between El Niño and drought over the South African summer rainfall region. Scientific papers already reported the statistical relationship between El Niño and rainfall deviations over the southern African summer rainfall region in the 1980s. State-of-the-art Coupled Global Climate Models used currently by weather services and other scientific institutions worldwide consider the coupling between ocean and atmosphere and are still inclined to make the same assessment regarding expected weather conditions based on sea surface temperature (SST) anomalies, and specifically with regard to drought over the southern African summer rainfall region being related to the El Niño phenomenon.

Monitoring products suggest the situation in South Africa is normalizing in some areas, following widespread rain during January and March 2016. Further north, over Angola and Zambia, the presence of a tropical low causing widespread precipitation in the region is also an indication that large-scale circulation patterns are improving. Interestingly, the classic pattern associated with El Niño over South Africa is for a normal early summer and a dry late summer.

However, this seems to be different for the current summer, with the most severe conditions experienced during the October-December period followed by comparatively wetter conditions since January. It is clear that the current El Niño event was associated with very intense hot and dry conditions especially during the late summer of 2014/15 and early-to-mid summer of 2015/16. Months that stood out as extremely dry (compared to average conditions) were February and October-December 2015. This resulted in 2015 being one of the driest calendar years on record. Very high temperatures exacerbated the effects of rainfall deficiencies with heatwaves occurring regularly during 2015 as well as early 2016. Dry conditions continued especially over the central parts of the country and low-lying extreme eastern areas (Lowveld and parts of KwaZulu-Natal) in February, but some of the eastern and northeastern areas as well as the western parts of the summer rainfall region fared substantially better since January this year than in 2015.

Of course, even if the situation changes to normal during the next few months, the damage has already been done, with late rains limiting planting and dry periods with high temperatures leading to failure of what

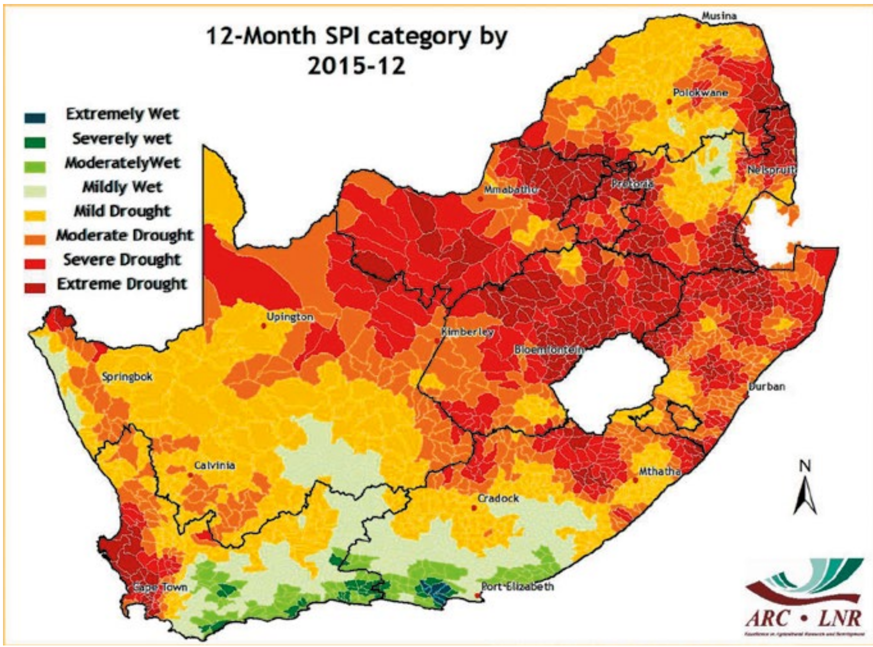

Figure 1

crops have been planted over the western summer grain production area. Over many parts of the interior, but more intensely further east over KwaZulu-Natal, the prolonged nature of the drought culminated in water restrictions in many areas, with improved weather conditions leading to greening but not necessarily reflected in the dwindling levels of reservoirs.

The Agricultural Research Council (ARC) monitors climatic conditions and vegetation responses operationally over South Africa. It provides processed near-real time monitoring information, packaged for agricultural applications, to the Department of Agriculture, Forestry and Fisheries (DAFF) through the National Agrometeorological Committee and the Crop Estimates Committee. It also disseminates information to a wider range of interested parties through a monthly Umlindi newsletter, workshops, and upon request from clients.

Monitoring for agriculture is made possible firstly by timely acquisition of meteorological data from a network of automatic weather stations operated by the ARC, strategically located to support the needs of the agricultural community. Near-real time data from the network is used in a Geographical Information System (GIS) environment towards monitoring at a wide range of scales.

Secondly, an archive of remotely sensed data from a range of satellites, updated routinely, provides valuable information regarding the responses of vegetation to climatic conditions as well as conditions relative to other periods or the long-term mean. The intensity and extent of the current drought conditions are well captured by this dataset.

The Standardized Precipitation Index (SPI) is used to quantify precipitation deficits on different time scales. Based on rainfall records from the ARC and South African Weather Service (SAWS) automatic weather station networks, Figure 1 shows the 12-month SPI for the driest period (January-December 2015) observed during the current El Niño event.

Figure 1 Drought severity according to the Standardized Precipitation Index (SPI) for January-December 2015. Areas in red or dark red experienced severe to extreme drought.

For the 12-month period January-December 2015, much of the central interior, KwaZulu-Natal the Lowveld and the western grain production areas of the winter rainfall region experienced severe to extreme drought. This includes much of the central to western maize production area. The severity of the drought during the early and mid-summer periods of the current summer is shown for the 3-month periods October-December 2015 (left) and December 2015 - February 2016 (right) in Figure 2.

Figure 2 Drought severity according to the SPI for October-December 2015 (left) and December 2015 - February 2016 (right). Areas in red or dark red experienced severe to extreme drought during the relevant sub-period at the 3-month time scale.

It is clear that the conditions regarding rainfall improved during the current summer. However, very high maximum temperatures still occurred at times during the January-March 2016 period, and drought stress remained in place over especially the western parts of the maize production area and the Lowveld.

Despite upward trends in rainfall in many areas, the fact that the damage has already been done is noticeable in the cumulative vegetation activity during the current summer compared to the long-term average (Figure 3).

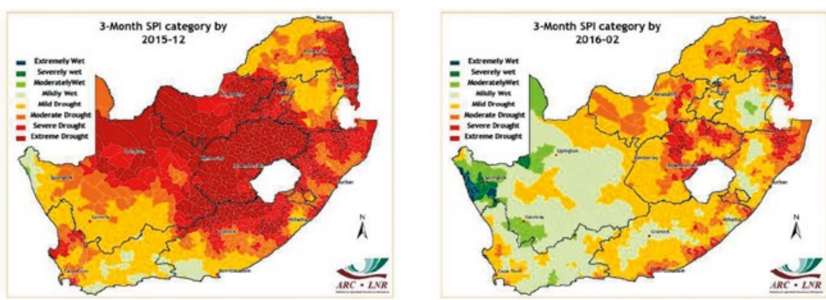

Figure 2

Percentage of Average Seasonal Greenness (PASG) is a measure of the total cumulative vegetation activity compared to the long-term mean, and therefore also of the impact of climate extremes on agriculture. The strong indications of drought stress over parts of all nine provinces in Figure 3 elude to the very negative impacts on the agricultural sector associated with the current El Niño, despite recent improvements in weather conditions. Areas shown in red as being the hardest hit include the Lowveld, much of the Free State, North West, northeastern Northern Cape, northern KwaZulu-Natal and central parts of Limpopo, as well as the northern and eastern parts of the Eastern Cape. Negative impacts will still be felt for a long period in terms of low biomass and strained hydrological networks – keeping the agricultural sector firmly in the grip of the drought.

Nonetheless, improving atmospheric circulation patterns, as reflected in the relatively wetter conditions during the second half of summer compared with the first half, may indicate a change in global circulation patterns—signalling an end to El Niño. This despite the ocean still indicating El Niño conditions through anomalously warm SSTs over the Equatorial Pacific.

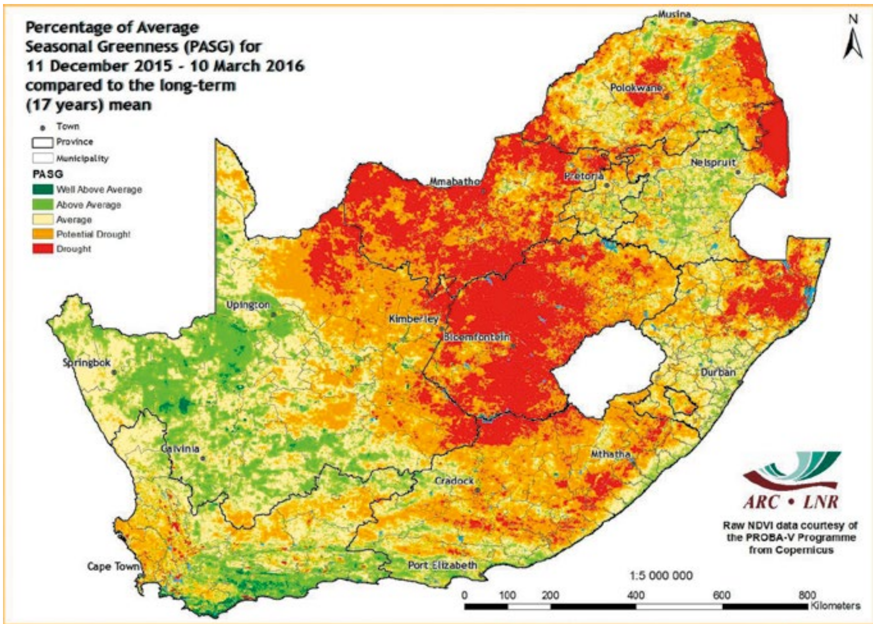

Figure 3 Percentage of Average Seasonal Greenness (PASG) for December 2015 - March 2016. Areas in red experienced severe to extreme drought as indicated by significant negative deviations in vegetation activity.

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Sappi Containerboard

A complete solution of premium quality products for increased production efficiency and lower cost end-use products

Celebrating its 80th anniversary this year, Sappi has been a loyal supplier to the paper packaging industry for many decades. Although evolving, Sappi's strategy and mission is still firmly based on wood fibre products and processes, with packaging identified as a strategic market segment with strong global growth potential. As a consequence, Sappi has been making significant investments in its manufacturing operations so as to manufacture worldclass products.

Used in the manufacture of boxes and cartons, Sappi's paper packaging products contribute to economic growth through the export of fruit and vegetables in boxes. Sappi offers an extensive range of premium quality fibre-based packaging products, with an extensive supply-chain network set up to service customer needs throughout the country. Innovative products meet industry requirements in line with market trends for paper combining the advantages of light weighting and strength.

Sappi manufactures a range of fluting and liner paper products for the agricultural markets for packaging fresh fruit and vegetables. Sappi also produces packaging paper products for frozen meats and fish as well as the industrial market, where heavy-duty boxes are required for transporting and shipping automotive parts, domestic appliances, beverages and cans.

Key benefits of products

Products such as KraftPride®, UltraFlute®, UltraTest® and FusionTopliner used in box combinations offer customers versatility in application. For example, KraftPride, a 3-ply virgin linerboard available in grammages from 140-330g/m^2 combined with UltraFlute, a semi-chemical fluting made from virgin NSSC fibre in grammages 125-180g/m^2, can provide strength and cost optimisation opportunities to box makers. The products' superior burst and strength properties, together with high humidity performance, ensure that they retain strength over longer periods of time in changing cyclic humidity conditions experienced throughout the supply chain. The benefit to customers is that these properties prevent boxes from collapsing. The liner applications of KraftPride and FusionTopliner provide a superior print surface to enhance the aesthetic appeal of graphics on end-use boxes. This enables brands to differentiate themselves from their competitors. UltraTest has a 100% kraft appearance and can substitute recycled liners.

"Our product innovation is driven by market demand," says Richard Wells, General Manager Commercial, Sappi Paper and Paper Packaging. "Developing lightweighting products that address yield and cost advantages will assist box makers in constructing a box that is cost competitive, without compromising on performance standards. It not only maximises machine performance and runnability but also impacts positively with carbon footprint and benefits of reduced road, air and sea-freight costs."

Part of Sappi's value proposition to the industry is the services offered by the Sappi Technology Centre. Industry bodies are assisted with paper, board and box testing. Some of these include Cobb tests, Scott bond test, box compression (BCT), Shortspan (SCT) and Concorra Medium Test (CMT). All these parameters are critical measurements in box construction.

"We manufacture products that adhere to international standards and that carry ISO 9001 and ISO 14001 certifications. The woodfibre used in our process is a renewable resource that is FSC® (Forest Stewardship Council®) certified, biodegradable and recyclable. In addition, relevant products are certified safe for food contact through BfR (Bundesinstitut für Risikobewertuing). Paper packaging is an ideal medium to protect products from farm to market," ends Wells.

Live Long and prosper

Guidelines for establishing a sustainable agriculture business

Over the last four years the agro-processing sectors in South Africa have seen significant change and large expansions. Previously unknown, obscure operations located far off the beaten track rose to prominence and we are seeing large processing factories where five years ago there was vacant land. With few exceptions these investments were made by knowledgeable, hands-on operators who proactively identified trends and opportunities in their sectors.

As the leading banking and finance partner of these successful ventures, Standard Bank offers the following guidelines to prospective entrepreneurs and investors.

1. Changing consumer preferences and awareness will determine sustainable top line revenue and underpin the gross margin by creating opportunities to price for a superior product.

Gone are the days when consumers bought what was offered on the retail shelves. Successful food retailers and FMCG providers differentiated themselves by meeting the exact needs and preferences of the end consumer. In economic language, the food sector became demand pulled rather than supply driven. Consumers look for easy, convenient ways to include so-called "good-for-you" products into their lives, analysts says.

The principle is logic and simple enough to understand. The solution however is complex because consumer preferences shift and these shifts became more dynamic in recent times. The ventures supported by Standard Bank, generally align with global trends, the most prominent of which is the concept of "naturally functional foods and ingredients". It shows the intrinsic health benefits of a food or ingredient in a way that is easy for consumers to understand and media to communicate without having to make specific health claims. FMCG providers leveraged this trend in various ways. For example, by tying in aspects such as weight wellness and emphasising place of origin. They also make use of creative marketing and packaging, in essence creating media appeal. A related trend is the strong focus on the portion controlled snacks.

These intense changes made it possible for new entrants to quickly carve a niche for themselves. Yes, established major food companies are also reacting to these trends, but their responses are complicated by legacy systems and product ranges which ever-better informed consumers seem to be acutely aware and suspicious off.

2. Innovation must have a commercial relevance

When thinking about innovation, technology and technological innovation springs to mind. In a world where profits are driven by

Sustainable business in action

KZN facilities, Dairy Day (Pty) Ltd create jobs, give investment value to farm employees, and hedge revenue for milk producers

In a ground breaking move, 30 dairy farmers in KwaZulu-Natal have created three business entities through which they can guarantee supply of dairy products to retailers, giving themselves an innate hedge against market fluctuations in prices and a bigger share of the consumer's wallet.

Each farmer has a shareholding in Dairy Day in direct relation to the number of litres he or she can supply. Dairy Day holds 85% of the shares of an operating entity running two acquired dairies, Honeydew and Stonelees, and a newly built, in excess of R100 million, 22 000 m2 processing plant in Howick, which packages private labels on behalf of retailers and brands and produces its own products under the Honeydew brand.

The operating entity, known as Dairy Day (Pty) Ltd is capable of processing 600 000 litres of fresh milk daily, includes cold rooms and production lines, operates in excess of 100 vehicles, and employs 1 200 people.

It produces sterilised milk, maas, yoghurt, cream, juices, dairy blends, butter, and powdered milk.

The remaining 15% of the shares in Dairy Day are held by the Dairy Day Workers Trust in which the producers' employees participate.

"Unlike other farmer-owned or co-operative organisations, we are focused on providing a service rather than simply a product to our customers, who are the major retailers," says Paul Marshall, CEO of Dairy Day. "We achieve this by underwriting our supply to the retailer."

"We know exactly what our own milk producers can deliver and, therefore, what the processing plant's output will be. Because our suppliers have the benefit of revenue from the plant, we are less vulnerable to farmers choosing to supply a different processor in the quest for short term price advantages."

"So, we can do integrated and very accurate planning from the farm gate, through the processing plant, to the customer. This gives our customers a sense of security and builds their loyalty to us."

"By the same token, it gives our suppliers a sense of security. They're not going to be abandoned during times of over supply, when processors can pick and choose their suppliers purely on price. It truly is a business model in which everyone wins."

Ensuring stability of supply to retailers will create demand that should drive steady growth for the farmer shareholders.

"Ideally, we would like growth of supply to come from within our existing and future shareholder base," Mr Marshall says. "In fact, a large part of what we're doing is geared towards enabling such growth."

"Dairy Day has been established to stabilise dairy farm profitability. This should assist in making dairy farming an attractive career and, thereby, draw new entrants."

"If we do get into the fortunate position of having more demand than our existing suppliers can fill, then bringing in more shareholding farmers will simply help us create a bigger pie, of which everyone's cut will be proportionately bigger."

Bertie Hamman, Senior Manager: Secondary Agriculture for Standard Bank, Dairy Day's primary banker, believes that the Dairy Day business model addresses a number of issues in the dairy sub-sector and in agriculture in general. "We have believed for many years that the dairy industry is too fragmented. Producers have an organisation, as do processors. But none of the linkages in the value chain, including logistics providers and retailers, have been closely integrated."

"From a broader agricultural industry perspective, it is our conviction that farmers do need to get involved up and downstream of their farm gate in order to diversify their income and spread their risk."

"So, we were delighted to give our support to Dairy Day. We believe its focus on using superior service to retailers and consumers as the basis for creating growth for its suppliers will deliver value at all levels of society."

Mr Marshall says that Standard Bank's belief that Dairy Day's business model is sustainable has given the company and its shareholders a great deal of confidence. "Most other "co-operative" style companies in agriculture have low capital input and much higher funding than we have needed, because we obtained 100% of our capital from our shareholders, upfront."

"So, we were an attractive option for any bank. However, Standard Bank has a strong agricultural division and deep insight into the industry. They understand that what we're doing is good for the farmer, retailer and consumer and that makes for good business. By supporting us, they're saying our vision is right. And, they're supporting the evolution of the dairy industry in South Africa."

doing more with less, technological innovation is indeed a non-negotiable. All the processing factories financed by Standard Bank are considered state-of-the-art and conforms to international specifications. They are not only operationally efficient, but also leave a very limited ecological footprint, yet their operational capabilities are robust.

But innovation must have commercial relevance. At the recent launch of one of the Standard Bank supported manufacturing plants, the Chairman summarised this concept well by stating that an engineering feat must not be compromised by a marketing defeat.

Innovation goes beyond production technologies and includes, amongst others, product-, marketing- and organisational innovation.

Especially the relevance of organisational innovation are often overlooked or taken for granted—very much to the entrepreneur's detriment. Recently Standard Bank supported a large new venture primarily because the organisational innovation created a very robust, integrated business model.

While not being oblivious to the challenges it present, Standard Bank widely advocates the commercial relevance of integrating sector value chains. If done responsibly and by applying the relevant skills sets, the commercial benefits will outweigh the inherent risks. Through organisational innovation it is possible to establish natural affinities along the value chain which imbed demand-, supply- and other stakeholder fundamentals way beyond what is possible through traditional contractual means.

3. Financial astuteness

Taking business decisions have financial implications and it was encouraging to note how close to the mark the ventures supported by Standard Bank came. The projects were delivered on time and on budget - but this was no coincidence – without exception the CEO's and CFO's involved were seasoned business leaders with a very strong financial acumen.

This financial acumen not only bodes well for the venture in a direct sense but also

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creates confidence amongst financiers and investors alike.

The mistake many less experienced entrepreneurs make is to underestimate or not fully appreciate the financial impact of their business decisions. They may recognise this weakness and compensate by pushing out the numbers, but still the cause and effect link is not made.

For example, a strategy to grow revenue through aggressive marketing at lower margins not only impact on the income statement in the form of lower profitability, but will also have a material impact on the working capital cycle and therefore free cash flows.

Indeed, less experienced entrepreneurs regularly wrongly estimate the cash generative ability of their ventures or don't fully comprehend how their decisions impact thereon, except for perhaps sensing a casual link. This leads to crises decisions being taken which compromises the business- and operating models and ultimately the venture as a whole.

4. Inclusivity

Business ventures do not function in isolation or independent of the environment within which it operates. In Business Management language the term "sustainability" is often defined as managing the triple bottom line, being profit, people and planet.

The ventures supported by Standard Bank build their business models around their stakeholders which included, amongst others, suppliers, employees, off takers, the Local Authorities and the wider business communities within which they operate. This was done by integrating and aligning the interests and expectations of the stakeholders. Achieving this is not easy; in fact the dynamics are highly complex but judging from the praises sung by community leaders, the dancing and song of employees, doubling as shareholder, the ISO accreditations from industry and the unanimous product listing by the major retail chains (and products already on shelf), the right things have been done.

5. Leadership

At the heart of the ventures supported by Standard Bank is exceptional leadership whom succeeded, not only to sell a vision to the various stakeholders, but also to execute their strategy down to the finest detail. Leadership of the various ventures was keen and quick to understand and then to deal with business situations as they arose, leading to good outcomes. They had excellent knowledge and understanding of the financial, accounting, marketing and operational functions of their businesses and subsequently showed superior judgement and appropriate, timely decision making.

Bertie Hamman, Senior Manager Secondary Agriculture, Standard Bank

From left Paul Marshall- Dairy Day's CEO, Mr Cyril Xaba, MEC of Agriculture and Rural Development in KZN, Mbali Myeni- Mayor of the Umgeni local Municipality, and Stuart Mackenzie - Director

science
& technology

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REPUBLIC OF SOUTH AFRICA

Strategic overview

The National Development Plan recognises the crucial importance of science, technology and innovation in accelerating South Africa's socio-economic development. To make South Africa a more globally competitive economy, both government and industry will need to scale up innovation radically.

The National Development Plan also recognises that advances in technological innovation, the production of new knowledge, the application of knowledge and research collaboration are vital for a thriving economy.

It is in this context that the Department undertook its planning for the 2016/17 financial year. The strategic outcome-orientated goals expressed in its 2015-2020 Strategic Plan are aligned to the National Development Plan and government priorities set out in the Medium Term Strategic Framework, the New Growth Path, the Industrial Policy Action Plan and the Nine-Point Plan.

Science, technology and innovation, along with water, transport, infrastructure and information and communication technologies, cut across the Nine-Point Plan. The Department steers the national system of innovation to contribute to specific areas of this plan. Examples are the revitalisation of the agriculture and agroprocessing value chain; increasing the impact of the Industrial Policy Action Plan; the beneficiation of mineral wealth; unlocking the potential of small businesses, cooperatives, and rural and township enterprises; growing the oceans economy through Operation Phakisa; resolving the energy challenge by advancing alternative energy sources, and scaling up private-sector participation in research and development.

The Department has put in place several specific strategic interventions that are intended to increase the capacity and contribution of the national system of innovation to South Africa's economic growth.

With the budget for the 2016/17 financial year at R7,4 billion, the focus for this year identifies human capital development, knowledge generation, infrastructure, and global and African collaboration as priority focus areas over the Medium Term Expenditure Framework period.

The Department will continue to focus its investments on research and development, promoting innovation, and building the country's knowledge economy to improve productivity, health systems, education and infrastructure. This will include research infrastructure grants to researchers and institutions across the innovation value chain (e.g. for pilot plants, technology demonstrators and specialised facilities); the establishment of new technology service platforms, such as the bioinformatics service platform to service the life science sector; and agro-innovation hubs to connect researchers and rural communities.

Sustainable growth in South Africa will require a transformed and fully utilised human capital base. To this end, the Department will ensure that at least 80% of postgraduate students receiving support through the National Research Foundation (NRF) bursary programme are black, 55% are women and 4% are people with disabilities. Guidelines are in place to achieve this through the bursary and research support programmes, and the efficacy of these guidelines will be monitored and evaluated annually to ensure the realisation of these goals.

Nurturing the human capital pipeline requires that society appreciates the benefits science, technology and innovation can bring, and that learners and students are attracted to pursue careers in related fields. The Department's Science Engagement Framework provides an outline for the alignment of the efforts of all its entities and partners to maximise the impact of efforts to raise awareness. In the period ahead, the Department will be exploring the feasibility of establishing a flagship national institution to support science engagement and promotion.

Some key priorities in 2016/17

Government has set the target of raising gross expenditure on research and development to **1,5%** of GDP by 2019 from the current level of **0,73%**. Modelling exercises undertaken by the Department show that gradual investment is required to reach that target by 2019. The investment should come from both the public and private sectors, and the Department's contribution over the medium term will be **R13,2 billion**. This is budgeted for in the Research, Development and Support programme, and constitutes 58% of the Department's total expenditure.

R2,1 billion of this, or **16%**, is transferred to the National Research Foundation to ensure the completion of the Square Kilometre Array (SKA) demonstrator project. The SKA will be the world's largest and most sensitive radio telescope. Key economic benefits from this investment will be the leveraging of foreign direct investment from the SKA Organisation for construction and operational costs.

The National Development Plan acknowledges that economic growth is a longer term project and that the key role that innovation plays should increase incrementally. Over the medium term, the Department will focus on South African innovation for energy security, poverty alleviation and health care funded through the Technology Innovation programme, which is allocated **R3,2 billion**, or **14%** of the Department's total budget over the medium term period.

In line with the Intellectual Property Rights from Publicly Financed Research and Development Act, 2008, the Department will ensure greater economic and social returns from intellectual property generated from innovation activities using public funds. Through the National Intellectual Property Management Office, the Department will transfer **R90,1 million** over the medium term, including increased funding of **R75 million** over the period, to the National Intellectual Property Management Office, which ensures that publicly funded intellectual property is used to create products, processes and services that contribute to quality of life in South Africa.

The Department aims to position bio-innovation as a mechanism for achieving government's industrial and social development goals, guided by the Department's 2013 Bioeconomy Strategy. **R436 million**, budgeted for under the Technology Innovation programme, is allocated over the medium term for bio-innovation in the health, agricultural and industrial biotechnology sectors. In addition, **R45 million** over the medium term is transferred to the South African National Aids Council for HIV initiatives.

Expenditure financing

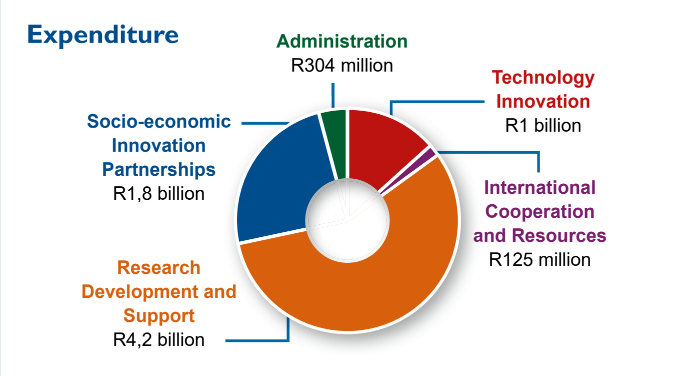
Funding is allocated to the DST by National Treasury as part of the Medium Term Expenditure Framework. For the 2016/17 financial year, the DST received **R7,4 billion**. The table below shows the resources allocated to the DST over the 2016 Medium Term Expenditure Framework period:

Financial year	Budget (R billion)
2016/17	7,4
2017/18	7,6
2018/19	7,8

The Department also receives official development assistance from international partners through various funding instruments.

Functional classification of expenditure

The DST's total budget for the 2016/17 financial year is **R7,4 billion**. The chart below shows how this is divided between the Department's five main Programmes, which represent various core focus areas.



Department of Science and Technology

Budget Guide for the 2016/17 Financial Year

Research Development and Support receives an allocation of **R4,2 billion**. Among other things, the Programme aims to contribute to the development of demographically representative, high-level human capital by increasing the number of postgraduate research students awarded bursaries through the NRF to 42 396 over the medium term; ensure that South Africans have access to internationally comparable research and innovation infrastructure by maintaining the number of researchers awarded research infrastructure grants at 70 per year over the medium term, and by increasing the availability of bandwidth per South African National Research Network site from 3 500 Mbps in 2016/17 to 8 000 Mbps in 2018/19, which will assist in providing more efficient transmission of data to all research and academic institutions and national projects; support and promote research that develops basic sciences through the production of new knowledge and relevant training opportunities by maintaining the number of articles published by researchers funded by the National Research Foundation at 13 617 over the medium term, and by maintaining the number of articles published by researchers funded by the National Research Foundation and accredited by the Institute for Scientific Information at 21 000 over the medium term; strategically develop priority science areas in which South Africa has a competitive advantage by increasing the total number of MeerKAT antennas installed to 64 in 2016/17 and ensuring that a functional climate change research network is in place, with two reports on the state of climate change in South Africa approved by 2018/19.

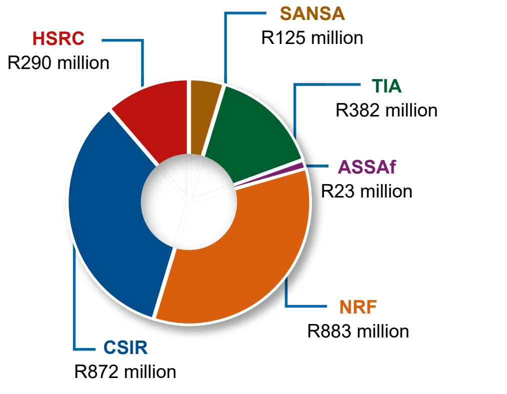
Socio-economic Innovation Partnerships receives **R1,8 billion** and will spend it on supporting the development of science and technology-based innovations for tackling poverty, including the creation of sustainable jobs and sustainable human settlements, and the enhanced delivery of basic services; providing policy, strategy and direction setting for the research and development-led growth of strategic sectors of the economy, and support for the transition to a green economy; leading and supporting the development of indicators and instruments for monitoring investments in science and technology and the performance of the national system of innovation, as well as ways of strengthening policy in relation to the system; and funding technology and innovation development programmes to advance strategic medium and long-term sustainable economic growth and sector development priorities, as well as public service delivery.

Technology Innovation receives an allocation of close to **R1 billion** to spend on leading, informing and influencing policy development in strategic focus areas; coordinating and supporting research and skills development in space science, renewable energy and the bioeconomy; and promoting the development, commercialisation and legal protection of scientific research and development outputs, processes and services. Some of these objectives are carried out through the Technology Innovation Agency and the National Intellectual Property Management Office.

Administration receives **R304 million** for the overall management of the Department and to ensure that organisations funded by the DST comply with the standards of good corporate governance and align their activities with the strategic focus of the national system of innovation.

International Cooperation and Resources receives an allocation of **R125 million** to use for increasing the flow of international resources into the country for science, technology and innovation-based socio-economic development; increasing the exposure of South African researchers and students to global knowledge and science, technology and innovation networks; contributing to the global science, technology and innovation discourse and policy through regional, continental and global initiatives; supporting capacity development in Africa to develop the continent's knowledge-based economy; and increasing the participation of South Africans in international human capital development opportunities.

Parliamentary grants for entities reporting to the Minister of Science and Technology



The **National Research Foundation** (R883 million) supports and promotes research through the funding of human resource development and the provision of facilities to enable the creation of knowledge, innovation and development in all fields of science and technology, including indigenous knowledge systems.

The **Council for Scientific and Industrial Research** (R872 million) to foster industrial and scientific development, particularly through multidisciplinary research and technological development, either by itself or in cooperation with public and private sector institutions.

The **Human Sciences Research Council** (R290 million) undertakes, promotes and coordinates policy-relevant, problem-oriented research in the human and social sciences, including research projects for public sector users, non-governmental organisations and international development agencies in partnership with researchers all over the world, but particularly in Africa.

The **Technology Innovation Agency** (R382 million) stimulates and intensifies technological innovation in order to improve economic growth and the quality of life of all South Africans. The agency is key in ensuring the translation of the research and development outcomes of higher education institutions, science councils and public entities into commercial technology products and services, thus intensifying the impact of innovation on the economy and society.

The **Academy of Science of South Africa** (R23 million) carries out its mandate of promoting common ground across all disciplines; promoting innovative and independent scientific thinking; promoting the optimum development of the intellectual capacity of all people; and providing effective advice and facilitating appropriate action in relation to the collective needs, opportunities and challenges of all South Africans.

The **South African National Space Agency** (R125 million) promotes the use of space and cooperation in space-related activities, while fostering research in space science, advancing scientific engineering through developing human capital, and providing support to industrial development in space technologies.

All of the above-mentioned DST entities implement departmental projects through project funding.

Department of Science and Technology

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On the pulse

Pulses are key in combating hunger and food security

This year South Africa joins the rest of the world in celebrating the International Year of Pulses (IYP2016). Pulses are leguminous plants such as lentils, beans, peas and chickpeas, and are a critical source of protein and amino acids for both people and animals.

Health organisations around the world recommend eating pulses as part of a healthy diet to prevent and help manage obesity and chronic diseases such as diabetes, coronary conditions and cancer.

Pulses have nitrogen-fixing properties that can contribute to increased soil fertility and have a positive impact on the environment.

In the global context, IYP2016 will complement Sustainable Development Goals 2 (To end hunger, achieve food security and improve nutrition, and promote sustainable agriculture) and 3 (Ensure healthy lives and promote well-being for all at all ages).

The United Nations (UN) focus year aligns with various other UN initiatives to address poverty, hunger and food insecurity around the world, like the second UN Decade for the Elimination of Poverty (2008-2017), and the UN High-Level Task Force on the Global Food Security Crisis, established in April 2008 to promote a comprehensive and unified response to the challenge of achieving global food security.

Pulses, especially dry peas, are useful as animal feed. Some 25% of pulses produced are used to feed animals, especially pigs and poultry. Complementing animal feed with improved varieties of pulses has been shown to improve animal nutrition significantly, yielding better livestock, which in turn supports food security. A study in West Africa showed that animals fed cowpea hay during the dry season, along with rice feed meal, gained 95 kg, compared to 62 kg for animals that did not receive the cowpea fodder. The manure was also of improved quality and the study estimated that farmers that used cowpea fodder could benefit from an extra 50 kg of meat a year and over 300 kg of cereal grain from the improved soil quality.

Pulses are locally adapted and can be grown by local farmers for their own nutrition as well as for sale. They are widely accepted crops, which keep well in storage.

Pulses, because of their role in improving sustainability, notably through soil management, also impact food security. Soil degradation is a major threat to food security in many areas.

Africa is particularly impacted by soil degradation, yet pulses are part of traditional diets and often grown by small farmers. By improving the crop patterns using pulses, farmers can improve their yields and limit the long-term threat to food security that soil degradation represents.

The aim of celebrating IYP2016 in South Africa is to raise public awareness about the important role pulses could play in addressing hunger and food insecurity, as well as to encourage the growing of pulses by the general public. IYP supports government priorities to eliminate poverty and the Nine-Point Plan objectives to revitalise agriculture and the agroprocessing value chain, and provide a long and a healthy life for all South Africans.

The Department of Science and Technology is supporting the University of Johannesburg and the Human Sciences Research Council, which are holding an International Congress on Food Security and Safety from 16 to 18 May 2016. One of the sessions will be focused on pulses and their nutritional value.

A NEW BUZZ-WORD

Drones—cultivating new solutions for farmers

In agriculture, one of the biggest challenges facing farmers is overseeing the vast tracks of land that commercial crops or livestock require. The time and resources required to monitor perimeters, water sources, movement of livestock and crop growth are considerable, resulting in high labour and fuel costs and long hours.

Malcolm Osmond, Managing Director of CC&A Insurance brokers, who offer specialised commercial insurance, highlights an exciting solution. He says, "Farmers from various disciplines are turning to drones to lighten the load."

When we think of drones, we very often think of sci-fi movies, high-level security or hobbyists.

However, drones are making a real impact into other key areas – notably, agriculture. How can these little airborne devices help the farmers on the ground, with real world problems?

Drones are also known as unmanned aerial vehicles (UAVs) and come in a range of sizes with a range of capabilities; from a fast and nimble machine, perfect for capturing footage for the film industry, to a heavy duty option carrying products in the mining industry.

Malcolm Osmond adds, "Because we deal with the film industry as well as a cross-section of commercial clients, we have seen the impact that drones are making in business today."

Saving time and money

Drones themselves come packed with features that have created solutions for farmers across the board. High-resolution cameras connected to a live feed can operate a fast and accurate patrol along kilometres of perimeter fencing – a task that would take hours of time, a great deal of fuel, and wear and tear on vehicles.

Data collection and crisis management

Some of the systems that now link to a drone are nothing short of amazing. For example, automated launches and preprogrammed flight routes can be set up to collect specific data and monitor a precise section of land or water source on a daily basis. This data is valuable to farmers whose livelihood depends on quick responses to potential crises. An aerial view of a dam, for example, along with daily data updates will assist the farmer in staying on top of his water situation – a valuable tool in times of water shortage.

Payload capacity

A significant feature affecting drone use has been the payload capacity. With the drones themselves becoming more powerful, the weight of the load that they are able to carry has increased.

A hardy and intuitive example can be found in the Agras MG–1 Octocopter.

The MG-1 can carry up to 10kg of liquids including pesticide and fertilizer. This effectively means that an area of 4000 – 6000 m^2 can be covered in a mere 10 minutes, which is 40 – 60 times faster than manual spraying. The MG-1 can be equipped with variable spray nozzles depending on the speed of the drone and the properties of the product being applied. The nozzles themselves have been cleverly positioned beneath the propellers, which creates an accelerated downward airflow, increasing the reach of the product. A feature sure to impress is the microwave radar linked to an intelligent flight control system. This means that the drone is able to maintain a constant, centimetre-accurate height above the crops that are being sprayed. As the terrain dips or rises the MG-1 maintains its relative height, resulting in the optimal amount of liquid being applied throughout.

"This system is currently the best the world has to offer in surveillance and agri multicopters," says Mike Menzies of Smashtronics

An advanced system like this would be priced from R124 995.00 and is available online from Smashtronics. (http://smashtronics.co.za or +2783 463 8310)

"Drones present a significant investment in time and money for our farmers," says Malcolm Osmond of CC&A Insurance. "Therefore, it's vital to identify exactly what your needs are and what each product can offer."

Security

Security has been a hot topic here in South Africa and drones are showing themselves to be a valuable addition to your security measures. Infrared or thermal cameras can be easily added to a drone and launched at any time of the day or night. An ideal option would be the Phantom 4. This intelligent drone offers obstacle avoidance which allows it to fly in hilly terrain without incident. Visual tracking allows you to lock onto a moving target and follow them – a valuable security tool indeed.

"We've had many farmers purchase our drones for counting stock and perimeter security," says Hana from Drone World.

A Phantom 4 combo pack comes with a top quality camera, additional batteries, a long range signal booster, along with a number of other useful add-ons from R35 995.00 from Drone World. (www.droneworld.co.za or +2782 811 1928)

Insurance

While technology like this is exciting and incredibly useful, it also comes at a cost. A wise farmer will be sure to protect his assets and explore the best insurance possible for his equipment.

Good insurance should include cover of the drone and the payload, which can include advanced measuring equipment and cameras. Ground station equipment should also be covered as it would include costly items such as phones, tablets and computers. One would also consider public liability cover for personal or property damage as well as the payment of legal costs.

"Technology like this requires specialist insurance and international backing. CC&A Insurance were one of the first in South Africa to offer drone insurance. Our dedicated team and extensive research mean we are able to offer precise, tailored cover," according to Malcolm Osmond.

South African law requires that a drone used for commercial purposes is flown by a licensed pilot, and CC&A makes a point of adhering to these regulations. In order to attain a Remotely Piloted Aircraft System (RPAS) license, the pilot would be required to obtain aviation training through an approved organisation. The applicant will need to be over 18 with clear medical assessments and have an English Language Proficiency of level 4 or higher. In addition, a practical assessment as well as a radiotelephony examination will be conducted. Applicants are approved through the South African Civil Aviation Authority (SACAA). All forms, fees and requirements can be found on their website at www.caa.co.za.

For more information or advice on insuring your commercial drones, contact CC&A Insurance brokers on +27 31 716 6000 (KZN) or +27 11 463 0085 (Gauteng) or visit http://ccainsurance.co.za.

CRUNCH TIME

Apples and pears remain key basket items despite drought

Tru-Cape Fruit Marketing, the largest marketer of South African apples and pears, and the biggest supplier of Abate Fetel pears, invested in a varietal-specific promotion to drive consumer awareness of Abate Fetel sales at retail level during April this year.

Tru-Cape Managing Director Roelf Pienaar says that with each season that Abate Fetel is marketed locally, more and more consumers get to experience the versatile pear which, unlike most other pears that need to be ripened at home, is good to eat fresh and crisp and as delicious as it ripens and the white flesh becomes juicy.

"While Packham's Triumph is still the most popular pear, plantings of Abate Fetel are increasing and far in the lead of other historically popular pear varieties like Rosemarie, Forelle and Bosc."

An apple a day

Tru-Cape is equally pleased with a recent study that confirms the adage about an apple a day keeping the doctor away. According to Tru-Cape's Quality Assurance Manager, Henk Griessel, new research finds that older women who eat an apple a day will live a third longer than those who don't.

According to a report from The University of Western Australia, School of Medicine and Pharmacology, in Perth, women who ate an apple every day had a 35% lower risk of dying prematurely than those who did not. Lead scientist, Dr Jonathan Hodgson, said the team studied apples as they were the most commonly consumed fruits: "Apples also provide a significant contribution to a number of dietary factors that are thought to be important in relation to health - dietary fibre, flavonoids and vitamins like vitamin c, potassium and magnesium," he said. His study looked at a group of 1, 456 women, aged between 70 and 85, who were asked to regularly record their diets over a 15-year period.

Griessel, a former university lecturer in apple biology, concurs with the science underscoring the findings: "We've always known that flavonoids like Quercetin Glycosides were beneficial because they act as an anti-oxidant and help to remove free radicals from the system but here is proof that they are anti-ageing and life enhancing in a measurable way", he says adding "Storing your apples in the fridge will keep them freshest for the longest period."

Drought conditions

The drought conditions and extremely high December 2015 and January 2016 temperatures has Western Cape apple and pear growers thinking carefully about irrigation practice and future varietals.

For Calla du Toit, Tru-Cape Fruit Marketing's Procurement Manager and a grower in the Witzenberg Valley of Ceres, the necessity for irrigation water has been the mother of invention including the unorthodox use of plastic caps to top irrigating sprayers to ensure that water reaches the stem of the plant and is not lost to wind evaporation.

"Growers are also treating the leaves with a fine layer of kaolin, a white clay powder from which porcelain is made", he explains, "which reduces the plant's need for water by increasing its photosynthetic rate. It acts very much the same way that suntan-lotion does on the skin by reflecting away light. Another benefit of the kaolin spray is that insects don't like it as it clogs their breathing apparatus but it is also difficult to clean off the fruit so we tend not to use it unless really necessary. "

"In Ceres we typically have 1150mm of rain a year and yet this year before the April harvest we had just less than a quarter of that with 454mm of rain recorded.

"Not only are we thinking carefully about the varietals we plant in terms of the length of time they are on the trees and require irrigation but also about how we irrigate. We now quickly pulse irrigate rather than water for an extended period of time which we did in the past.

Spreading the risk

According to Pienaar, Tru-Cape sells around R1.5 billion in fruit each year equated to about 14 million cartons.

"As a wholly grower-owned business, we work hard to support the more than 15 200 people and their families who rely on our ability to market our growers' fruit at the best price," he says.

Pienaar explains that as Tru-Cape sells fruit to over 100 countries it needs to source fruit from a number of different growing biomes and regions within Ceres, the Elgin, Grabouw and Villiersdorp Valleys and in The Langkloof to spread the risk. "Our continued ability to meet our commitments to our customers, even when parts of the country are in drought, hail or flood conditions, is what makes Tru-Cape the leading marketer of apples and pears."

Brian Berkman
www.Tru-Cape.com

Contributing to the improvement of agriculture

Cultivars ideally suited for multiple crop production

Monsanto has launched 10 new maize cultivars – two white and eight yellow – with high yield potential for the 2016/17 planting season. The launch was at Rietgat, the company's experimental farm, Lichtenburg. More than 200 farmers and their families attended. Further launches will be held at strategic venues in the summer grain production area.

"We believe that, with new genetics to improve crop production, double cropping and increased growth vigour as our goal, we will be able to make a contribution to the improvement of agriculture in our endeavours to boost productivity on the farm and food quality," said Kobus Steenekamp, managing director of Monsanto, at the launch.

The two new white cultivars are DKC76-61B and DKC63-53, and the yellow DKC68-58BR, DKC68-56R, DKC71-44B, DKC71-42, DKC74-74BR, DKC74-26R, DKC65-52BR, and DKC64-54BR.

Some of the outstanding traits of the new cultivars are

- new genetics with excellent yield potential;
- widespread adaptability;
- stable performance under varying conditions;
- rapid-drying;
- excellent grain quality;
- a good disease tolerance package;
- good standability; and
- multi-eared.

DKC63-53 (white) and DKC65-52BR and DKC64-54BR (both yellow) are ultra-short growing season cultivars specifically suited for full irrigation, not less than 80 000 plants/ha. Moderating plant types and genetics (single-ear and stem) make them ideally suited for high yield potential under full irrigation practices. They are also ideally suited for multiple crop production where two harvests per season could be produced, for instance after maize has been harvested wheat can be planted immediately.

For more information contact Gert Heyns 082 388 0211

Pictured at the launch of Monsanto's new maize cultivars at Rietgat, Lichtenburg, are from left: Kobus Steenekamp, managing director, Monsanto, South Africa; John Mathew and his wife Jenny; Derek Mathew and his wife Karin, all prominent maize farmers from the farm Silverton, Lichtenburg; and Gert Heyns, marketing manager seed and biotechnology, Monsanto. Photo Hans Lombard

Water for food, water for life

Water Wise summarises some facts and figures to consider about water and farming

The most recent El Niño weather phenomenon has left South Africa gripped in one of its worst droughts in decades. Record high temperatures and low rainfall patterns have left many South Africans reeling from the lack of rainfall. Recent reports from the South African Weather Services indicate that South Africa's 2015 rainfall was the lowest since 1904, at a total annual precipitation of 403 millimeters.

In addition, large cities such as Johannesburg and Pretoria experienced record-high temperatures in 2015. It is clear that our perceptions of water as a widely available resource needs to be altered. How do we make the change to become Water Wise?

Start valuing water for the scarce natural resource that it is.

- Understand that society cannot exit as is, with very little or polluted water.
- Discover how much water you actually use by learning how to read your water meter. If there are no meters, have them installed.
- Use your creativity to find ways to use less water at home, on the farm, and in the office.

It is our responsibility to ensure the sustainable use of this planet's most precious resource. Water use in South Africa is divided up amongst four main sectors specifically domestic and urban, industrial and mining, agricultural and irrigation, and environmental use. The agricultural and irrigation sector consumes the highest combined volume of water at approximately 63% of the country's water supply. This is to provide food to the South African population. However, farmers face a difficult challenge in that only 12% of the country is suitable for the production of rain-fed crops.

In addition, South Africa is a semi-arid country that receives less than half the annual rainfall average received by the rest of the world.

That means that more than 30% of the country's crops are produced on only 1.5% of land that is irrigated. The agricultural sector is an essential one to the country's economy, contributing approximately 14% of South Africa's GDP. Agriculture is also an important contributor to South Africa's food security, social welfare, and job creation. By implementing sustainable practices in the agriculture and farming industry, one can allow the sector to grow in strength and ensure water security and long-term land productivity.

Examples of sustainable practices to implement:

- Carefully manage water resources. Be aware of how much water you use every month. If you use borehole water, ensure that you comply with your municipal requirements, and measure water levels regularly.
- Maintain healthy, functioning agricultural ecosystems. If you are resting your land between crops, ensure the land has been planted with nitrogen-fixing vegetation that can enrich your soil with nutrients naturally.
- Reduce the amount of chemicals such as pesticides and fertilizers on your crops, as these chemicals can pollute ground- and surface water.
- Practice no-till or minimum till farming. This can prevent the breakdown of the natural soil structure.
- Do not overstock land. Overgrazing can result in high levels of soil erosion, which in turn causes water pollution.
- Remove invasive aliens on your land. Invasive alien plants often consume large amounts of water and displace indigenous vegetation, reducing biodiversity. Contact www.invasives.org for more information.
- Restore and protect wetlands. Wetlands are one of nature's most functional ecosystems, purifying water and providing a buffer against droughts and floods.
- Use more efficient irrigation systems and maintain those systems regularly. Drip irrigation is a water-saving method to try.
- Use drought resistant crop varieties that can survive South Africa's highly variable rainfall patterns.
- Maximise the soil's water-holding capacity to reduce the amount of watering required by adding compost, manure, or mulch.

This information was extracted from the WWF Report on Agriculture: facts and trends, South Africa.
Courtesy of Water Wise

Syngenta's Grain Academy in Action

The SmartFarm model that is changing the face of farming

Under the umbrella of its SmartFarm brand, Syngenta, one of the world's leading agribusinesses, is shaping the future of agriculture in South Africa, as demonstrated by the outcome of its recent Grain Academy Alumni Summit

The event was held to showcase its Grain Academy in Action. The 2013 – 2015 Grain Academy Alumni shared how they had applied Grain Academy teachings and the Systems Thinking model to their farms and businesses.

"We are not going to leave the future of agriculture in this country to chance. And we are not going to succumb to the many complicated challenges we face. That's why, in partnership with the University of the Free State Business School and Grain SA, we have developed this tailored leadership development programme called The Grain Academy. With this programme we are equipping young commercial farmers with the skills to tackle the challenges in our agricultural industry. At its heart lies the importance of sharing up-to-date information and learning from it. This Grain Academy Alumni Summit helped us to do exactly that," says Antonie Delport, Managing Director of Syngenta South Africa.

Syngenta's Grain Academy Alumni event gave our young commercial growers the opportunity to participate in a range of socio-economic and industry-specific discussions. "The future of agriculture in South Africa is facing one too many red lights. For growers, survival has become the main goal. In turn, the larger South Africa is feeling the effects. We need a pro-active platform to discuss this reality and, in the process, do our best to find workable science and technology based solutions. A sustainable agricultural industry is within South Africa's reach," says Jannie de Villiers, CEO of Grain SA.

Syngenta's Grain Academy Alumni Summit represents one way of achieving this whilst placing the spotlight on our young leaders within agriculture. Their directive is aligned with the values of the Grain Academy Programme: "To CHALLENGE the status quo and to have CONVERSATIONS to keep talking positively and create the kind of conversations that will lead to CHANGE, as positive change is needed in our industry, which will instill COURAGE to enable us to move forward passionately in agriculture, as growers and as a nation."

The SmartFarm concept is all about making the right decisions as a farmer and in your business. A grower's business must be profitable and also sustainable. The Grain Academy represents the core foundation for sustainability.

According to de Villiers, the current drought we are facing is allowing us to positively promote the image of agriculture, as well as to highlight the real issues around food security facing South Africa. This challenge has actually put agriculture back on the map. It's now up to farmers to take responsibility and focus on sustainable farming to help them create a good yield for their families and broader communities.

This is what some of the Grain Academy Alumni had to say:

Loots van Rensburg from Bloemfontein:
The Grain Academy programme has been life-changing. It has helped me to learn to value the people on the farm whom you work with. The drought has forced us as farmers to think differently and we must see this as the start of a new journey. Relationships with fellow alumni are worth more than gold, because as farmers they are experts at what they do and the knowledge sharing is invaluable. Ultimately, we must learn to be daring and experiment, and maybe, just maybe, you will discover something that no one else has ever thought of.

Syngenta Grain Academy Alumni Thabo van Zyl; Farmer from Bothaville

Gift Mafuleka from Bronkhortspruit:
The challenges we face take us back to what we have learnt in the Grain Academy programme, it allows us to apply what we have learnt. If you want to be a great leader, you must be a great follower – the journey as a successful farmer or expert in the agri-industry begins now.

Thabo van Zyl from Bothaville:
As a farmer you cannot allow yourself to have tunnel vision, else you will miss your destiny. Through the Grain Academy, I have just come right back on track, from valuing farming, planning and strategising and being a leader. I have learnt that those on the farm do not work for me, but that they work with me. As a farmer, you have to adapt to change, grow and evolve, else you will miss out.

With the current drought and the increased difficulty to predict accurate weather patterns, South Africa's agricultural industry is at a crossroads. This is not a time to despair – all growers are in the same boat and need to stand together. Only then can we move forward. All of South Africa's eyes are on us.

PARTNERING TO CREATE SUSTAINABLE RURAL COMMUNITIES

Food security, skills development and education feature prominently in new job creation drive

Tongaat Hulett, in partnership with the Jobs Fund, is working to create more than 2 850 new jobs as part of a rural development and sustainable job creation initiative. The four-year project, which commenced on 1 August 2014, aims to plant 12 000 hectares of dryland sugarcane in KwaZulu-Natal, in some of the poorest areas of South Africa.

Although the prevailing drought has resulted in a delay in the planting of the sugarcane in some regions, this will be planted once there is sufficient rainfall. The project is on track to exceed the initial estimated number of jobs to be created, and has already surpassed the number of beneficiaries trained.

The initiative, which is supported by the Ingonyama Trust Board, the Department of Economic Development, Tourism and Environmental Affairs and the KZN Provincial Planning Commission, will cost some R300 million in direct sugarcane establishment costs, with R150 million funded by the Jobs Fund and R150 million funded by Tongaat Hulett.

This innovative project looks to make a meaningful difference in the lives of the communities in which it is being implemented, and encompasses areas overseen by 13 traditional councils. In addition Tongaat Hulett has committed to in-kind contributions of R71.6 million, which includes socio-economic development initiatives, community consultative work and project management.

Local community members are upskilled to enable them to work in a range of jobs on these projects, at multiple managerial and skill tiers that typically range from farm managers, assistant managers and supervisors to drivers, weeders, planters, and harvesters.

At the launch event on 27 November 2015 Tongaat Hulett CEO, Mr Peter Staude said, “The Sugarcane Development Initiative reflects Tongaat Hulett’s commitment to the future of the South African Sugar Industry through the comprehensive training and development of small-scale sugarcane growers, with the goals of creating independent, viable and sustainable SMMEs and increasing cane supplies to our mills.

"We believe that the small-scale grower community has a key role to play in the future success of the South African Sugar Industry and the agricultural sector of KZN, and we will continue to look for further opportunities to partner with Government in supporting and growing this important stakeholder," said Straude

Food security

Food security is an important part of this holistic approach to rural development. Some 55 small family-managed vegetable gardens, of 0.3 hectares each, have been established together with cooperatives located at Eshowe.

In order to be aligned with the Agri-Park model, Tongaat Hulett is also working with the Mngampondo Cooperative towards the establishment of 6.8 hectares of irrigated food crops. The produce will be sold to the Uthungulu Fresh Produce Market, which is responsible for distributing vegetables to the surrounding schools as part of the schools' nutrition programme. Tongaat Hulett provides extension services to these farmers to assist in skills transfer to the local community and ensure the sustainability of this project.

Commenting on the impact of the initiative on the Ndlangubo Traditional Council, where the Mngampondo Cooperative Irrigation Scheme was established, Mrs Najwah Allie-Edries stated, “This initiative is a leading example of the impact that sugarcane can have on the development of rural economies, and it is one of the reasons why the Jobs Fund recently acknowledged Tongaat Hulett as one of the top three projects that our fund has supported since inception, for its contribution to sustainable job creation.”

Water programme

A number of rural communities have been negatively affected by the drought. In response, Tongaat Hulett has partnered with municipalities, traditional leadership councils and livestock farmer associations, and has invested resources towards the installation of three boreholes and two windmills in the Mbongolwane, Ntambanana and Mtubatuba areas.

It is anticipated that the intervention will enable communities and livestock to access water while also improving the quality of life of some 10 000 community members.

Education

Education plays a fundamental role in uplifting communities and breaking the cycle of poverty. As such, Tongaat Hulett has invested extensively in projects that look to contribute towards improving the quality of education and educational facilities in these areas. These initiatives target learners from primary school age through to post-school education.

Bursaries and training

A total of 26 students received bursaries from the company to study at the Owen Sitole College of Agriculture, 21 to study plant production in sugarcane agriculture, and the remaining five to study animal production. The three-year plant production programme includes experiential training on Tongaat Hulett's estates during the final six months.

Some 343 local community members, employed to work on these sugarcane estates, attended certificate courses at the SA Sugar Research Institute (SASRI), training at the South African Sugar Association's Ushukela Training Institute or internal training programmes, with more training in the pipeline.

School Infrastructure

Tongaat Hulett, in partnership with the Department of Education, is working towards accelerating the provision of quality school infrastructure. Since 2012, Tongaat Hulett has invested approximately R10 million in thirteen rural schools in the Ilembe and Uthungulu district municipalities.

The investment has improved the culture of learning and teaching for some 3 965 learners and 136 educators.

Owen Sitole College partnership

In 2012, Tongaat Hulett signed a Collaboration Agreement with the Department of Agriculture and Rural Development in KZN, to cement its relationship with the Owen Sitole College of Agriculture in order to transform the College into a Centre of Excellence. The partnership looks to harness the potential of agriculture in the surrounding rural areas, focusing on:

- The establishment of an experimentation plot to ensure that students obtain hands-on experience in various aspects of sugarcane agriculture.
- Capacity building of academic staff, to strengthen the College's capacity to develop and provide quality and relevant educational programmes, practical assignments and research that will support the local socio-economic agenda.

Celebrating the launch of the Job's Fund partnership are, from left, Inkosi Biyela, Ndlangubo Traditional Council, Michael Mabuyakhulu, MEC for Economic Development, Tourism & Environmental Affairs, Najwah Allie-Edries, the Head of the Jobs Fund, Peter Staude, Chief Executive Officer of Tongaat Hulett, Mduduzeni Shobede, Chairperson: Mngamphondo Cooperative and Nico Koen, Jobs Fund Project Manager

- Promoting the cross-pollination of information through company-led expert lectures.
- Awarding bursaries to high-potential students from historically disadvantaged backgrounds with a passion for agriculture.

During his address at the College's recent graduation ceremony, Principal Siyabonga Mazibuko acknowledged Tongaat Hulett's contribution towards improving the culture of learning and teaching at Owen Sitole College of Agriculture, which includes an investment of R1.1 million to date.

Cattle upliftment project

With sugarcane and cattle being complementary agricultural operations, the company is partnering with the Department of Agriculture and Tongaat Hulett's animal feed operations, Voermol, to host cattle farmer information days in order to upskill rural cattle farmers.

Partnerships with other donor organisations have facilitated the construction of windmill-powered boreholes to provide drinking water for cattle. The company also provides water for cattle dipping in areas where there are no boreholes.

Key Facts: As at 31 March 2016

Cooperatives formed: 27

Area covered: 13 Traditional councils

Funding to date:

Jobs Fund Grant:	R68 750 000.00
Tongaat Hulett funded:	R68 750 000.00
Total:	R137 500 000.00
In-kind contribution	R49 346 637.20

Hectares

Planned: 12 000 hectares

Planted to date: 3 654 hectares

Jobs

Target: 2 850

Created to date: 905

Training

Target: 28

Beneficiaries trained to date: 343

Driving growth and sustainability

Reaping the benefits of agricultural insurance in South Africa

The agricultural industry is among South Africa's key sectors; the industry accounts for 6%1 of employment and contributes 2.5%2 directly to the country's GDP, and as much as 15% to 20%3 indirectly. In a country where almost half the population does not have regular access to food4, the sector is becoming increasingly important and the pressure to grow is that much more.

The National Development Plan (NDP) acknowledges the potential of the agricultural industry, aiming for the sector to create a million jobs by 2030. Despite a number of very real challenges currently impacting agriculture in South Africa, insurance can assist in the mitigation of certain risks, as well as help drive exponential growth and sustainability in the following areas:

Climate change

The drastic effects of climate change, across the globe, are being seen more frequently than ever before. Even though efforts are being made to address the issue, such as the negotiations at the recent United Nations (UN) 2015 COP 21 summit held in France – which aims to limit global warming to less than 2 degrees Celsius above pre-industrial revolution times – the reality is that these discussions centre around long-term solutions rather than interim measures.

Closer to home, South Africa itself, has experienced its worst drought in more than two decades, resulting in multi-billion rand losses within the agricultural sector. Some drought relief is underway with the Minister of Finance's recent announcement of the re-appropriation of funds to enable the delivery of water tanks, drilling of boreholes and even moving of cattle to state land. While the announcement gives farmers hope, it is also important to note that such measures will need time and resources to implement, and can only provide a certain level of respite as budgets are limited.

Understanding that drought conditions are worsening and so is the vulnerability of farmers and their insurers to such weather related events, appropriate insurance is a crucial element of the agricultural risk management equation. These developments will see a steep increase in the dependence on, and need for effective irrigation systems, the construction of dams, more resilient, drought resistant seeds or crop stock and investment in comprehensive insurance cover.

Securing livestock

The water shortages in particular, have meant that farmers have taken to slaughtering their livestock before these animals fall prey to the ongoing drought. The consequence is a rapidly diminishing herd (impacting breeding) and huge financial losses as farmers have to sell the meat at a reduced cost. Livestock insurance is an essential form of cover in mitigating the extent of the losses experienced, ensuring that farmers do not face bankruptcy.

Embracing diversification

Agriculture, like any other industry, needs to consider diversification and the exploration of new markets. This can be seen, for example, in the move from livestock to game farming, or engaging in more downstream farming. However, critical to diversification is the need to look at alternative crops and varieties for different seasons, as well as systems that foster the need for a balanced approach with natural resources management on the one side, and socio-economic and market demand on the other.

There has been a significant increase in the promotion of the ocean economy with Operation Phakisa identifying aquaculture as one of the four critical streams. The South African Department of Agriculture, Forestry and Fisheries (DAFF) also recently reviewed fishing rights allocations, licensing and quotas, further driving the growth of the sector. There is no doubt that the expansion of this industry is a welcome development in the fight to attain food security, and is a growing opportunity for agricultural insurance providers.

It is essential for the agricultural industry, insurers and government to work together in order to minimise the extent of the financial impact the challenges outlined above present.

Water and food security are critical components of the growth of any economy, making planning, insight and flexibility key to ensuring that the agricultural industry prospers.

Thami Gxabhu, Line of Business Head: Commercial Packages, Zurich South Africa

AGAINST VESTED INTERESTS

The WHO's vacuous policy agenda: An honest attempt to curb tobacco-related harm or a pretence for exclusion of more than 30 million farmers', workers and dependants' legitimate interests?

Truth never damages a cause that is just, wrote Mahatma Gandhi. In June 2015, the World Health Organisation (WHO) Director General (DG), Dr Margaret Chan addressed a summit on measurement and accountability in health as follows, "In this day and age where transparency is such a big commodity, there is no other option but to have transparency and accountability." The WHO DG noted that "the WHO have to change the way we do business". So what does the WHO have to hide?

Through its Framework Convention on Tobacco Control (or "FCTC") the WHO has spawned an organization which adopts strategies and tactics which are increasingly at odds with principles of openness, fairness and accountability. Through deliberate exclusion and collusive, opaque and undemocratic practices, the FCTC, under the mantra of protecting public health, has started promoting measures which cut across areas such as national agriculture policies, taxation, trade and many other areas beyond their remit or expertise, which, as a result, can create more harm than good.

Who should be more equipped to discuss pragmatic solutions concerning agriculture than tobacco farmers who work hard to produce legal and compliant crops? Some of the FCTC articles are aiming at curtailing tobacco production or implementing limits on some inherent natural constituents of tobacco plants, without proven effects on reducing cigarette consumption. The direct consequence of these measures however, directly threatens the livelihood of more than 30 million people who grow a legal crop to meet business and consumer demands.

Farmers are not asking for special treatment from any other industry, and they have a right to a seat at the table when their livelihoods are being discussed, and, as previous FCTC discussions have shown, threatened. Farmers are reasonable businessmen and women who deserve to have their voice heard on issues which affect them, their families, workers and local communities. Exclusion from these discussions are blatantly unfair and undemocratic.

When it comes to the nature of the product, tobacco farmers across the globe from Brazil to China, and from Greece to Malawi recognize that tobacco is a harmful product. Tobacco farmers do not operate in a vacuum or in denial. On the contrary, they endorse sensible, evidence-based and effective regulation of the commodity they labour long and hard in heat, rain and cold to cultivate, and they accept the need for comprehensive education programmes to inform adult consumers of the potential risks associated with smoking. What farmers cannot and will not accept is any attempt to blindly seek to

force millions of tobacco farmers worldwide into a condition of hopeless penury and abject poverty by pushing measures not aimed at reducing consumption, but rather at destroying the tobacco sector, including the most vulnerable part of the sector's value chain – namely, the farmers - without any consideration of the grave socio-economic consequences.

Like the media and public at large, the International Tobacco Growers' Association (ITGA) is excluded from even observing the discussions of the FCTC Conference of the Parties, and less still, the deliberations of its Working Groups which are seeking to irreparably damage the livelihood of millions of tobacco farmers. Yet, the ITGA has a good dialogue with the United Nations International Labour Organisation and subscribes to the United Nations Food and Agriculture Organisation's Code of Good Agricultural Practices. In practical terms, this means that the ITGA encourages tobacco farmers to boost smallholder productivity, reduce soil erosion, manage water resources sustainably, ensure crop traceability, and produce the crop under safe conditions, while at the same time, produce a crop that meets market requirements.

The ITGA also promotes measures to enhance the sustainability of tobacco production. For example, farmers are now growing food crops alongside tobacco, just as in the case of Malawi where tobacco growers have quadrupled their yield of maize vis-à-vis other farmers. This is because tobacco farmers are trained to follow good agricultural practices and are sponsored by tobacco buyers providing certified seeds and crop inputs which help to promote local food security. Farmers are also adhering to principles promoting the elimination of child labour from the field, and they have invested in afforestation projects to use sustainable energy sources for curing tobacco in the future.

Those facts are ignored by the individuals regulating tobacco control, who, in the vast majority of cases, have never visited a contracted smallholder farmer and ignore the milestones achieved by this part of the global farming community. The "green revolution" in tobacco is the fact that farmers grow tobacco - one of the best cash crops on earth - and receive certified seeds to grow food at an ideal rate of 2kg of food for every 1kg of tobacco grown.

Farmers form part of an integrated supply chain where they receive technical assistance and guidance on how to apply good agricultural practices to mitigate environmental risks and improve their yields, and support to help them improve the living and working conditions on the farm. Of course, improvements are always possible and, just like other agricultural businesses, tobacco farmers are leading the effort on sustainability through applying holistic approaches to growing their crops, upholding labour and human rights on their farms and taking strides to mitigate environmental impacts. In fact, their efforts can be considered as a standard for many other competing "cash crops."

When we met in Moscow on the side-lines of the FCTC Conference of Parties in 2014, Dr Chan touched my arm and said, "I don't want to damage tobacco farmers." As the President of the ITGA, I took the WHO DG at her word as the head of an important international organization. In this spirit and at her request, I have written to Dr Chan several times to request that the legitimate interests and concerns of more than 30 million tobacco farmers, workers and dependants are fairly considered in FCTC discussions. I have also specifically requested a meeting with her and relevant FCTC officials. After all, the FCTC's own rules dictate that farmers should be involved in policy development. Regrettably, Dr Chan has never replied. A petition of over 250,000 farmers was also ignored.

I want to extend a public invitation to Dr Chan to come and visit tobacco farmers in Africa or anywhere else in the world. We have nothing to hide; on the contrary, we seek an open, inclusive and transparent dialogue with the WHO's FCTC.

After years of efforts by the ITGA to approach the WHO unsuccessfully, it is time for the rest of the world to know how an important agency of the UN, such as the WHO, operates when it comes to tobacco, a legally-produced crop.

For every other legal industry across the globe, it is inconceivable to think that workable and enforceable guidelines governing a sector should be developed without consulting and engaging with the very sector you wish to regulate – including representative groups of that sector's value chain. This is the democratic way of doing things which underpins our global policy-making system. Why are these rules not respected by the WHO's FCTC?

The WHO and FCTC bureaucracy may wish to reflect on the words of an undisputed leader I have always admired and had the privilege to meet, Nelson Mandela. "A good leader can engage in a debate frankly and thoroughly, knowing that at the end he and the other side must be closer and thus emerge stronger."

It is time for an open dialogue with farmers. We call on the UN to guarantee an acceptable level of democracy within the FCTC process.

Francois Van Der Merwe
President of the International Tobacco Growers' Association

Business rescue proceedings offer a way out for embattled farmer

The recent drought throughout South Africa has had, and will continue to have, a dramatically detrimental effect on South Africa's agricultural production. We might very well be at the brink of the next big recession - if not already in it.

According to the Economic Review of the South African Agriculture 2014/15, farming debt has increased from R75Bn to almost R126Bn over the last five years.

In an average year South Africa will typically record a 2 million tonne maize surplus, generating about R6bn in export revenue. However, due to the harsh drought South Africa will need to import 770 000 tonnes of maize at a cost of R2.2bn.

This is only one of many examples of the drought's impact on our already struggling economy.

Recently the prime lending rate increased and the country's credit ratings is at an all-time low, meaning it is becoming more expensive to obtain funding and service debt. Taking this all into account - along with the increasing inflation rate - the future for South African farmers is looking very bleak.

A possible solution for farmers might be business rescue proceedings tailored specifically for the agriculture sector.

In American Football there is a term called a 'Hail Mary Pass'. The Oxford dictionary describes it as being 'a long, typically unsuccessful pass made in an attempt to score late in the game and consequently winning it'. This is exactly what business rescue is - it is a last resort to save a company.

According to Alex Eliott, a business rescue expert, one of the main reasons for the failure of business rescue proceedings is the lack of experienced, skilled company turnaround strategists in the country. Business rescue experts assisting farmers need to have an in-depth knowledge of the agricultural sector – both the financial and non-financial aspects.

The current drought and the consequent high number of farmers expected to go bankrupt has opened up a whole new market for financial advisory firms in the form of business rescue practitioners specialising in agriculture. To ensure that business rescue plans are successful, practitioners will need to have a good knowledge of the sector, otherwise bankrupt farmers will just become a new scary statistic.

A business rescue expert servicing the agricultural sector needs to know:

How the different seasonal cycles work.

These will determine when funding is needed and when the necessary cash flow should be available to pay debt.

Which Act is applicable and when.

Different Acts are applicable to different farms. For instance The Agriculture Produce Standards Act will be more applicable to farms exporting produce than farms producing for South African use only.

How to improve cash flow through the diversification of cultivars.

Different cultivars of the same fruit may differ in:

1. Life cycles - from planting to maturity to harvest. The shorter this period, the quicker the farm will be able to generate cash flow.

2. Different harvesting times. If we take citrus as an example: Clementines can be harvested in May while something like Tambor will normally be harvested in September. Using the correct methods and creating the ideal environment it could be possible to have both these cultivars on one farm. Consequently the cash inflow period will increase.

How to account for the different classes of biological assets

The classification of biological assets between non-current and current assets might have a significant influence on the financial position of a company. A stronger financial position will lead to credit suppliers being more lenient towards the company.

How environmental developments will influence the present and future economic situation of farms.

If we think about environmental developments we tend to immediately think about the climate and we forget about environmental factors such as disease and pests. Some of these include, sirex (wood wasps), fruit flies, melanose, potassium deficiencies and mold.

The business rescue specialist should know the financial implications of a disease or pest on a farming operation.

The different carrying norms for different produce

Different cultivars have different carrying abilities. It is very important to know what the norm per cultivar is for better budgeting purposes. Better budgeting will lead to better cash management.

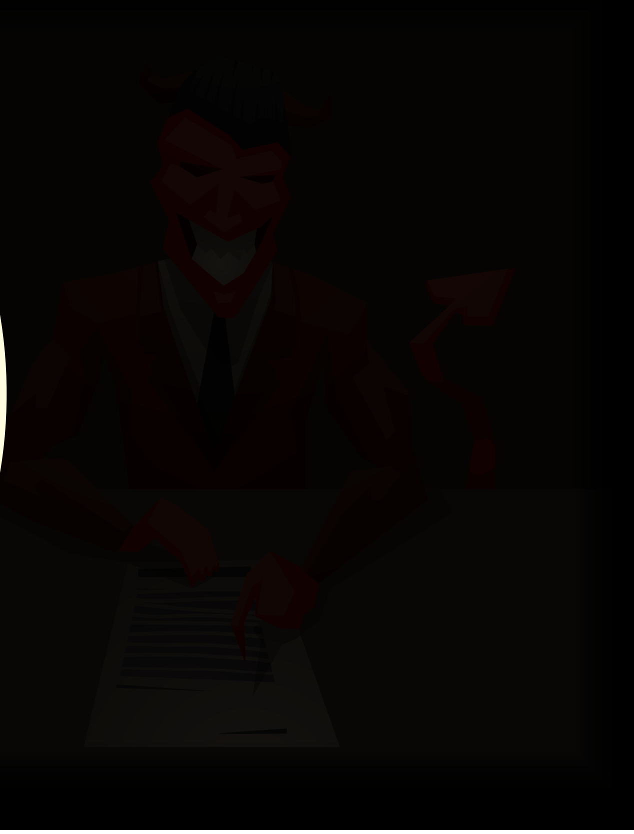
What the B-BBEE requirements are for agricultural exports

The practitioner should also be aware of the B-BBEE requirements for doing business offshore, better ratings could lead to more income streams.

What the requirements are for government grant applications and how to account for this

Farms may apply for government grants, especially for socio-economic development of farms and the laborers working on farms.

Werner Gerber, Audit Manager, BDO South Africa



Spotlight returns to ruined land reform 'jewel'

A former manager has lifted the lid on the collapse of a R150-million land reform scheme

An Israeli irrigation specialist who ran a R150-million paprika scheme in the Northern Cape, described as "the jewel of land reform", has blamed its spectacular implosion on the provincial government's failure to deal with unruly and criminal elements who stole millions of rands of farm equipment.

Gil Arbel, of the company Gili Greenworld, who conceived and ran the scheme for eight months, said racial tensions and unresolved land issues were also central to the collapse of the project at Goodhouse in Namaqualand. The irrigated farm was intended to "green the desert", creating up to 1 500 jobs and generating R70-million a year in foreign exchange earnings.

After receiving R150-million in grants and loans from the Northern Cape government, the national agriculture department, the Land Bank and Eskom, it fell apart in 2004 after two years of operation.

Other have blamed mismanagement. A rare frost in the second year of production appears to have contributed to cash-flow problems. The project is back in the news after the Northern Cape auditor general revealed in his 2014-2015 report that R34-million of government investment had been written off, as well as R9-million in irregular expenditure.

The Democratic Alliance's agriculture spokesperson, Ismail Oberay, said the government has never explained what happened to the scheme, and that he plans to raise questions about it as soon as the Northern Cape legislature reopens this year.

"The government has circumvented all the questions we have asked since 2009. I have asked questions in the agriculture portfolio committee and [public spending watchdog] Scopa. It's like looking for a needle in a haystack," Obaray said.

A report by the National Assembly's agriculture portfolio committee, which inspected the project in 2005, found it had "completely collapsed" and cited then agriculture MEC Dawid Rooi as promising to launch a forensic investigation.

He also undertook to form a new company. The agriculture committee in the Northern Cape legislature later reported that the company would be allocated R5-million "to sort out the irrigation scheme".

Asked whether an investigation was ever conducted and, if so, whether its report is available, the provincial agriculture ministry spokesperson, Ali Diteme, did not respond.

Instead, he suggested amaBhungane lodge a request for information from Hansard under the Promotion of Access of Information Act.

"The department has provided all the responses to the relevant committees of the legislature and we are quite satisfied as to why we have taken a bold decision to discontinue the project and write off some of the debt," he said.

Obaray said, to his knowledge, no forensic report was ever tabled in the legislature.

The scheme envisaged that 51 farmers would grow paprika on 10-hectare plots irrigated from the Orange River in a kibbutz-style operation under Arbel's management.

They were to supply a R45-million factory in Springbok, majority owned by the empowerment company, Pamodzi Investment Holdings, which would develop the Goodhouse Agricultural Corporation into the second-largest supplier of paprika to the European Union.

If government gave land to individuals, one in a 100 would succeed

The Land Bank and the Northern Cape government did not answer questions about their financial support for the project. But the portfolio committee report states that the farmers received government grants of R90-million, and a R57-million Land Bank production loan.

According to a land reform researcher, Kjersti Gjuvsland, the province invested R17-million in a 25% stake in the factory for the farmers, who would share infrastructure and profits.

In an interview, Arbel said the major problem was political and predated him: some farmers said the land was given to them by the British government, wanted individual title, and "did not want to be told what to do on their own property".

"If government gave land to individuals, one in a 100 would succeed," he said. "Small farms in such a remote area cannot survive."

He said Rooi and former premier Manne Dipico agreed that the farm should be run as a co-operative "but could not control the situation".

Gjuvsland reported that the farmers split into "pro-Gil" and "anti-Gil" groups, and the portfolio committee refers to conflict between old and new farmers.

The rift took on a racial complexion. The Mail & Guardian reported on a meeting in Goodhouse at which one farmer said: "Gil en sy fokken wit honde moet weg van Goodhouse" (Gil and his fucking white dogs – a reference to his two white assistants – must get out of Goodhouse.)

But politicians can't farm

After a good crop in the first year, Arbel said, the farmers insisted on being paid before the servicing of the Land Bank loan. They also started to sell their produce for cash to "others than the factory".

He reserved his sharpest criticism for the Northern Cape government, alleging that it "capitulated" to unruly elements. After eight months, he was told to "go away and come back after the [2004] elections", while the politicians sorted out the problems. A year later the project was dead. "The MEC and the director general took over," he said. "But politicians can't farm. They look after their constituencies."

In November 2003, 21 farmers cancelled their contracts. "We did all the work. We want to farm, not engage in politics," a member of the group, George Cloete, was reported as saying in the M&G. "We cannot work with a bunch of criminals and opstokers [troublemakers]."

The remaining farmers took over the hiring of workers and payment of wages. Arbel said vital resources, including kilometres of drip irrigation, pumps, filters and electric cabling used in the 555-hectare irrigation scheme, started disappearing. "You would see pipes being driven away on the back of bakkies," he said.

The portfolio committee noted that "the project lacked proper security … resulting in abuse, neglect and wreckage". It also found that individuals were "taking from the project for food security".

Arbel said, after being ousted, he sneaked back to find goats eating the paprika pods. He complained that the nearest police station was 120km away and that the government failed to provide local law enforcement. A new chief executive was brought in from Pretoria, he said, but the farmers forced him out after a year.

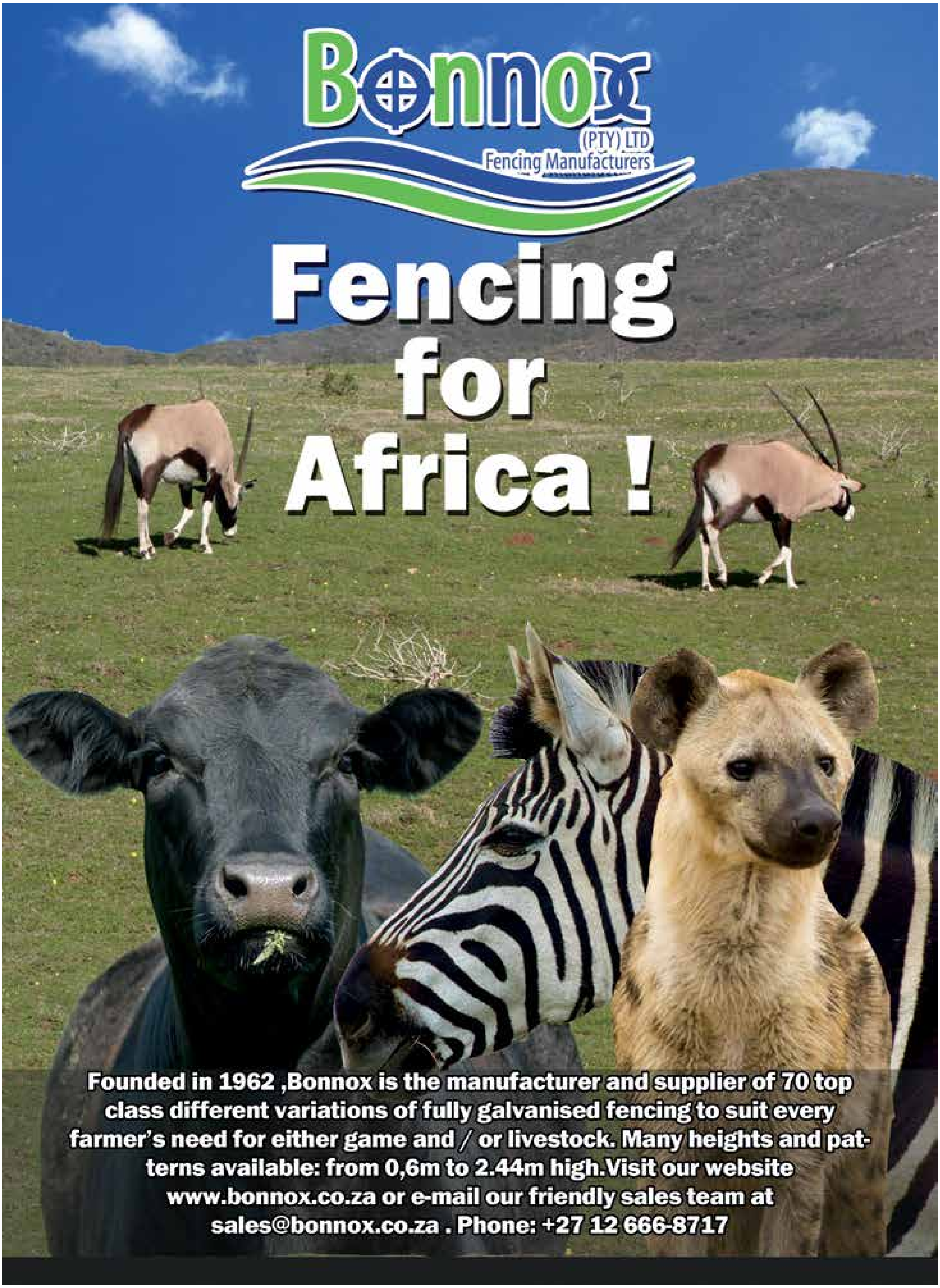
After Rooi was moved from the agriculture portfolio – Arbel claims because of the failure of the scheme— Tina Joemat-Pettersson (then the minister of agriculture) took over but also failed to rescue it.

Rooi, now the Northern Cape public works MEC, was asked detailed questions about Arbel's allegations through his spokesperson, Crystal Robertson, but did not respond.

Asked about claims that money intended for the project was misdirected for his own use, Arbel said the government investigated him but found no wrongdoing.

On claims that the company reneged on promises to pay farmers a R500 monthly wage, he said they had received what was in the budget until they "killed" the scheme.

Tariro Washinyira is a GroundUp staff writer doing an internship with amaBhungane. This article was simultaneously published by the Mail & Guardian and amaBhungane.
www.groundup.co.za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