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Harvest SA

Securing South Africa's

FULLY ENDORSED BY GRAIN SA GRAAN SA

Siyabonga Gama

Transnet Freight Rail CE reveals plans to expand logistic operations

TRANSNET freight rail

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

TABBIES 2013 Award Winner


DESIGNED TO HELP SAVE FUEL*
More go time, less down time. Formulated to maintain the engine's operating efficiency, Shell Diesel Extra is the professionals' choice to help protect the engine from the inevitable effects of intensive operations so that your equipment can run more efficiently for longer.
Shell Diesel Extra
* Compared to regular diesel without fuel economy formula. Savings may vary per truck/vehicle.

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On the cover

Siyabonga Gama, CEO of Transnet Freight Rail speaks to *Harvest SA* about its Memorandum of Understanding between Imperial Logistics and Barloworld, transforming transport logistics from road to rail.

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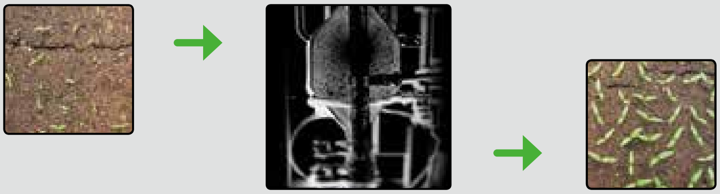
CONTENTS

The seven INCOTEC technology groups

incotec
involved in seeds

Upgrading

Processes to seperate the seeds with the best germination quality from those with less germination quality.

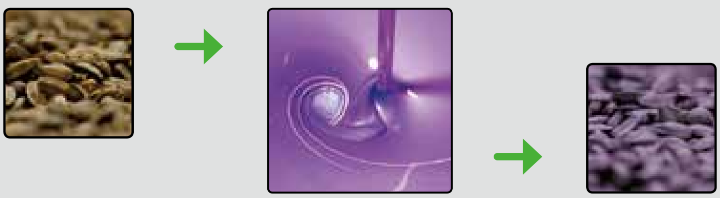


Priming

Under controlled conditions germination is triggered and then brought to a standstill at just the right stage.

Disinfection

Different techniques to remove seed-borne diseases from the seed.

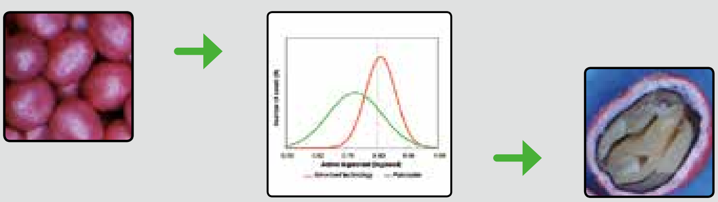


Film coating

Applying a film coating, which is usually colored, while maintaining the original seed shape. In this way actives and additives can be applied to the seed.

Encrusting & pelleting

Adapting the shape of the seed by affixing a layer of coating material. This makes the seed easier to sow. This layer of coating material can also be used as a carrier of actives and additives.



Application of actives and additives

Seed application technology as an independent platform for PPPs, stimulants and biologicals which protect seeds and plants against diseases, stimulate root and plant growth and improve nutrient uptake.

Analytical quality testing

Control and breeding assistance through a broad range of biochemical molecular and analytical tests and technologies.

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field crops vegetables ornamentals analytical services

FORE WORD

JANNIE DE VILLIERS
CEO: GRAIN SA

Do we lack discipline?

Grain SA would like to congratulate Cape Media on the wonderful honour of winning a gold medal at the Tabbie Awards, an international platform with *Harvest SA* magazine - most remarkable is the short time in which the team has achieved this goal.

While the team at Cape Media work on the next editions of the publication, civil society in South Africa is confronted by crime and lawless individuals on a daily basis, not just breaking the law, but also acting with such selfishness that it harms their fellow citizens. Our first reaction is always to add more rands to the national budget for law enforcement and therefore adding to the number of policemen and women as well as those who monitor the regulations and laws. I want to argue this lawlessness and selfishness from another angle, — that of a lack of discipline.

Discipline and self-discipline are taught at home. Long before any of us knew anything about laws and regulations, our parents taught us the principles of right and wrong, and above all they taught us to respect authority. Is the current wave of lawlessness a result of bad parenting or has it to do with the many homes where children are at the head of a family because of the devastating effect of AIDS. Or is it an unintended consequence of a generation of revolutionists revolting against authority? It is probably a combination of the three. If it is the latter of the three, the behaviour of people should have changed together with the change of government in 1994. I am of the opinion that the lawlessness and poor discipline are intensifying and the causes need to be investigated.

As a parent myself — my kids are young adults, my wife and I believe in mentoring and advising them in making their own decisions. We still need to assist them to consider all the consequences of their decisions and behaviour — especially in correcting wrong decisions and behaviour. All this is done in an effort to deliver responsible citizens to South Africa.

My contention is that parents are failing our country by not delivering on their roles as parents to young individuals who should be behaving in a responsible way. The principle of respecting authority begins with not talking on your cell phone driving, obeying the traffic rules and not following those who have no respect for the law. What does your child learn from you when you are driving and talking on your cell phone? Actions speak louder than words, in my opinion.

GSA would like to wish all our readers a Merry Christmas, a safe and festive season and a prosperous 2014.

Shell's AgriBonus improves farmers' bottom-line

Understanding the financial pressure on small business owners, especially farmers, Shell have deployed loyalty programme AgriBonus to incentivise farmers and small business owners to shop at Shell branded distributors.

The AgriBonus loyalty scheme is a multi-spectrum programme with several service providers and partners offering a vast range of products, allowing the customer to be incentivised on a much larger portion of their business spend.

"The programme is designed to reward our customers for their loyalty. It provides a channel for developing long-term relationships with our customers, allowing us to reap the benefits of mutually beneficial relationships," says Andrew Evans, commercial marketing manager at Shell SA.

Get your AgriBonus card at a Shell branded distributor near you

Express Petroleum	Eastern Cape/Greater Karoo	043 726 3022 041 486 2601
WJ van Zyl	Western Cape	021 905 5915
DJ Erasmus Vervoer	Western Cape	028 4241755
Oilco	KwaZulu-Natal/Mpumalanga	035 792 4900
P Trimborn Agency	KwaZulu-Natal	033 346 1093
Auto Commodities	Gauteng/North West	011 955 4571
Midwit and Porta Diesel Distributors	Mpumalanga	013 631 7978 013 246 1252
Sebokeng Fuels	Gauteng/North West/Limpopo	016 423 5860 014 717 1900 014 598 4036 058 852 2758 018 632 0681/2

What is AgriBonus?

AgriBonus is the first benefit programme specifically designed for the farmer, by awarding customers points for purchases made. The points have a monetary value and can be exchanged for items that customers need. Points can also be used to purchase products at partner stores.

The more products are purchased, the more points are earned, and the higher a participant is rated, thus qualifying leading participants for yet more benefits and awards. Points can be redeemed at the Bonus Shop on AgriBonus' website.

How does AgriBonus work?

AgriBonus is only available at Shell branded distributors across the country. Customers can visit any of these distributors and request an AgriBonus card.

The cards are used to gain points when they purchase diesel or lubricants at any distributor across the country. Points are also earned when customers purchase goods from Shell's partners.

AgriBonus sends out points statements to each customer quarterly, notifying them of the value of redeemable gifts that they have qualified for.

"We want our customers to view us as a business partner. The monetary value of their points can be used to purchase more stock, thus reducing their operating expenses and increasing their bottom line", adds Evans.

Shell branded distributors

Shell believes that the closer the farmer or business is to fuel distribution points, the more efficient the service delivery they enjoy.

This understanding of the conditions and pressures under which farmers operate, has enabled Shell to support independent fuel distributors across the country.

"Our ability to deliver fuel and lubricants through our network of contracted Shell branded distributors plays a major role in servicing our agricultural customers. Farmers can also enjoy the benefits of technical know-how, taught through regular training programmes," adds Evans.

For more information on AgriBonus, log onto www.agribonus.co.za

EDS NOTE

TRACEE HARVARD
EDITOR

Growing gardens of goodness

Today we live in a world where a alternative means of finding good, wholesome and nutritious food is of great consequence.

Food has become too expensive for many — even the upper echelons of society complain about the soaring prices of food, which means the middle class are feeling it.

And if we the middle class are feeling it, you can only imagine what it must be like for those who live in poverty. It is quite likely that they have no idea where their next meal — or their families' next meal is coming from. I personally cannot imagine what that must feel like, but if I place myself in their position for just a moment ... I feel frightened.

Soon, the global population will place so much pressure on the agricultural industry that alternate means will be required to control the issues of supply and demand. In fact, it is already happening.

If today, 11 million people have no food in South Africa, imagine what it will be like when in a handful of years time there will be millions more people on this planet who will struggle to afford food or be able to gain access to it.

With water scarcity already an issue for most of Africa coupled with a lack of proper infrastructure that is holding back economic development on the continent. High prices for fuel and food and global warming impacting every aspect of our lives — if ever there was a reason to go to war this would be it. Do not fight your society or your government, rather work together and fight the war on food and water insecurity.

That is why it is of great importance that we all play a part in easing the pressure on our pockets, on our environment and fragile resources.

For the suburban housewife, establishing a vegetable or herb garden is trending at the moment. But for the mother of five who lives in a rural area it is a necessity.

Even cities that are re-establishing themselves as green cities or smart cities are engaging in the ideology of living green: being smart about our buildings, our resources and our environment and how we use all of these together in a sustainable manner.

We are starting to see that rooftops in concrete jungles of South Africa are adorned with greenery whether it is vegetable gardens, flowers, hedges, indigenous plants, fruit trees and more.

South Africa is slowly realising that to have a garden on a roof top isn't bourgeoisie, but rather a very important start to the fight against hunger.

A09597/HSA

PRODUCING CONSERVING IMPROVING LIVES

THIS IS HOW WE ARE GOING TO FEED A GROWING POPULATION

PROBLEM

RAPID POPULATION GROWTH

Source: http://www.worldometers.info/world-population/

THREAT TO FOOD PRODUCTION

- Climate change
- Limited and shrinking resources
- Pests

SOLUTION

GM CROPS

Plant varieties that deliver:

- More yield
- More efficient use of resources
- Insect tolerance
- Herbicide tolerance
- More biodiversity
- Increased yield

Better seeds are helping farmers **grow more while using less**

WHAT'S IN IT FOR YOU?

***GM crop benefits:**

Increased food security
Increased sustainability

Decreased emissions
Decreased use of pesticides

ENOUGH HEALTHY FOOD**

15 years of production on more than 1 billion hectares worldwide

NO ADVERSE EFFECTS DOCUMENTED

* According to Brookes and Barfoot, 2013, from 1996 to 2011 biotech crops contributed to food security and sustainability by increasing crop production valued at US$ 98.2 billion. It also provided a better environment by reducing pesticide use by 473 million kg of active ingredient. In 2011 alone CO_2 emissions were reduced by 23,1 billion kg, equivalent to taking 10,2 million cars off the road.

** Regulatory agencies worldwide, such as the Food and Agriculture Organization, World Health Organization, the European Commission, the French Academy of Medicine, the American Medical Association, and the American Society of Toxicology have agreed that GM foods are safe for human health.
http://www.sho.int/foodsafety/publications/biotech/20questions/en/
http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf

MONSANTO®

About Monsanto Company

Monsanto Company is a leading global provider of technology-based solutions and agricultural products that improve farm productivity and food quality. Monsanto remains focused on enabling both smallholder and large-scale farmers to produce more from their land while conserving more of our world's natural resources such as water and energy.

Clients are welcome to contact our client services on 011 790-8201 or customercare.sa@monsanto.com

To learn more about our business and our commitments, please visit: www.monsanto.com. Follow our business on Twitter® at www.twitter.com/MonsantoCo, on Facebook® at www.facebook.com/MonsantoCo, or subscribe to our News Release RSS Feed.

Furthering connections

Siyabonga Gama, CEO of Transnet Freight Rail, speaks about the company's major plans to expand operations and contribute to the economy in a sustainable manner

Transnet Freight Rail, the largest division of Transnet, is a world-class heavy haul freight rail company that specialises in the transportation of freight. With over 38 000 employees spread throughout the country the company maintains an extensive rail network across South Africa that connects with other rail networks in the sub-Saharan region. Transnet's rail infrastructure represents about 80% of Africa's total and operates in six business units: Agriculture and Bulk Liquids, Coal, Container and Automotive Business, Iron Ore and Manganese, Steel And Cement, and Mineral Mining and Chrome.

Transnet Freight Rail (TFR) has a strong and proud reputation for technological leadership beyond Africa as well as within Africa, where it is active in 10 countries. The company has positioned itself to become a profitable and sustainable freight railway business to assist in driving competitiveness in the South African economy.

Africa as a whole is currently a hub for accelerated growth and development and the role that TFR plays, especially within the SADC region, is vital for its success. We have a powerful rail link and our aim, particularly in Africa, is to create a seamless flow from point to port – almost as if there are no borders.

The market demand strategy mandates us to perform in order to narrow service gaps and fulfil the country's economic needs and this affects Southern Africa as well. We have, through our International Business Unit (which aims to grow Transnet Freight Rail's activities in neighbouring countries and identify new markets in an effort to extend the company's operational footprint), formed the Joint Operating Centres (JOCs).

JOCs are a facility and centre for rail and port information sharing. They are set up in Botswana, Mozambique, Swaziland and Zimbabwe in partnership with the respective countries and their railways. This year we started a train service running in Malapye Botswana, from the coal mines straight to the ports in Durban.

A single touch point is significant for cross border planning and execution. It drives improved efficiency and will be essential in the co-planning of operational execution of trains from borders to ports in the four countries and the rest of Southern Africa.

What we want to see ultimately is a relationship between TFR, SADC Ports and rail and transport service providers to promote investment and ensure efficient supply chains and volume growth and a satisfied customer.

The International Business Unit co-ordinates and grows TFR's activities in the neighbouring states and identifies new markets in an effort to extend the company's operational footprint.

TFR as a freight rail company with a unique service offering in our economy and in the country cannot provide the service in isolation. Road versus Rail has long been a topic of discussion – we have reinvented it as a Road and Rail collaboration. This is a strategic and mutually beneficial partnership between TFR and other transport logistics companies. It exists to achieve the objective of moving rail friendly traffic from road to rail and to create an end-to-end logistics solution for our customers. The effect is a lowering of the cost of doing business and growing freight movements – all in an effort to achieve the Market Demand Strategy and ultimately grow the South African economy.

We have signed Memoranda of understanding with logistics giants like Imperial Logistics and Barloworld Logistics which is the first step in achieving these objectives. The partnerships are aimed at allowing these companies' to offer their customers, as well as TFR, an end-to-end logistics solution. As partners in trying to move the South African economy forward,

we will rely on each other to integrate our expertise to serve customers better. The aim is not to compete with road but rather to simplify the way of doing business in the South African transport and logistics sector. Moreover, this will filter into the rest of the countries which form part of the SADC region and ultimately, the rest of Africa.

The Agriculture and Bulk Liquids (ABL) business unit

The main objectives of ABL's are to achieve volume growth, shift appropriate volumes from road to rail, reduce costs and harness market opportunities in the agricultural and chemical sectors. The business unit is geographically dispersed with depots extending from Durban and Pietermaritzburg to Pretoria and Sentrarand in the north; Bethlehem, Kroonstad, Bloemfontein in the Free State as well as East London, Worcester and Bellville in the Western Cape.

Critical train flows are:

Timber: Ermelo to Richards Bay, Ermelo to Umkomaas and Ermelo to Ngodwana.

Fuel: Fuel from Durban to Gauteng, Pretoria to Polokwana. Aviation fuel is transported from Island view to O R Tambo and Sasolburg to Waterkloof by Butadiene gas tankers and from Richards Bay to Newcastle and Sasolburg.

- Grain: Kroonstad to Durban, Kimberley to Cape Town, Klerksdorp to Polokwane.
- FMCG (fast moving consumer goods): Train flows are Rosslyn to Bloemfontein, Pietermaritzburg to Johannesburg and Caledon to Johannesburg.
- Chemicals: Secunda /Sasolburg to Durban and Richards Bay.

Since the opening up of international markets for export maize, local grain prices, which will dictate imports, exports and grain demand in the southern African region, might impact the future performance of this sector and business unit. The market objective is to try and recapture some of the lost market share over the next few years. This will go hand in hand with TFR's efficiency improvements, the implementation of the grain model, volume ramp up and more reliable service. We are looking at increasing tonnages transported by at least 5% per year over the next four years. FMCG consists of frequently purchased products such as food, beverages, household products and general merchandise. The market is very volatile and seasoned with new commodities and brands being frequently launched. The ABL business unit transports mainly sugarcane, refined sugar products, beer and barley in this portfolio. Since railways typically serve bulk markets, some of our key challenges involve exploring ways to consolidate products into bulk volumes at key hubs to reduce costs.

The ABL business unit is a logistics enabler for various sectors which require over-border freight movement. A varied product and client base characterises this business sector which aims to increase trade between South Africa's immediate neighbours and other countries from the broader SADC region. Market growth opportunities over the coming years show that timber products, chemicals and petroleum liquids/products will grow by 20 million tons (mt).

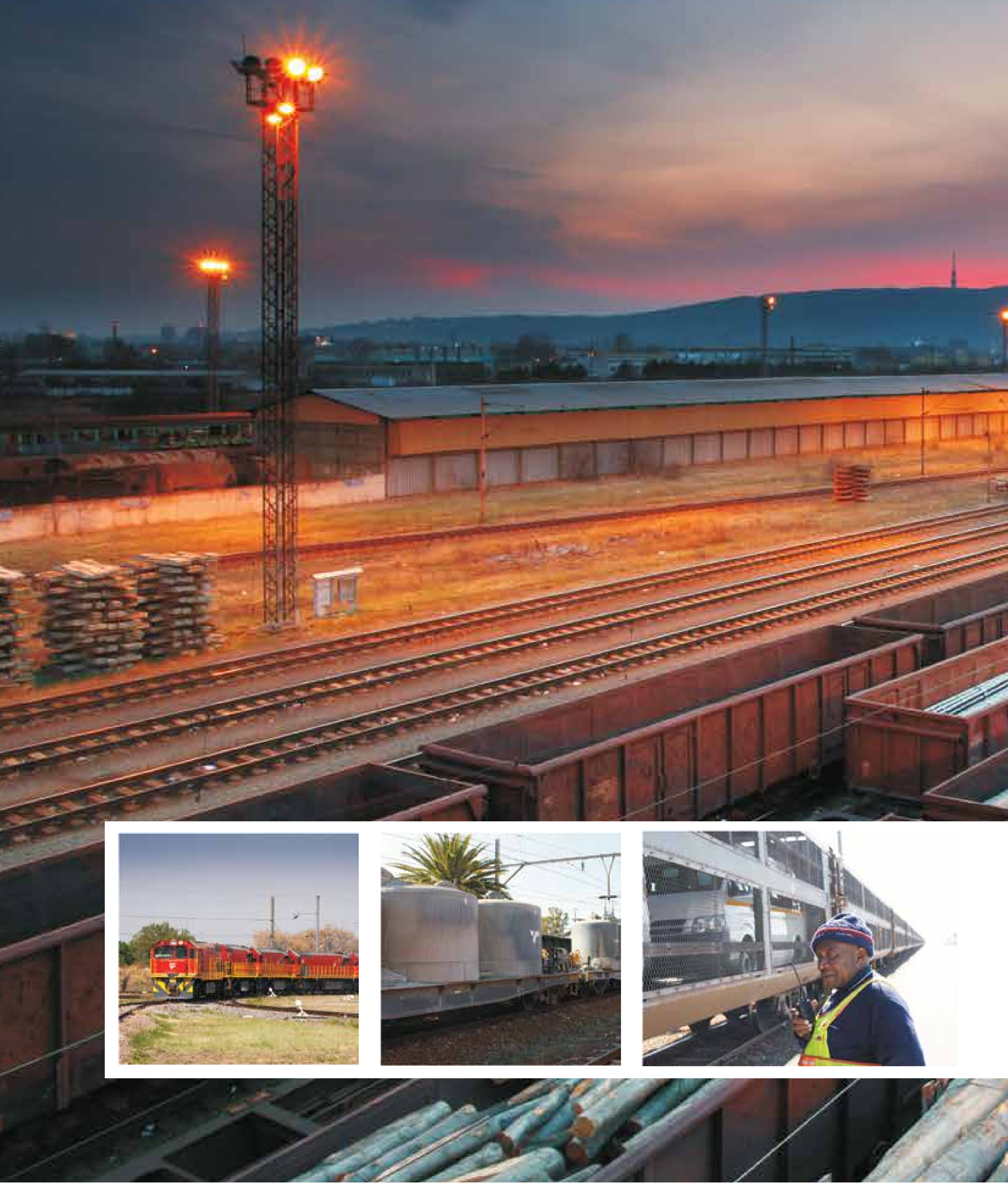
As part of the Market Demand Strategy (MDS), TFR continues to strive for 100% customer satisfaction. This means that our operations and service provision should meet our customers' needs and deliver freight reliably. All our operations and current and future initiatives and partnerships are aimed at doing just that. In turn this means that a large investment needs to be made in infrastructure and operational development. The MDS has allowed TFR R205 billion for the development of infrastructure, rolling stock, facilities and branch line revitalisations over the next seven years.

TFR transports more than 15 million tons of domestic coal a year, 15 million tons of grain, FMCG, chemicals and other liquids and over 10 million tons in our containers and automotive business unit, all of which include export goods as well as providing the nation and its businesses with the goods they require in order to conduct their business.

Huge economic relevance is gained in the South African environment when the freight transportation industries partner with and provide opportunities to smaller businesses and collaborates with the private sector. There is a strong correlation between the freight transportation of a country and its GDP growth. Anything that the industry or SOEs can invest in making the freight transportation more efficient directly affects the general public as it lowers the cost to consumers. This also results in a greater level of global competitiveness.

TFR has made every effort to improve its business operations and provide an efficient and reliable service. We are acquiring brand new locomotives and I believe that this in itself is a great achievement for the business. These locomotives will add to our rolling stock and infrastructure development and ultimately create better efficiencies. One of our greatest projects this year was our coal-line project called Project Shongololo (millipede). This entails bypassing the Ermelo yard leg of the service, which will significantly reduce train handling processes. Shongololo is a 200 wagon train service on the export coal line that will run directly from the Richards Bay Coal Terminal (RBCT) to the mines in Mpumalanga giving the company the capability of exceeding 81 million tons per annum in the next financial year, should the coal be available. Decreasing the handling processes used during train transport will increase reliability which will equate to improved sustainability and service predictability. This is part of the scheduled railway philosophy introduced by TFR two years ago. We would like to collaborate with the agricultural sector to increase wagon loads (less than train wagon loads, less than 20 wagons is not economic to railways). The old marketing boards were crucial to the consolidation of cargo into large parcels. Efforts to improve hub and spoke systems will ultimately better serve our customers, who themselves need to be better organised so they can consolidate their produce in silos so that we can rail larger loads.

On a global scale our high aspirations are not far from becoming a reality. One of our brand positioning statements is that we would like to be among the top five railway companies in the world by 2020. This is dependent on a number of factors, but TFR and Transnet as a whole has grown in leaps and bounds as a freight company within South Africa. We are currently the best in Africa and The Middle East and hold 9th place in the world, so I would say that we are not too far off. There are still a lot of technological and technical developments out there that we can learn from in our endeavour to becoming a company worthy of a world top five ranking. Already, the iron ore operations are the best heavy haul operation in the world and coal is improving steadily.



RELIABLY MOVING FREIGHT 24 HOURS, 365 DAYS

Transnet Freight Rail (TFR) aspires to be counted among the top five best railways in the world by 2019 resulting in our communication and strategies modernised in line with global trends. TFR International Business is enabling African regional development through integrated planning and infrastructure development with - its over-border railway and intermodal hubs and ports. This development has led to the establishment of Joint Operating Centres (JOC) with strategic intent of enabling regional integration - to be achieved through the institutional framework of JOC in Maputo, Mahalapye and Bulawayo. The railway operators in the African region will execute the scheduled railway philosophy seamlessly, eliminating existing country boundary complexities. This will align the railway companies in each of these corridors in order to execute one unified railway system. The primary objectives are to achieve operational efficiencies and improve real time communication in the African region. To give effect to TFR's Africa Strategy, the three JOC's will be operational by November 2013.

Our business is moved by our people

TRANSNET

delivering freight ***reliably***

freight rail

www.transnetfreightrail-tfr.net

The Maize

Trust

The custodian of the maize industry in South Africa

Helen Keller once said: Alone we can do so little; together we can do so much.

In agriculture, few activities take place without help from others or assistance from experts. The Maize Trust protects the funds of the maize industry, but without organisations like Grain SA the funds cannot properly be utilised to the benefit of the industry.

The Maize Trust came into existence in August 1998 after long and challenging negotiations between the then Minister of Agriculture and representatives from the maize industry, following the demise of the Maize Board. The provisions and stipulations of the Deed of the Trust are the result of these negotiations. The provisions of the Deed were a compromise by both the Minister, on behalf of the government, and industry role-players. However, first and foremost in everybody's mind at the time were the benefits that a trust of this nature could bring to the maize industry as a whole. The Maize Trust was therefore born as the custodian of industry, which is to be used to the advantage of the industry at large, within the agreed principles and policies as stipulated in the Deed.

The responsibilities of The Maize Trust

The Trust serves the industry through financial support for institutions and organisations with programmes aimed at market and production related research. The secondary objectives of the trust are to fund the assimilation and dissemination of market information and to broaden market access for the benefit of the maize industry. An amount of R319-million was transferred as a donation to the Maize Trust by the Maize Board, with the final transfer done in June 2010 at the completion of the dissolution process of the Board.

The trust does not have personnel, but makes use of the services of a part-time investment adviser on a contractual basis to advise the trustees on the investment of the trust's funds. The administrative services of the trust are contracted out to an independent firm. The trustees are not remunerated for their services but are reimbursed for their direct and indirect expenses on behalf of the trust. The Board of Trustees comprises six members and is appointed for a term of two years. Three of the trustees are appointed by specific maize industry sectors, while the other three Trustees are appointed by the Minister for Agriculture, Forestry and Fisheries.

The mission of the Maize Trust is to facilitate the continuous improvement of the entire maize industry in South Africa, to ensure that the industry becomes the leader in the region and that it is internationally competitive. The Trust Deed does not specify beneficiaries but only lists the objectives of the trust. This means that funding from the trust can be accessed by anybody in the

maize industry who can demonstrate that the intended programme will benefit the industry as a whole. The trust's funding is aimed at the financial support of actions and programmes by acceptable institutions that are involved in the maize industry.

The general criterion for funding is that each project should have a quantifiable and measurable outcome, which is consistent with the mission and objectives of the trust. The trustees, twice a year, consider applications for funding and approximately a further six meetings are held annually to discuss the general operations and investments of the trust.

Funding is aimed at improving the whole maize industry

Since its establishment, the Maize Trust has granted a large amount of money to a variety of organisations and institutions involved in research, development, information and other relevant programmes in the South African maize industry. The grants are paid from the annual income of the Trust, which is derived from dividends and interest on the investment of the donations that the trust received from the Maize Board. The trust does not have any other source of income.

The trust is currently spending approximately R50 million per annum on project funding that is directly aimed at the improvement of the maize industry. The investments of the Trust have always been managed prudently and with great caution, which resulted in very good returns and a steadily growing asset value. This was done in line with the policy to have an evergreen trust that could be maintained to the advantage of the maize industry. Funding by thetrust is done annually to a maximum of 6% of the trust's asset value in order to achieve this policy. The costs of the trust are strictly managed and are kept as low as possible. This proves the fiduciary responsibility of all the trustees who have been appointed to the trust over time and is still the case up to this day.

Identify and implement new initiatives

Over the years the trust has endeavoured to identify and implement new initiatives in conjunction with the normal funding of projects that would benefit the industry. There are several successful initiatives that have been launched by the trust since its inception, which have all benefitted the maize industry and often created opportunities and benefits for the other grains and oilseeds industries. A few of these initiatives were initiated by the Maize Trust and in others the trust played an important part in their funding thereof.

Some of the highlights in the industry where the Trust has or is still playing an important role are:

- The development and co-funding of the Southern African Grain Information Service

(SAGIS) and the Southern African Grain Laboratory (SAGL);

- The development of a model to predict the effect of changes in the agricultural industry (BFAP);
- Funding of a highly successful Farmer Development Programme for emerging maize farmers (Grain SA);
- The development of a crop estimates model (DAFF / SiQ (Pty) Ltd);
- A generic marketing campaign for maize ('Pap Idols');
- South Africa's participation in a World Trade Organisation dispute on trade subsidies;
- A dedicated and focused schools Programme, managed by Grain SA, to increase knowledge and awareness among school children about maize, farming and careers in agriculture;
- The Maize Trust Bursary Scheme and Internship Programme;
- The launch of a pilot project to assist black emerging farmers and the formation of the Grain Farmer Development Association (GFADA);
- The donation, allocation and distribution of maize meal to the value of R1 million to help the poor;
- Application on behalf of all the agricultural trusts to get clarity on the tax exemption status of the trusts (SARS);
- The development and erection of the Grain Building in Pretoria;
- The development of a common and focused mycotoxin research strategy and a dedicated panel of mycotoxin experts (Facilitator: Prof P.S. Steyn);
- The possible development of a Public-Private-Partnership to co-fund approved mycotoxin research projects (Department of Science and Technology); and
- The development of a conservation agriculture strategy for maize and the appointment of a specific facilitator to drive this process (Facilitator: Dr Hendrik Smith at Grain SA).

Board of Trustees

Continuation of trustees is extremely important to ensure the correct

functioning of the trust. During the past financial year there were no changes to the trustees.

The Board of Trustees is comprised by three Ministerial representatives, namely Karabo Peele, Toto Hewu and Penny Daly as well as three trustees from industry, namely Jannie de Villiers who is the representative of white maize producers, Neels Ferreira who represents yellow maize producers and John Purchase who represents maize processers. The composition of the trust was also a negotiated agreement between the government and the maize industry in the 1990s, in an effort to provide fair representation to all parties involved.

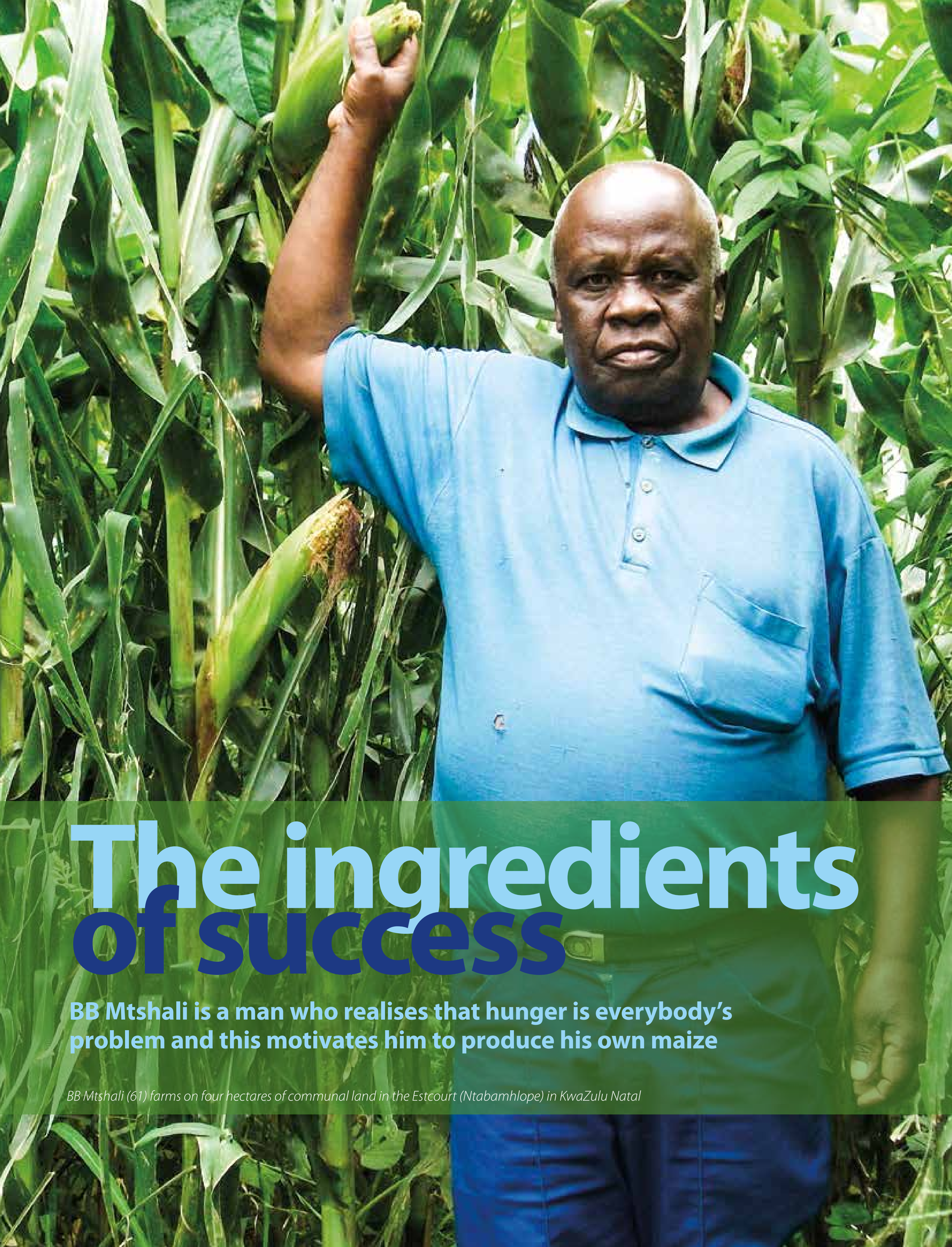
Grain SA's Farmer Development Programme also benefits

The trust currently contributes approximately R15 million per annum to Grain SA's Farmer Development Programme, which represents the lion's share of the costs of that Programme. This Programme has always been supported by the Maize Trust and is generally seen as the most successful development Programme for emerging farmers in the grain industries.

The Maize Trust is committed to capacity building in the South African maize industry. Training, development and mentorship of new farmers is a crucial part of this.

Without successful farmers the industry and the country will suffer, because reliance on imports is not regarded by the trust as a long-term solution to food security. It is also crucial for farmers to be well trained in order to be more competitive in the international market. The last few years South Africa has proved to be a regular exporting country for maize and international competitiveness is imperative for our farmers to survive. The trust supports farmer development for these reasons and believes that the sustainable commercial production of maize will achieve food security and independence for our country from other sources.

Leon du Plessis
Administrator: The Maize Trust



The ingredients of success

BB Mtshali is a man who realises that hunger is everybody's problem and this motivates him to produce his own maize

BB Mtshali (61) farms on four hectares of communal land in the Estcourt (Ntabamhlope) in KwaZulu Natal

On how many hectares are you farming? What do you farm with?

I farm in a communal area and cultivate four hectares of maize, two hectares of dry beans and half a hectare of potatoes.

What motivates/inspires you?

My father passed away when I was very young and my uncle started to use me to hold the rope in front of the oxen when he ploughed. Later on, when I had the strength, I was able to plough my own field. My main motivation has always been to provide enough maize for my family because buying maize meal and transporting it back is very expensive.

Describe your strengths and weaknesses.

Strengths: My willingness to work hard and provide for my family makes me proud.
Weaknesses: I think my biggest weakness is my age and the fact that I cannot get finance to plant more fields.

What was your crop yield when you started farming? What are your respective yields now?

Back in 1975 I harvested about 26 bags of maize per hectare but now after receiving training from Grain SA and attending study groups meetings I averaged a yield of 4.8 tons of maize and had enough maize for my family and could sell the extra maize to a local buyer.

What do you think was the main contributor to your progress and success?

Training and study group meetings taught me a lot but taking soil samples, planting better cultivars and the involvement of my local Department of Agriculture has done a lot for me.

What training have you received to date and what training would you still like to do?

I have done the introduction to maize course and the tractor maintenance course but I would love to do the tractor repair course because then I would be able to repair more than the small stuff on my Massey Ferguson 135.

Where do you see yourself in five years? What would you like to achieve?

In five years time I would like to be a bigger farmer and be able to have the funds to plant more fields — if God gives me the strength to do that I would be very grateful.

What advice do you have for young aspiring farmers?

I will advise young farmers to learn more about our soil and agriculture and to love the soil and become active with the soil. The young people need to become active farmers who can grow food for themselves and for the growing population. Working hard and learning more about producing food is key to become success full in farming. The other thing is to never give up and always look forward and learn from your mistakes.

Jurie Ments

During the Agri Megaweek in Bredasdorp, Grain SA's Farmer Development Division displayed the tractor that they use to train emerging farmers about the technical aspects of servicing tractors

What pests!

About a quarter of our grain production each year is given over to vermin, birds and insects

For quite some time now the issues of food security in South Africa have been at the forefront of both the public and private sector's discussions. However, while both parties are eager to find solutions to food security, both seem to be unable to come together and say and do what is needed to get the conversation started on a far more pragmatic and effective level.

And, we know what the problem is: climate change, population growth, water shortages, unemployment and the high cost of food all impact on global food security.

For example, in 1935, the global population stood at 3.5 billion people. Today that number has doubled and in 2040, will have done so again. And while we try to the best of our abilities find sustainable solutions, there are other elements at play against us.

According to Dr Marinda Visser, a plant pathologist who heads the industry services division of Grain SA spoke about how the impact of pests and diseases on crops is hampering our food security issues further more than what we knew.

Amongst the many things to consider when grain farming, pestilence and disease are two environmental concerns that farmers, particularly developing farmers need to be knowledgeable about so as to prevent utter crop devastation.

According to Dr Visser, there are a number of birds and vermin that destroy about a quarter of our annual grain harvests and will continue to do so under the aegis of conservation agriculture and various environmental laws that protect these pests unless quick legislative action takes place preventing further crop damage.

One of Grain SA's biggest areas of support is helping to develop farmers to become commercialised through its well-known farmer development programme.

Dr Visser's department while misleading by name has a most important role in supporting the farmer.

"Our primary mandate is to make sure that all grain farmers are armed with information in terms of market information, inputs information, research and development and making sure that farmers remain sustainable and profitable in the long term."

Dr Visser as head researcher in the department makes certain that the research is needs driven to help address farmer constraints both for the developing and commercial farmer.

"When I started my masters, I focused on a mycology project where we looked at fungal diseases of important crops. And while I started my PhD at the University of Pretoria, I did part of it at the University of California Davis which is the best school for plant pathology in the world. I focused on tropical fruits and the diseases affecting these crops because millions were lost each year to crop devastation which is not just about fungal or bacterial diseases that are destroying farms."

According to Dr Visser, while focus is usually on whether there is land, seeds, equipment and so on, there is not a substantial amount of information passed on about diseases and pests that can wipe out crops. Having that information is vital to the longevity of a farm.

"It is different to livestock. People can always detect a sick animal. With a field of maize, the one day it can look good and the next day it is gone because of the one or other disease."

Education seems to have fallen short in the last few years because extended services which Dr Visser considers vital have decreased.

"What I am trying to do, is grow extended services once more and help farmers get diagnostic and technical support in terms of disease and pestilence control."

Touchy subject

Crops that are more unlikley to be impacted by pests and disease are genetically modified organisms (GMOs). But according to Dr Visser who quoted the World Health Organization, there is no proof in the world that biotechnologically produced crops are harmful to society.

Dr Visser advocates that: "GMO is just a tool that is used to enhance disease resistance or to make a crop stronger."

While this may be a highly contentious issue for South Africa, the government has legislation to ensure that GMOs are very strictly regulated.

"We have a technically sound GMO council which oversees every application ensuring thorough screening so nothing can enter this country without expert approval.

Interestingly, South Africa produces about 85%-90% of its soya beans and between 80%-90% of maize through GMO.

Pests

Two of South Africa's provinces have been devastated by pestilence this year and while the usual suspects like army worms are to blame, there is yet another that the man on the street wouldn't even consider.

"Depending on which commodities we are looking at, in the past season there have been great outbreaks of army worms in maize crops which have caused a lot of devastation in the North West and the Free State.

But rodents are the biggest problem we face in the maize commodity and which are threatening our food security. These are the sort of pests that we want the Department of Agriculture Forestries and Fisheries (DAFF) to update our national database of pests so that we can include these problems because tif they are not part on a legislative platform, the problem cannot be managed.

One needs a management plan that will look to add to the list of pests. Pigeons and doves are eating our sunflower crops. We are a net importer of sunflower oil. We can produce more, but because of this problem we are importing it because our farmers don't want to produce sunflowers anymore because of pestilence problems."

It is as simple as just changing the legislation, and should be driven by government.

According to Dr Visser, "We have tried to work with the government, but there hasn't been much co-operation. We have sent several letters to officials who deal with these issues but its at a point now, where the losses to the developing sector has become significant."

Dr Marinda Visser, Industry Services for Grain SA

A sense of urgency

With food prices, population and our societal needs increasing, it is that more important to invest time energy and money into finding sustainable solutions to a problem that according to Dr Visser is a lot simpler than it seems.

"If we don't put enough public funds into research and development looking at new technologies, looking at better ways of doing more with the same piece of land, if we dont invest in these areas so then I don't see how we going to self sufficient any time soon."

She further advocates that while there are no longer breeding programmes in the public sector, but rather in the private sector, that public and private partnerships are needed to further research ways in producing more of our own produce.

Dr Visser would like to see South Africa 85% self-sufficient but unfortunately with all the obstacles in the way, the country is not at that level yet.

Tracee Harvard and Tony Sanderson

The hand that feeds

Food security is a far more complex social issue than we think. Environmental concerns, a global rise in population, price hikes and infrastructure are all elements that weigh heavily on this topic

One of the greatest challenges mankind has had to face in the 21st century is ensuring that there is enough nutritious food for all, while also looking after the natural environment in a sustainable manner to ensure that natural food production continues.

Combined with climate change issues and an increase in the global population, food security is at the top of the agenda in political centres across the globe.

South Africa

In an article called 'The hidden food security issue in South Africa' written by Refiloe Joala on *www.thoughtleader.co.za* she points out that while South Africa is food secure and is able to feed its people, the greatest issue is distribution and being able to afford to feed one's family, particularly in rural areas which is near impossible."

"South Africa entered the [economic] crisis marred with local financial weak points, which included a very large current-account deficit, high interest rates and high inflation. However, almost four years out of the recession, consumers are still feeling the brunt as the general price of food continues to rise. In February [2013] the Food and Price Monitor reported the inflation on food and non-alcoholic beverages in January 2013 at

6.2%. Recent reports indicate that inflation has dropped to 5.9%. However, the price of rice (2kg) and maize meal (5kg) were respectively reported to be R3 and R2.20 more expensive in the rural areas compared to the urban areas."

The issue of poverty is not one many of us reading this can understand, and yet high food prices are making an impact in all households regardless of social class. The worst affected, however, are the 11 million people who will probably not have a meal today.

However, besides the cost of food distribution, logistics planning is also a major contributor to people living in rural areas who don't have access to nutritional food. Having said all of this, one of the core focuses of the National Development Plan for 2030, highlights food security in South Africa as a vital area for the country's growth but is hard pressed to meet these goals with the increase in population, high prices and global energy needs.

The Department of Agriculture, Forestries and Fisheries is doing its best to uphold its mandate in supporting co-operatives and Small to Medium and Micro Enterprises (SMMEs) which has its own set of unique challenges: land use, support, a lack of infrastructure in roads, water, energy and ICT.

Annually, 16th October is acknowledged as World Food Day. The theme for 2013 is 'Sustainable Food Systems for Food Security and Nutrition". Established by the United Nations Food and Agriculture Organization (FAO), it aims to highlight the challenges and solutions to hunger and food security issues around the world.

There have been many conferences aimed at strategising ways and means to ensure food security is stable across the globe.

The first international conference on global food security which took place between the 29 September and 2 October in The Netherlands. Over 600 delegates from 60 different countries attended the event with the aim of: "…delivering state-of-the-art analysis, inspiring visions and innovative research methods arising from interdisciplinary research. Join us in this exciting opportunity to ensure that the best science is garnered to support the emergence of the sustainable development goals.

Achieving global food security while reconciling demands on the environment is the greatest challenge faced by mankind. By 2050 we will need to feed nine billion people. The urgency of the issue has led to huge scientific strides forward; making it difficult to keep up with the rapidly expanding volume of scientific research.

"We aim to better understand economic, social, biophysical, technological and institutional drivers of current and future global food security. The conference will address food production and access, and the trade-offs between competing environmental, economic or social objectives and outcomes."

Conferences like this aim to establish a strategic plan going forward and as a result, the combined information collected from the conference will be compiled into what a Synthesis Paper and will further their findings by creating a special edition called the *Global Food Security Journal.*

Topics that were covered as plenaries at the conference will be incorporated into the findings of the paper and journal which are:

- Global and local analyses of food security:
- Enabling policies for local and global food security;
- Sustainable intensification of food production systems;
- Novel ways of feeding nine billion;
- Learning from the past to understand the future;
- Land sparing, land sharing and trade-offs
- Agricultural production as feedstock for renewables;
- Lost harvest and wasted food;
- Nutritional security; and
- Labelling, certifying and striving for quality and sustainability of food production.

The amount of food that is wasted globally on an annual basis is estimated to be approximately 1.3 billion tonnes which amounts to 470 billion Euros. Translated, this means that alternate and better means of transporting, packaging and handling produce needs to be taken into consideration.

Humans tend to want the best of everything, whether it's the perfect avocado pear or perfectly ripe apple. We do not tend to want to pay for imperfect produce, but we also do not take the time to consider where this unsatisfactory produce lands up.

Perhaps a solution lies in this problem: For all the bruised, expired or about-to-expire produce that is essentially wasted, perhaps large food retailers could give those that are suffering an opportunity to purchase the food at a much lower cost rather than throwing the food away. This would firstly aid in our food security issues and secondly, take away from landfills that are currently over worked and emitting carbon gas into the environment.

Rebecca Sorel

Erase waste

Feed Efficiency the Keenan way

Sixteen years ago, renowned Australian business consultant, John Sprouster, visited Keenan Head Offices in Ireland. After his assessment of our operations he concluded that there had been at least 30% waste in our factory.

Being the largest mixer wagon manufacturer in Europe, this was hard to accept. If he had told us 10%, the gain probably wouldn't have been worth the effort. But 30% — that was a potential game changer. Leading from our own experiences, we applied the same basic principles to our customers' farm businesses. Our measurement of Feed Efficiency for our customers has shown us that the variation is way above 30%, which is not all down to feeding. Elements such as cow comfort, lighting, calf rearing as well as forage quality and genetics all play an important part.

As an example of waste, look at the age of heifers at first calving. What would calving down at 24 months instead of the average 27 months mean? Feeding these heifers for the additional three months could mean an approximate extra R1 440 per head in feed. On 100 heifers, that is R144 000 per annum.

At Keenan, we know that if a customer follows the correct protocols and procedures, they can cut their feed usage or increase efficiency by 10% within 12 months. To find out whether it could work for you, contact us for a no obligation assessment of your current situation.

You have nothing to lose, but potentially 30% to gain.

Noel Keenan
UK Market Director

The power of five

The BRICS countries are crucial to dealing with food security issues

BRICS is an important grouping to deal with the global food crisis, promote global economic recovery as well as play a crucial role in global initiatives for food security.

This is according to a joint declaration of the 3rd BRICS Ministers of Agriculture and Agrarian Development, who met in Pretoria recently to adopt tangible measures to boost domestic agricultural productivity.

The ministers also welcomed discussions aimed at establishing the Basic Agricultural Information Exchange System of BRICS [Brazil, Russia, India, China and South Africa] countries.

However, they noted that such a system should not be a duplication of the Agriculture Marketing Information System (AMIS), created under the G20 and administered by the Food and Agriculture Organisation (FAO) of the United Nations (UN).

The gathering also reaffirmed its support for such a system as a platform for sharing information, and called upon technical experts in their countries to continue to work together for the development of the system.

Addressing food insecurity

With regard to addressing food insecurity, the ministers noted that all efforts must be geared towards enhancing agricultural production and adaptability of agricultural systems to climate change, especially for smallholder farmers.

They also agreed to cooperate in research, development and the application of technologies which enable agriculture to adapt to the effects of climate change.

The agreement was also extended to sharing information, policies and best practices to address common problems faced by BRICS countries in agricultural development.

It was also noted that the volatility in the price and supply of food and other commodities as well as constrained financial resources has compounded food insecurity for developing countries.

The ministers said strengthening agricultural cooperation among BRICS countries was imperative to ensure global food security and agricultural development. This would help to achieve sustainable development, eradicate poverty and realise the UN MDGs.

"(We) reaffirmed our commitment to strengthen areas of cooperation, namely, information exchange, food security, climate change, agricultural innovation and trade and investment, and gradually expand the cooperation so as to address the other challenges to food security.

"We also reaffirmed our commitment to assist other developing countries in enhancing agricultural productivity, paying particular attention to smallholder farmers, women and youth to improve world food security," read part of the joint declaration.

The minister responsible for agriculture also welcomed the establishment of the BRICS Strategic Alliance for Agricultural Technology Cooperation, which will combine their efforts in addressing major challenges in agriculture.

The 3rd BRICS meeting also resolved to forge a stronger partnership for common agriculture and agrarian development, and endorsed the 2013/14 Calendar of Events for Agriculture Cooperation Working Group of BRICS.

Russia, India, China and South Africa thanked Brazil for its offer to host the 4th Meeting of the BRICS Ministers of Agriculture and Agrarian Development in 2014.

SAnews.gov.za

Potatoes is a strategic crop to ensure household food security

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

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

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

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

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

Source: Nutri-Vation, ARC, University of Pretoria

Potatoes provide important dietary diversity for rural households

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

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

Potatoes South Africa's Small Growers Development Programme

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

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Agricol

The leader in the South African seed industry believes in good practice

Agricol has made it's mark both in South African and international markets over the last 50 years and is currently one of the biggest locally owned seed companies in South Africa. Regionally its operations have expanded across the country and has branches in Cape Town, George, Port Elizabeth, Durban, Nigel, Pretoria, Kimberley and the Potchefstroom Northern headquarters.

Agricol is both a member of Grain SA and prides itself on having a full product range to cover all the needs of the farmer. Its international alliances ensures that Agricol is best placed to give sound advice, while supplying the farmer with top quality products and services. This includes plant breeding, production, international trade, processing and distribution of seed.

Agricol has a number of ways in which to support farmers with its products.

"We make use of our own agronomists, sales staff and agents to get the products to the farmers. As an added benefit to the farmer, technical support is also provided if need be so as to further ensure client satisfaction which, according to Kotzé, is a very important element of what Agricol does. Although South Africa is considered to be an arid part of the world, Kotzé believes that despite our circumstances both external and internal, that South African farmers are a cut above the rest.

"I think we have some of the best farmers in the world. If you look at the sort of production that we are able to maintain over a certain period of time and the environment in which we do it, we do a pretty good job," he said. But he isn't blind to the fact that improvements are always necessary. "We do have a lot of challenges. Improving our practices like minimum tillage which allows the maximum amount of precipitation to be used to promote greater crop growth. "The less run off, less evaporation means more moisture."

Challenges

One of the most well documented issues about South African land and issues of food security, is that to the eye of the average citizen, acres of land seem to be standing doing nothing.

Kotzé admits that in the past mistakes were made, where land was ploughed in marginal areas with minimal rainfall, that obviously created problems later on.

Focus is needed to ensure sustainable farming practices in these environments. Land degradation must be avoided at all times to ensure high production levels are achieved. Although high productivity would be required in future, it needs to be environmentally friendly to ensure sustainability.

Good practice

Kotzé believes that rotational crops are what have saved many a farmer who has experienced drought and disease.

"An example of crop rotation working to its full benefit, is that in the North, where recent drought devastated a lot of crops, particularly maize crops, there were other crops like sunflower and other farms that fared well or sufficiently to get by, where others were devastated."

And according to Kotzé, if one is to go and analyse why some farms in areas fared well, and some suffered devastation, one would find that it is the difference between proper crop rotation and minimum tillage that helped the farmers fare as well as they did, in the circumstances that they faced.

"Rotational crops in medium to high potential areas where cropping is a definite alternative and where cropping would be the most productive means of using those fields. And going back to minimum tillage, I firmly believe that it has a huge role to play in those environments. There are a huge amount of benefits using crop rotations. It also helps to reduce diseases and pesticides.

Nitrogen is vital to proper growth and according to Kotzé if crop rotation includes alternating with leguminous crops, then there's massive nitrogen benefit, adding to the profitability of the system.

Sustainability and food protection

Food security in South Africa is a concern. One of the biggest questions is can we sustain ourselves in the face of world demand, population increase on top of exporting to China and Russia.

Kotzé is confident that the South African farmer will be able to keep up with production levels so as to be able to feed ourselves, but he believes that if we change the way we approach food security, we will succeed.

"We don't need to interfere with the commercial farmers, but we do need to work closely with aspiring black farmers. There is plenty of land transferring on the open market on an annual basis, which could be used to ensure land reform.

There is a lot of land in the Eastern Cape that is coming out of the old regime,

Nick Kotze Managing Director, Agricol

that is now under communal farming conditions. If you look at those levels of production there, production could be doubled if not tripled by assisting the black aspiring farmer to think bigger.

I believe that there are different levels of commercial farmers. I don't think subsistence farming can feed the nation, I think a commercial attitude can feed the nation, whether the farm is small or big. The implication is that regardless of the size, the farm would have to be productive - the best technology needs to be applied, you need to plant quality seed and follow best practices in every aspect to ensure high levels of production. Kotzé believes in good practice for all farmers. He believes that if emerging farmers use best practices that the annual crop yields will be significantly bigger. I easily think that yields of five tonnes to eight tonnes can be achieved with best practice, but when you talk to the emerging farmers, they often have missed vital steps in the process. These farmers need to have a commercial focus combined with good practice in order for the country to overcome the issues of food insecurity.

Unfortunately, the recapitalisation programme has been dropped in certain areas at government level, even though they have promised emerging farmers that for the next five years the government will support them which means this will negatively impact the yields for next year and likely increase the price of basic food stuff, making it that much more unreachable for the poor. At Agricol, an agronomist has been appointed in the poor areas. Speaking the local language, knowing the culture and customs on the ground level, Agricol is doing what it can to support these communities to become more productive.

Kotzé believes that there is an urgency, and that it needs to communicate to the government, that letting these farmers down would be a mistake. And while the private sector supports where it can, the collaboration of both the private and public sector is vital to seeing that South Africa remains food secure.

The blue revolution

Demand for seafood products is increasing which is why governments all over the world are implementing strategies to grow their aquaculture sector

Gone are the days when people believed there were many fish in the sea. Recent UN reports reveal that two-thirds of the world's fisheries are either overfished or fully harvested.

South Africa is no exception with many of its commercially viable sea life and marine creature stock exploited or in rapid decline due to pollution and unsustainable practices.

In spite of this dire situation in local and international wild seas the demand for seafood products is on the rise across the globe and is the fundamental reason for the rapid adoption of aquaculture. Aquaculture is one of the fastest growing food production sectors in the world and its success weighs in at an advantage against natural fisheries that are limited by how many fish can be caught during certain seasons. Aquaculture can provide large and consistent quantities of fish and seafood all year round.

South Africa is promptly taking the bait and establishing aquaculture farms around the country even though at this stage, the local sector is relatively small fry in comparison to other big fish on the continent such as Egypt and Nigeria. SA only contributes about 1% of Africa's total aquaculture production but with the sector forming a key part of the government's Industrial Policy Action Plan (IPAP) and New Growth Path it has the support it requires to grow into a burgeoning industry.

The United Nations Food and Agriculture Organisation's (FAO) State of World Aquaculture and Fisheries 2012 report said that despite falling fish catches since 2009, South Africa was still one of three African countries to retain its position as a major marine producer.

This is despite the industry only contributing 0.029% towards the GDP in 2010. The potential for growth though has secured an R800-million incentive programme launched by the Department of Trade and Industry (DTI) and the launch of the Aquaculture Development and Enhancement Programme — both aimed at promoting marine and freshwater fishing projects.

Aquaculture holds a lot of promise for the country in general. Not only will it serve to supplement and/or replace the supply of wild stock with cultured fish products but also offers enormous benefits in the form of job creation, food security, foreign currency and skills development. The government hopes to help aquaculture realise its potential by pushing incentives in research and development, technology and education and training programmes with particular focus on freshwater aquaculture. This sector has huge growth potential even though SA does not have a particularly ideal environment for marine aquaculture because coastal areas are too exposed, lacking the sheltered bays necessary to rear fish in cages or pens.

In 2010, Western Cape led the aquaculture sector with 20 farms (with Saldanha Bay contributing approximately 39,9% of the national marine aquaculture tonnage), followed by the Eastern Cape with nine farms, three in Northern Cape and one in Kwazulu-Natal. Production largely concentrated on rainbow trout, abalone, mussels, oysters and, increasingly, kabeljou (known internationally as 'dusky kob'). One of the distinct competitive advantages that aquaculture has over wild-caught fish and seafood is sustainability, in line with global trends to stay away from produce caught by environmentally harmful fishing practices.

Kabeljou, for example, is now in commercial production in the East London Industrial Development Zone and is being sold by retailers such as Woolworths, Pick 'n Pay and Checkers as a WWF Southern African Sustainable Seafood Initiative (Sassi) greenlisted species. Wild caught kabeljou by comparison, is classified as WWF-Sassi orange due to associated environmental impact and consumers are discouraged from buying it.

Sustainability, in the face of water scarcity and environmental impact, is another focal point for the industry. While aquaculture can in some instances improve water quality by adding nutrients, it is still necessary to monitor its effects in a controlled and regulated manner. This minimises stress on the environment, mitigates possible negative consequences such as the loss or alteration of natural habitats, the introduction of exotic species, threats to species biodiversity, changes in water quality, as well as the introduction and spread of diseases.

South Africa's aquaculture sector realised gaps in adequate legislature and in 2009/10 the Department of Environmental Affairs together with role players across the board developed and implemented an environmental impact guideline for aquaculture to create an environmentally responsible and more sustainable aquaculture industry. Unfortunately, Illegal, Unregulated and Unreported (IUU) fishing remains a problem in South Africa but the South African government has demonstrated determination to tackle the problem, including pursuing damages and fines in foreign courts.

While sustainability is a huge focus of the industry, job creation is another major incentive to develop aquaculture in the country. Abalone farming is one example of how jobs can be created with aquaculture where they were being lost in commercial abalone fisheries. Despite generating almost R100-million a year in the early 2000's, the industry ground to a halt in 2008 because of rampant illegal harvesting and rapid decline in stocks.

However, due to the quality of local abalone, its unique premium value in Far East markets and the introduction of aquaculture, abalone production is forecast to double over the next five years. Abalone farms have created the majority of direct new jobs in the aquaculture sector totalling 1 219 in 2012.

But abalone farming is just one sector that offers job opportunities for local fisherman and unemployed youths. In terms of South Africa's National Development Programme aquaculture is playing an increasingly important role in ensuring that the agricultural sector meets its NDP growth target of 1 million jobs by 2020. Current Initiatives within

aquaculture are set to increase production by 400 tons equalling 300 new jobs at the same time.

That is quite a catch considering that employment in the commercial fishing industry shrunk by 17% between 2000 and 2008. Today one direct job is created by every three tons of abalone, catfish, oysters, marine fish, tilapia and other aquaculture products farmed in SA. So the expression rings true, for the individual and the country, that to give a man a fish, you will feed him for a day but teach him aquaculture and he will eat for a lifetime.

But it is not just man who must eat but the fish too. Fish feed technology is one of the least developed sectors of aquaculture, particularly in Africa and other developing countries of the world, but is one of the major inputs in aquaculture production. Locally produced feed has become a key component for realising the true potential of local aquaculture and efforts to increase yield and quality are underway. Developing feeds, in the form of granules or pellets, provides nutrition in a stable and concentrated form to feed the fish efficiently and allow them to grow to their full potential. But aside from the obvious benefits, producing local feed can also support fish and seafood as an affordable source of protein on the continent. According to reports from fish farms it only requires 1kg of feed to grow 1kg of fish in comparison to the 8kg of feed required to grow 1kg of beef.

In general, South Africa's aquaculture industry is an active example of the country casting its nets wider to harness local produce that can become viable, competitive commodities in a global market. And by adopting innovative, progressive technologies and practices the aquaculture industry is sure to captivate the continent and world demands hook, line and sinker.

Taryn Springhall

Fishing for change

Amending the Marine Living Resources Act to legally recognise the small-scale fishers

The Marine Living Resources Act (MLRA) is the law that promotes the sustainable use of marine resources and which allows the government to grant fishing rights to certain types of fishers. These are commercial, recreational and subsistence fishers. Small-scale fishers do not fall within any of these categories of fishers.

The issue of the sustainability of our fishing resources as well as their availability to the broader populace, especially those who have been deprived of these resources in the past, is at the heart of the recent proposed amendments to the MLRA which has just been adopted by Parliament and now is going to the National Council of Provinces.

The urgency to pass this Amendment Bill is because the current MLRA does not recognise small-scale fishers.

The new law will recognise small-scale fishers as a unique and distinct group of fishers and allow legal access for fishing communities that were previously disadvantaged. The small-scale fishing communities are still largely prejudiced, in the current set up these communities simply do not receive any fishing rights resulting in abject poverty and food insecurity.

Small-scale fisheries can help relieve poverty and ensure food security in fishing communities. Addressing Parliament when the Marine Living Resources Amendment Bill was passed, the Minister of Agriculture, Fisheries and Forestry, Tina Joemat-Pettersson said the occasion marked a very special moment in the history of the South African fishing industry.

"We delivered freedom from poverty to thousands and thousands of humble, patient small-scale fisher folk from more than 160 coastal communities who have their ancestral roots along our country's 3 000 km coastline. It is in our hands to change the lives of these thousands of breadwinners who support the livelihoods of thousands of downstream dependents and bread winners who have not been able to make a living from the ocean as their ancestors had. We gave new hope to these families and communities and demonstrate the real meaning of the freedom we acquired in 1994."

A policy to empower the small-scale fisheries sector

MLRA amendments help the course of change

The amendments to the Marine Living Resources Act (MLRA) will provide a legal framework for the implementation of the policy for the small-scale fisheries sector which was adopted by the cabinet and gazetted in June 2012. The policy will help transform and develop the small-scale fisheries sector.

The government will help and support small-scale fishing communities to ensure that they have access and the opportunity to fish.

New approach to change the tides

This policy allows the government to take a new approach to managing marine living resources for small-scale fishers and giving them access to marine living resources in their fishing areas. This will bring improvements in the living standards of small-scale fishing communities.

The new approach means that in future:

- The focus will be on people and communities so that members of small-scale fishing communities, including women and the youth will be involved in the fishing process. This may be through cleaning fish, preparing higher-value fish products or selling the fish once it has been caught;
- Small-scale fishing communities will be assisted by the law and by Government to reach the goals set out in the policy; and
- Government will work together with small- scale fishing communities to develop and grow and improve the benefits for communities.

The policy meaning to small-scale fishers

The new policy is aimed at providing small-scale fishers with the opportunity to fish legally, to increase the benefits from fishing and to feed their families as well as help them make a successful living. The vision of the small-scale fisheries policy is to ensure that the well-being of small-scale fishers is secured and the health of fish stocks and the sea is maintained. The new policy encourages small-scale fishing communities to establish community bodies and all small-scale fishers to join such community bodies. Under the new policy small-scale fishing communities will be able to apply for fishing rights.

Small-scale fishing communities may also be given special access to certain types of fish or fishing areas. Only traditional fishers may be given the right to fish as small-scale fishers.

The new policy allows small-scale fishing communities to play a role in the management of marine living resources and to be involved in decision-making that concerns them. Government and community bodies will manage small-scale fisheries jointly and work together in co-management committees.

Benefit from the new policy and how?
The new policy will benefit not only small-scale fishers, but also other members of the small-scale fishing community. Small-scale fishing areas may be identified. By giving the fishing right to a community body, more members of a small-scale fishing community will benefit. This will ensure less poverty and improve food security for families within small-scale fishing communities.

A further benefit will be that small-scale fishing communities will have control over who is allowed to fish and play a role in deciding how many fish may be caught by each fisher. If small-scale fishers work together under these community bodies, it will help to ensure that marine resources are protected. It will also mean that the fishing community, together with the government, will be managing fishing in the area.

As small-scale fishers will be clearly identified by their communities this will help to stop illegal fishing and poaching. Government will help small-scale fishers and small-scale fishing communities develop and improve their livelihoods.

Co-operatives for the fishing sector

Maximising long term community benefits

Co-operatives are key in soliciting government support and through them; government will seriously dent poverty and unemployment.

Co-operatives in the small-scale fisheries sector are a way of maximising long term community benefits to deal with the threats of fisheries mismanagement, livelihood insecurity and poverty – harsh realities for many small-scale fishers.

While there may be examples of fishing co-operatives that were not successful largely as a result of a lack of appropriate and required support, there are many examples of co-operatives that are successful to the extent that both the United Nations and the World Bank are encouraging the development of fishing co-operatives.

The minister said: “In the pursuit of social justice, we are determined to open up the fishing industry to benefit communities as organised formations such as co-operatives.

“We are determined to make a real difference and to change the fortunes of our fishing communities making it possible for them to partake in the lucrative fishing industry”. The government has created a conducive environment for co-operative development through the: Co-operative Development Policy for South Africa; Co-operative Act 14 of 2005; Integrated Strategy on the Development and Promotion of Co-operatives; and Co-operatives Management Act 6 of 2013.

Supporting the development of cooperatives in the small-scale fishing sector, Minister Joemat-Pettersson said ‘As recommended in our National Development Plan (NDP): Vision 2030, “strategies will have to be developed for economic cooperation to give poor producers greater collective market power in value chains while allowing them to negotiate improved levels of access to markets and better terms of participation”.

This recommendation further affirms the departments approach of decisively dealing with chronic hunger whilst transforming the economic landscape of our country and shaping the future for prosperity.

Critically, the National Development Plan also recognises that successful implementation of any food security and economic transformation intervention must be supported by enabling legislation and policies such as the Marine Living Resources Act Amendment Bill 2013 and the Co-operatives Management Act 6 of 2013.

Aquaculture

One of the fastest growing food production systems globally

Over the past 20 years the farming of fish has developed into a global industry with over sixty countries engaging in the production of more than 250 species.

As the world is experiencing a decrease in the supply of fish from captured fisheries, aquaculture presents an opportunity to satisfy the demand. With this growth, aquaculture can contribute to the economic development of many countries, employment and poverty alleviation, environment and species conservation of the aquatic systems.

Aquaculture, in South Africa maybe in its infancy with output being insignificant in regional and global terms however the potential opportunities presented for food security, job and wealth creation, reduction of imports, transformation and food sovereignty will see overwhelming growth due to government commitment to policy initiation and support. An avenue for the fisheries sector to grow is through aquaculture due to the capture fisheries sector currently reaching levels of maximum sustainable yields. The National Aquaculture Strategic Framework has been developed to provide guidance to DAFF and its partners as it identifies the much needed government interventions and support measures, which will facilitate the removal of constraints and create an enabling environment for the development of an equitable, diverse, viable, competitive and sustainable aquaculture sector. Though the aquaculture industry in South Africa only contributed 0,020% to the country's Gross Domestic Product (GDP) in 2011, the sector has employed over 1600 people on a full-time basis during that period in farms around the country. Also, a 2% growth in jobs created from 2010 bodes well for our growing economy that has unemployment reduction as an imperative.

Global outlook

Aquaculture is the fastest growing food production sector in the world, growing at an annual rate of 8-10% per annum for the last two decades and outstripping livestock 3-4 fold. In 2008, global aquaculture production reached 68 million tonnes, valued at US$ 106 billion and increased its proportional contribution to total fisheries from 15% in 1988 to 46% in 2008. This contribution, however, is largely an Asian phenomenon. Asia accounted for 62.4 million tonnes or 91% of total world aquaculture production in 2008, while Americas, Africa and Europe, contributed 3.5, 1.4, and 3.4%, respectively.

Preliminary fish landing data from 2011 indicates that world capture fisheries and aquaculture produced 154 million tons of fish (FAO 2012). Aquaculture production contributed 41% of the total world fish landings producing 63.6 million tons in 2011 (FAO 2012). Inland aquaculture contributed 44.3 million tones and marine contributed 19.3 million tones of the total aquaculture production in 2011 (FAO 2012). World capture fisheries remain stable, while aquaculture production is one of the fastest growing animal food producing sectors.

South Africa Aquaculture

South Africa's total production (excluding seaweed) in 2011 was 1 883 tons.

The Western Cape was the dominant province in terms of production and recorded a total of 1 624 tons. The abalone subsector was the highest contributor to total production making up 55% of the total production, followed by mussels with 35.1% and oysters with 14.3% and finfish with 0.4%. The finfish subsector recorded a production of 7.99 tons. Total production in 2011 decreased by 108.6 tons from 2010, which amounts to a 5.5% decline.

The abalone sub-sector experienced an increase in production from 2010, recording a production increase of 20.57 tons representing a 2% increase.

Value, Investment, Employment

The total value of the marine aquaculture sector was estimated at R379 million, the sector achieved a growth rate of 0.2% in sales value in 2011. Marine aquaculture contributed 0.020% towards South Africa's Gross Domestic Product (GDP) in 2011 and invested approximately R179 million in capital investment in 2011, which is an increase by 38% from 2010.

The marine aquaculture sector employed approximately 1607 fulltime individuals directly on the farms, increasing by 2% during 2011.

Fisheries and food security

National Food Consumption Survey, 2005

Nearly 14 million people in South Africa are vulnerable to food insecurity which means they have inadequate access to food, according to Statistics South Africa (2011).

The Hunger Index developed from the National Food Consumption Survey of 2005 showed that more than 50% of households had experienced hunger, 28% were at risk of going hungry and only 20% appeared food secure. According to the Food Agriculture Organization of the United Nations, the world's oceans, lakes and rivers are harvested by artisanal fishers who provide vital nourishment for poor communities, not only in Africa and Asia, but also in many parts of Latin America and islands in the Pacific and Indian oceans. Of the 30 countries most dependent on fish as a protein source, all but four are in the developing world. Not only is fish a vital food, it is also a source of work and money for millions of people around the globe. In 1996, an estimated 30 million men and women were deriving an income from fisheries according to the FAO. An overwhelming majority of them - some 95 percent - were in developing countries. Coastal provinces like the Western Cape where 2% of the GDP comes out of the fishing industry, have villages with histories of making a living from the sea. The social fabric of those communities is tied up to fishing, and government hopes to help them to sustain themselves and perhaps even break into the export markets and become active payers in the entire fishing value chain. The departments Fetsa Tlala Food Production Intervention, which forms part of a broader governmental Food Security programme, aims to contribute towards the alleviation and eradication of poverty and hunger, as well as ensure food and nutrition security through women entrepreneurship, SMME's, co-operatives and smallholder farmers.

Food security and staving off hunger, is becoming a concern to many governments around the world, and is upper most on the South African government's priorities. Our government recognises four factors that define food security. These are:

- The availability of food for both physical and social needs;
- The affordability of food whether by economic means or the ability to produce it;
- The utilisation of food in a manner that ensures that it is safe to eat and maintains its nutritional value;
- The stability of food supply to ensure that is available now and in the future.

Increasing not only food production but also its processing and marketing in a manner that boosts communal fishers is key in staving off hunger and achieving the department's objectives.

Small-scale or subsistence fishing communities traditionally included net-making, boat building and putting together bait for additional income and creation of more employment opportunities.

The small-scale fishing industry is still beset by problems which include a lack of access to markets and insufficient market information. Capacity in this area needs to be built. Government has developed policies aimed at transforming the fishing industry by making it possible for small-scale fishers who were excluded by discriminatory laws and policies to take part in the commercial side of the fishing industry and therefore boosting the economies of the poor areas they come from.

Encouraging fishing communities to form SMME's and cooperatives and work towards competing in both African and internal markets will contribute towards helping communities to create jobs, and therefore sending more children to school and beating the cycle of poverty. Government has pegged the empowering rural communities using access to land and the restoration of fishing communities as important in its fight to the "food secure" future for South Africans.

In South Africa fish remains one of the most affordable sources of protein for poor communities in South Africa.

South Africa's membership with BRICS has enabled us to penetrate new markets.

As a result, DAFF has opened up new offices in India and Russia. A new office will be opened in Brazil soon.

There has been a significant increase in exports from South Africa to Asian countries, with China being the largest export destination for South African agriculture, forestry and fisheries products followed by Indonesia, Japan and India.

The department is also looking for ways to increase trade with more African countries which currently stands at 10% of all trade. Intra-African trade will enable South Africa to diversify its export market and reduce dependence on traditional export markets.

The Maritime Stewardship Council surveillance audit recognises continued good management of SA's hake

The Marine Stewardship Council

The latest Marine Stewardship Council annual surveillance report for South African trawl-caught hake has confirmed that the fishery is well managed and continues to perform in line with the world's most rigorous environmental certification requirements.

The hake trawl fishery is one of the most economically valuable fisheries in South Africa and comprises the inshore sector, targeting predominantly shallow water hake (Merluccius capensis) on South Africa's South Coast, and the offshore sector, targeting mostly deep water hake (M. paradoxus), on fishing grounds extending from the Namibian border southwards along the Agulhas fringe. Recent statistics estimates the fishery to be worth 43% of the total value of the South African fisheries sector.

South African hake sold to European markets accounts for almost R2 billion in annual revenue, with the deep sea trawling sector employing approximately 6,500 people. Due to an increasing global demand, especially from European and North American markets for sustainable seafood that can be traced back to fisheries with credible third party certification, MSC certification allows the hake trawl sector to maintain its presence and opening new doors into these markets. The main export markets are Europe, Australia and the US.

The South African hake trawl fisheries sector was the first hake sector in the world to receive the MCS certification in 2004. The fishery was re-certified in 2010 for a further five year period.

Once a fishery has achieved its certification it is subjected to an annual 'surveillance audit' which is done through independent consultants contracted by the MSC.

South Africa's hake trawl sector was described as a 'very well managed fishery' underpinned by 'excellent science' with 'high international standards' by Martin Purves, the Southern Africa Programme Manager from the Marine Stewardship Council (MSC).

These sentiments were echoed by Roy Bross, Secretary of the South African Deep Sea Trawling Industry Association (SADSTIA) who said the fishing industry 'feel(s) the hake fishery is already well managed".

The MSC Surveillance Report of the 2nd five-year cycle of the MSC certified SA Hake trawl fishery was released earlier this year and confirmed that the fishery still meets the rigorous environmental standard set by the MSC. The report further confirmed that;

- the hake fish stocks are healthy,
- the environmental impacts of the fishery are minimized and
- that there is effective management in place for this fishery.

The MSC Surveillance Report noted in particular the continued improvement in deep water hake stocks, which are expected to achieve the stock rebuilding targets well ahead of schedule.

The recovery target for the deep sea hake trawl fishery is 24% of the pre-fished biomass or the pre-exploitations levels by 2014. The 2011 target reached was 21%. The 2014 recovery target for the shallow water hake trawl sector is 36%. In 2011 the target reached was 68% of pre-fished biomass, 182% higher that the set target.

Given a fishery sector which was confronted with an almost collapse during earlier years, the fisheries management regime has come a long way in proving the success of our relentless recovery and rehabilitation programmes, particularly during recent years.

The 'continued improvement' in our fish stocks emphasised the achievements of South Africa's fisheries management and by extension its role in and contribution to fisheries economy.

This elucidate part of the reason why South Africa's fisheries are recognized globally as the 'one of the best managed in the world'.

With regard to the vessels, DAFF's Fisheries branch has continuously and publicly communicated challenges with its vessel fleet. Despite these challenges all the surveys critical to the operational management procedure of the hake fishery, which determines the total allowable catch (TAC) (the amount of fish that may be harvested annually), were undertaken.

The Government appreciates the partnership with the fishing industry and remains committed to maintain and strengthen this existing partnership and collaboration.

The department will continue to work alongside the MSC and the fishing industry to ensure that we continue to maximize opportunities in existing and prospective markets as per the directive of Minister of Agriculture, Forestry and Fisheries, Tina Joemat-Pettersson.

The minister said: "The South African government remains supportive of any initiative that contributes to the well-being of our natural environment whilst also helping to secure jobs for local South Africans.

We have again demonstrated our commitment to the on-going certification of the hake trawl fishery and will continue to work alongside the MSC and industry to ensure we can continue to maximise opportunities in existing and prospective markets."

Rebuilding SA's wild marine stocks a priority

Status report show some improvements, gives hope for fishing future

According to a recent United Nations report, more than two-thirds of the world's fisheries have been over-fished or are fully harvested and more than one-third are in a state of decline due to the loss of fish habitats, soaring pollution levels in oceans and rivers, and climate change.

Further statistics reveal that global marine fish stocks are in a state of crisis, increasingly pressured by overfishing and environmental degradation.

The United Nations report further indicates that fishing is central to the livelihood and food security of over 200 million people, especially in the developing world, while one of five people on this planet depends on fish as the primary source of protein.

In South Africa the fisheries sector is worth around six billion rand per annum and directly employs, in the commercial sector, some 27 000 people. Thousands more and their families depend on these resources for food and the basic needs of life.

The Status of the Marine Resources Report confirms that South Africa stocks show no exception to global trends as local wild resources generally continue to decline.

Abalone stocks remains in a depleted to heavily depleted state as the resources continues to decline due to increasing levels of poaching and ecological factors.

Linefish resources range from heavily depleted to optimal state depending on species, but there are signs of a positive response of some species to the emergency management measures implemented in 2000. Given the low population sizes of many other linefish species, however, present management measures are expected to assist to allow stock sizes to increase.

The West Coast rock lobster resource shows some signs of recovery under the current operational management procedure.

Deep-water hake remains depleted but the status of this resource is improving, whereas shallow-water hake is considered optimal to abundant. The implementation of precautionary management approaches in the hake fishery in recent years has resulted in a faster than-anticipated recovery of deep-water hake.

Harders, which are the main target of the beach-seine and gillnet fisheries, remain in a depleted to heavily depleted state. Environmental anomalies and Illegal netting have impacted on the recruitment of the species in recent years.

The abundance of Agulhas sole has remained relatively constant over the past 15 years and this resource is considered to be abundant. Cape horse mackerel have increased in abundance in recent years due to good recruitment, and the stock is considered to be in an optimal state.

The status of Patagonian toothfish remains unknown although some data suggests that this resource is depleted and may be declining. The total allowable catch (TAC) for 2011/2012 has been reduced by 20%.

Small pelagic resources are in optimal or abundant state and fishing pressure is optimal to light. Recruitment of all three species was relatively low in 2011 and the anchovy stock is at the lowest level observed during the past 15 years, but sardine and round herring stocks continue to increase.

As wild stocks continue to decline, aquaculture is growing more rapidly than all other animal food producing sectors – and recent figures from the UN's Food and Agriculture Organization (FAO) indicate that around 80 million tonnes of fish and seafood are caught globally each year.

A few fisheries achievements

Reporting the Marine Living Resources Fund achievements for the past financial year

The Auditor-General has given the Maritime Living Resources Fund a clean bill of health for yet another year with the fund even recorded a surplus of R4 million from a previous deficit of R26 million.

Among the achievements recorded is the finalisation of the Small Scale Fisheries Policy which was approved by Cabinet in May 2012 after many years of public consultation.

The policy gives formal recognition and legal protection to a previously neglected and vulnerable sector of society.

The Aquaculture Development and Enhancement Programme (ADEP) which in collaboration with the Department of Trade and Industry (the DTI) was launched. This is an incentive scheme designed to attract investment in aquaculture and broaden participation and improve competitiveness of the aquaculture sector.

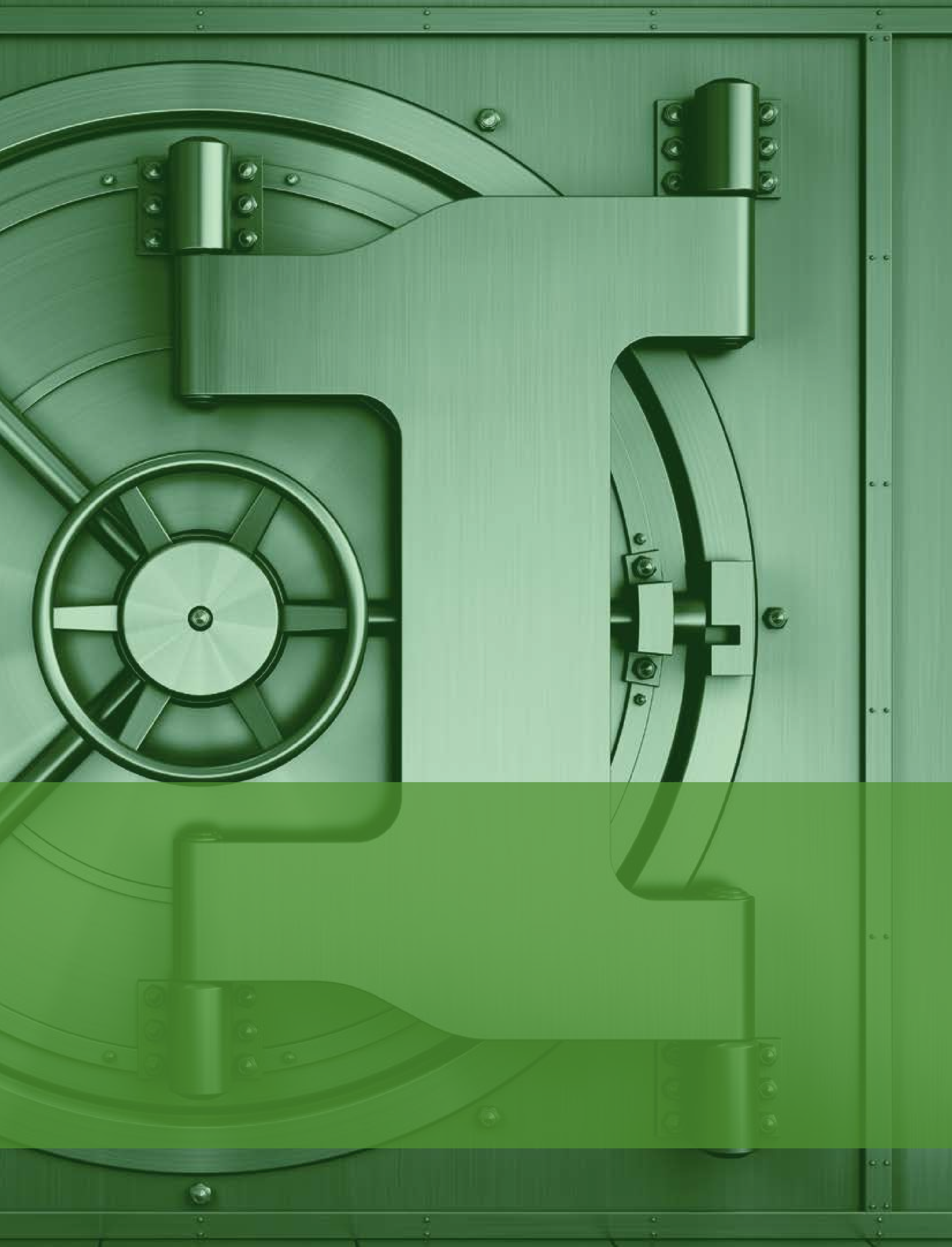
Job creating targets were exceeded by over 30%. More than 1 300 jobs were created through the implementation of eleven projects under the Working for Fisheries Programme (WFFP) which is a sub-programme of the National Extended Public Works Programme. The Marine Stewardship Council (MSC) annual surveillance report for South African trawl-caught hake confirmed that the fishery is well managed and continues to perform in line with the world's most rigorous environmental certification requirements. Approved recovery plans for abalone, hake, west coast rock lobster and line fish remain in place and are being implemented.

The abalone TAC for the 2012/13 fishing season was approved at 150 tons, which is the same as for the 2011/12 fishing season; hake TAC was approved at 156 151. 009 tons, an increase of 7.883% on the previous season; west coast rock lobster TAC was at 2 426 tons, the same as for the 2011/12 fishing season; and linefish TAE was approved at 455 rights holders and 3 182 crew, the same as for the 20111/12 fishing season.

The challenges include the fishing vessel fleet. However, essential stock surveys were conducted and the setting of TAC's and TAE's were not compromised. Poaching and capacity constraints of limited human, financial, and infrastructure resources also remain a challenge.

Financing African farmers

Poverty alleviation, food security and job creation are just some of the contributions that emerging farmers in Africa have the potential to make. But overcoming their major challenge – access to finance – is the first step towards helping them on the road to success



It will take a concerted effort to secure financing for agricultural production in order for a green revolution to occur in Africa. This was the main message which emerged from the African Green Revolution Forum (AGRF), held in September in Maputo, Mozambique.

The 200 delegates from the continent and around the world heard that the global gap in finance for agriculture is R4.5 trillion, a reality which is felt more acutely in Africa than anywhere else. Research shows that only 10% of African smallholder farmers have access to the credit they need to expand their production and improve their income.

On a positive note, AGRF convenor Irungu Houghton said that many successful partnerships are being forged between the private and public sectors and smallholder farmers. "But these partnerships are still too rare," he said. "We will only be able to transform Africa's agriculture, and alleviate food insecurity and poverty, if smallholders have the funds to boost their crop yields and expand their business."

Greater output needs greater input

"There's no doubt that access to credit for emerging farmers is difficult," says Kenneth Carden, a consultant at Cape Energy, a company which helps small South African farmers integrate into big companies' supply chains. "Agriculture is a risky business and with emerging farmers, the risks are even higher."

Some of the obstacles that small-scale farmers face is a lack of collateral – they frequently have no tenure over their land. In addition, they often lack experience: many lending institutions require at least five years' experience as a registered farmer. "There is also the question of the high cost of servicing the debt," says Carden.

Whereas large commercial farmers have a reliable credit record with their banks, which makes access to credit much easier, small-scale farmers' financial track record is meagre by comparison. "It is extremely difficult for black farmers to obtain access to credit because the lending criteria immediately disqualify most black applicants – for example, the cash flow requirement calls for regular deposits into the farmer's bank account every month," says Nompumelelo Obokoh,

CEO of AfricaBio. "This is not always possible since farming on a small scale cannot always yield monthly income."

Agriculture, which by definition is both capital intensive and risky, cannot flourish without the right inputs. "A small-scale farmer needs capital to buy various inputs, such as seed and fertilizer," comments Carden. "If his inputs are low, his crop yield will be low, therefore he can't plant as much and as good quality seed as he would like."

Carden adds that a lack of capital also limits an emerging farmer's ability to improve his farming equipment and irrigation. "We have worked with farmers in the Eastern Cape who still water their crops using buckets which they fill up from a nearby river," he says.

A coordinated response

Smallholder farmers are receiving support in South Africa and elsewhere on the continent, but it needs to be more coordinated, argues Carden. He is a member of the steering committee of the Southern Africa Food Lab, which seeks to improve regional food security by harmonising the efforts of government, civil society and the private sector. Carden, who previously helped set up the Woolworths Enterprise Development Programme, says it is very hard for retailers wishing to source products from emerging farmers to do so in a synchronised way. "The retailer may be dealing with one agency in one province and another in another province, which becomes too much of a headache," he says.

He notes that it is a great pity that the UN International Fund for Agricultural Development's (IFAD) proposed National Smallholder Development Programme did not see the light of day in South Africa. "This would have united all the various stakeholders under one umbrella body, which is what is sorely needed," Carden says. "Unfortunately there was no meeting of minds between government and IFAD. Government could not accept IFAD's terms of agreement, so the plans were withdrawn."

Other observers argue that emerging farmers need help to build their capacity and develop sound business models. "The smallholder model needs to be addressed so that they can be included into the production-focused farming community by being able to increase their economies of scale and management capabilities," comments Roger Armitage, CEO of Akwandze Agricultural Finance.

He believes that small-scale sugarcane farmers in the Nkomazi area of Mpumalanga have achieved greater levels of success than their contemporaries because they have ready access to production credit. A number of parastatals are willing to offer them soft loans, including the Land Bank, the Mpumalanga Economic Growth Agency (MEGA) and the Department of Agriculture's MAFISA programme. "This situation is unique to the sugar industry which offers a guaranteed off-take for growers," he says.

Louise de Klerk, CEO of Timbali Technology Incubator, a non-profit agri-incubator that helps establish small-scale farmers, asserts that emerging farmers often lack the required skills to access credit. "The biggest stumbling block for our clients is consistent access to markets and selling their products," she says. "Most smallholder farmers don't have the business systems in place to provide the data and documents required to access funding."

She adds that often small-scale farmers cannot enter sophisticated markets such as Europe because they lack the means to certify their produce. "In addition, when they do obtain funding, they are highly likely to make incorrect spending decisions if they don't have solid technical data and business intelligence to inform them," she says.

De Klerk argues that throwing money at the problem won't solve it. She believes enough money is available to help emerging farmers, but that the real challenges that need to be addressed are accessibility to funding and the competencies to use it wisely; quality technical small-scale farming practices; business systems to inform decisions; and access to markets.

This dovetails with the resolutions taken by the AGRF to build the capacity of farmers' associations, finance institutions and agribusiness agencies to work together, as well as to develop inclusive financial models that combine incentives, reduce debt risk and promote longer-term agribusiness models.

Katherine Graham

Musa Capital (Pty) Ltd

Private equity investing, property development, structured finance and investment banking advisory service

Musa Capital Advisors, Ltd. ("MUSA") is a boutique merchant banking firm, with expertise and transaction experience in private equity investing, property development, structured finance and investment banking advisory services.

MUSA has a unique focus on the African markets and since its inception, has principally engaged in the pursuit of executing profitable transactions on the African continent, thereby creating wealth for its clients, investor partners and portfolio company principals. Richard Akwei, principal at Musa Capital provides us with a corporate profile of the company.

When and how was Musa Capital established?

Richard Akwei: The company was started in 1995 by three African-Americans who made a decision to invest in the telecommunications sector in sub-Saharan Africa. They were fortunate enough to secure a $30 million commitment from a Middle-Eastern investor who asked them to invest in a broader mandate focusing on financial services, real estate as well as telecommunications. This became Musa's first fund, which was launched in 1996.

That fund was mostly invested in sub-Saharan Africa ex South Africa, in partnership with, and in well-known companies like MTN Uganda, Sonatel, UBA and Cal Merchant Bank in Nigeria, Uganda, Senegal, Ghana and Zimbabwe.

The success of the first fund was largely based on selecting the right sectors and the right partners, and the result was an attractive five times return for investors.

The second fund is very different. By the time of its launch in 2008, African private equity had begun to transform into a more value-added approach which required more active involvement with portfolio companies. Companies in the second fund are largely based in South Africa, and by then Musa had established its headquarters in Johannesburg to ensure proximity to portfolio companies. The investment philosophy around the firm is very simple: to provide basic goods and services to base-of-the-pyramid consumers in sub-Saharan Africa, recognising that the vast majority of the population do not have access to basic financial services, affordable housing, or food security.

The business philosophy is equally simple and holistic; that is to generate an attractive return to investors while addressing the broader needs of the respective stakeholders. This ensures that not only do the middle market portfolio companies in which we invest benefit, but the SMMEs which support them, and the broader community in which they operate benefit as well. The second part of our business is advisory and capital markets. Specifically, this entails providing innovative debt and equity funding solutions, corporate & financial restructuring and mergers & acquisition solutions to multinationals looking to invest in Africa, sovereigns looking to raise funding and parastatals with financial and strategic objectives.

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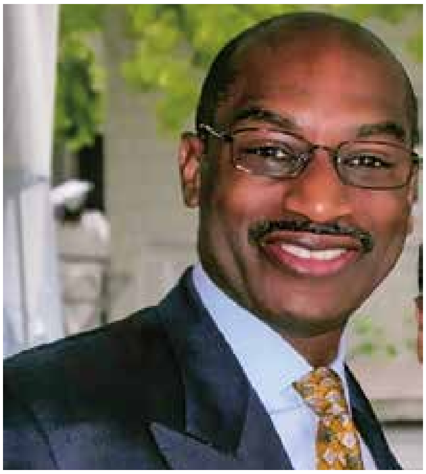
transacting change, transacting the future



Richard Akwei, principal at Musa Capital

What is your involvement with African Frontier Holdings and Matlapeng?

African Frontier Holdings and Matlapeng are both portfolio companies in Musa's second fund, and we are actively engaged in assisting them to fund and execute their growth strategies. Matlapeng builds and manages first time homes for miners and their families. We believe that it is possible to make good returns while also delivering on development objectives like home ownership. So when we build houses for the miners, we structure a programme which has a combination of private sector which would be, let's say, Kumba or BHP Billiton, which provides some guarantees and pays us for delivering on the houses as long as the miner remains employed. Matlapeng executes and provides the affordable housing for them; it also manages and delivers the on-going payment and upkeep of those houses. Through another Musa portfolio company called Abacus, we also provide finance through a pension-backed loan system enabling the miners -- in many cases it's their first house – to gain some equity where they live.

African Frontier Holdings is a company which is present throughout the agriculture value chain and actively promotes SMME and small-scale farmer development. In the area of primary production, we take a commercial entity or farm and integrate the emerging farmers around it in such a way that the emerging farmers get access to finance, equipment, and inputs. That makes it much easier for the emerging farmer to sell his products without having to worry about storage, getting things to the nearest market, etc., and also in time, that emerging farmer will grow and become a commercial farmer in his own right.

So African Frontier Holdings kind of epitomises your philosophy of the partnerships and the kind of investment infrastructure you want to set up.

Absolutely. To give you another example, there's a lot of debate in the use of communal land, or tribal land ownership. We have no interest in buying land, but we do have an interest in transforming currently 'unutilised' land in provinces like KwaZulu-Natal and Eastern Cape to address regional food security needs and broader socio-economic development requirements.

We come in and we provide the necessary elements to execute a working farm and integrate the surrounding community in such a way that they benefit directly from financial returns, and the food production replaces the food that currently is being bought and transported from other areas in and outside of South Africa using government funding.

In terms of the company's actual operations and functions, are there any innovations or services that Musa is introducing?

The firm is focused on: 1) executing of our strategic plans and enhancing portfolio company's operational performance, and 2) expanding our core competencies and regional footprint into sub-Saharan Africa. Currently the firm is focused on SADC. However, our business model is based on partnerships, and we have established partnerships in Namibia, Botswana, Zambia, Ghana, and Nigeria that will support our growth in sub-Saharan Africa. Through these partnerships, Musa has a footprint of people on the ground in those markets that understand the regions and are best able to identify investment opportunities and where we can use the expertise in affordable housing and agribusiness to provide those types of products into those markets. We know what we're good at and our idea is to use our current South Africa platform to effectively identify and execute on investment opportunities across sub-Saharan Africa.

Please give us a few highlights in terms of what you do outside of South Africa?

We are currently advising the government of South Sudan on 'capital raise' and infrastructure projects, we are also advising several states in Nigeria, particularly Bayelsa State, in terms of developing infrastructure around healthcare, hospitals, hotels and ports.

In Zimbabwe, we are advising Agribank, one of Zimbabwe's agricultural banks, on privatising that entity. We expect this part of the business to grow quickly with our expanded regional footprint in sub-Saharan Africa.

As a principal, could you give us a brief background about your career? Where do you come from? How did you get into this industry?

Sure. I'm originally from Ghana. I got into the industry after going to business school in North America.

I joined JP Morgan investment bank in 1986 and was there for 16 years, covering Latin America, South Africa, and a number of industry groups before moving to the buy side, where rather than advising companies you are actually investing people's money.

I worked with The Rohatyn Group, based in New York, it's an emerging market asset management company that focuses on both listed and unlisted investments across the globe. I covered the Middle East and Africa for them. And then I joined Musa about a year and a half ago.

Where do you see the company in ten years' time?

We are in the process of launching a sub-Saharan Africa private equity fund, which will be our next fund.

We are also in the process of launching an agribusiness investment company which is currently South African-based but which will have a sub-Saharan African focus.

So we intend to become bigger, more profitable and also gain a very sub-Saharan African reach based on the partnerships that we establish across the continent.

And who are the major role-players in the firm?

The major role-players: Will Jimerson, who heads private equity; Antoine Johnson, who heads the advisory part of the business; and Charles Kinzer, who heads the capital markets business.

The four of us work together essentially to drive the execution.

R2 billion towards hunger fight

The South African government has made available R2 billion to support *Fetsa Tlala* (End Hunger), government's Integrated Food Production Initiative aimed at producing enough food to meet the population's needs

The announcement was made by President Jacob Zuma while officially launching *Fetsa Tlala* in Batlharos outside Kuruman in the Northern Cape.

The programme is a multi-sectoral approach by government to deal with the structural problems of food insecurity.

"We are making an amount of R2 billion available for this programme as part of comprehensive support to farmers and for distribution to provinces. The initiative intends to put one million hectares of land under production of maize, beans and potatoes," Zuma said.

Through *Fetsa Tlala*, government intends to assist small-scale and smallholder producers to place at least one million hectares of arable land under production by 2019 across the country.

The President said with *Fetsa Tlala*, government intends to shift perceptions about agriculture and farming in general.

He said the impression that agriculture is regarded as less important is counterproductive. Agriculture is a key priority for government, as it forms part of the six job drivers identified in the New Growth Path. The other five are mining, tourism, the green economy, manufacturing and infrastructure development. According to President Zuma, this demonstrates the seriousness government has attached to agriculture for food security, job creation and economic development.

Zuma said through *Fetsa Tlala*, all underutilised agricultural land must be put under production.

"We are encouraging people to go back to farming. We are encouraging every household to develop a food garden. We want to see women's co-operatives and community groupings focusing on vegetable production, livestock or chickens to earn a living and fight hunger and poverty," he said.

Manyeding Agricultural Cooperative project

Zuma—who visited the Manyeding Agricultural Co-operative project, which is thriving in terms of fighting hunger and food insecurity in villages east of Kuruman — said he was encouraged that the overall food insecurity figure was declining due to government programmes.

The co-operative, which has a total of 159 beneficiaries from Manyeding and the surrounding villages, is situated on 137-hectares. It produces organic vegetables such as potatoes, tomatoes, spinach, green beans, cabbage and pumpkin.

Since the establishment of the cooperative in 2010, many jobs have been created for the locals. The cooperative supplies fresh produce to Pick 'n Pay, Boxer and Spar.

However, Zuma said there are still families who live in poverty — the country also remains a net importer of food, instead of being a major food producer.

Maximising land use

According to the president, there is a significant amount of land that still lies fallow, especially in rural areas, including some of the land that has been acquired through land reform.

He said smallholder farmers, communities and households will be assisted through the provision of mechanisation support and distribution of production inputs and technical services.

Much of the worst poverty is concentrated in the former homelands. The homelands, which accounted for 13 percent of the country's land, were home to half of the black population in South Africa before 1994.

These areas are still characterised by low incomes and high rates of infant mortality, malnutrition and illiteracy.

"These areas have remained extremely poor and underdeveloped, and are heavily dependent on remittances from workers in industrial South Africa," Zuma said.

He said South African agriculture continued to be characterised by a racially skewed distribution of assets, support services, market penetration, infrastructure and income.

"Some 36 000 large-scale farmers control over 86 million hectares of farmland, while 1.4 million black farmers have access to about 14 million hectares of farmland," he said.

Primary Animal Healthcare programme

The event also saw the launch of the Primary Animal Healthcare (PAHC) programme in Batlharos as part of the Agriculture Department's initiative to combat animal diseases and to improve access to veterinary services, especially in remote rural areas.

The PAHC programme is a nationwide project aimed at complementing the recently approved Compulsory Communality Services (CCS) programme for newly qualified veterinary doctors in order to capacitate provinces.

A total of R326 million has been set aside to support the PAHC and the CSS programme in the next three-year Medium Term Expenditure Framework (MTEF) cycle.

SAnews.gov.za

Growing small scale farms

By reducing our dependence on imported agriculture, we empower and help small scale farmers to grow

A drought in the United States of America (US), the world's biggest maize producer, affects food prices across the world; in a globalised agricultural economy, extreme weather conditions that destroy crops on one part of the planet, cause food prices to spike in others, as supply drops.

And as climate change activists warn of rising temperatures, and increasing droughts and heat waves, securing reliable food supply is becoming more important.

South Africa is a net importer of agricultural products so the price fluctuations on a bag of maize meal are due to weather conditions in the US maize belts. A pilot project in Umbumbulu, KwaZulu-Natal (KZN), funded in part by the eThekwini Municipality, is designed to reduce dependence on imported agricultural produce by helping small-scale farmers build commercially viable agri-businesses. The non-governmental organisation (NGO)Newlands Mashu Community Development Centre developed and implements its Partner Farmer AgriHUBprogramme gives farmers help with developing their land, subsidises seed and seedling purchases and helps with selling produce.

Subsistence to commercial farming

Paula Osborn, Partner Farmer project manager, joined the programme about eight months after it kicked off in September 2010. "The project is based on the open share principle. Anyone can become involved. We started with 50 small farmers; after the first few harvests we identify the most productive who we can help develop into commercial farmers. Developing from a subsistence farmer to one able to provide produce for your family and the market is dependent on your own efforts. The programme is designed to give farmers the tools to do that."

The community benefits from the harvest by buying fresh healthy produce at lower rates. As the project has grown farmers have been able to create jobs in a region where unemployment is entrenched.

Theresa Mabhida, one of the 467 farmers in the Umbumbulu project, farms in eTsheni. She says, "This project is doing away with unemployment and our healthy projects are curbing sickness. My sense of self-worth is high; I wake up every day knowing I have something to do for myself and my community."

The farmers in the programme are trained to use organic methods to produce crops for local consumption. Soils managed with organic methods have better water-holding capacity and water infiltration rates. They also produce higher yields under drought and high rainfall conditions.

"The mentors we have at each project were trained at the Durban Botanic Gardens Permaculture Centre. They are trained in holistic, ecologically balanced permaculture farming methods."

The harvest includes vegetables such as spinach, beetroot, red onions, potatoes and avocado. In a good month Osborn estimates the farmers in Umbumbulu can harvest up to 10 tons of fresh produce based on the sales of seedlings and seeds supplied to farmers. Most of the harvest is sold to neighbours or used by the family, but one to two tons of that produce is sold to local restaurants and health food shops in KZN. What is not sold is packaged into "veggie boxes" that are sold to local schools, which sell them to students' parents.

Saving is income

The farmers earn incomes through sales in their local communities and by selling excess to Partner Farmers, who pay close to retail prices. Schools earn an income as well. For Osborn there are two benefits to the system. "People are realising that saving is income so by purchasing local produce at reduced prices they are building wealth in the community. Second, parents tell us that kids who never eat vegetables are now chewing on fresh spinach leaves. Their bodies are telling them that these fresh organic vegetables are real food."

The programme success would be boosted if the yields could be accurately predicted. Ten tons of food is produced from 5 000 to 10 000 seedlings, but what is specifically available at harvest time is difficult to gauge.

Mentors visits to the fields give an idea of the haul, but recording is manual, time consuming and error prone. The programme managers are developing a smartphone app to instantaneously record what has been planted and what is likely to be available at harvest.

"If each farmer has a cell phone, and that is our hope, we can generate predictive reports that will allow us to sell the harvest before it leaves the field," says Osborn.

She believes that the programme in Umbumbulu will run at least until 2016 before the organization feels comfortable handing the management, production, warehousing and distribution over to a farmers' co-operative, while still providing mentorship where needed. Future programmes will run on average for just five years before handover.

"Umbumbulu was the pilot; with the know-how and experience gained we can avoid mistakes made in the new projects we run."

Long-term funding

The top-down funding system favoured by government and corporations does not work in agriculture, says Osborn. Agricultural projects need long-term funding, which does not fit in with government or business funding cycles. The Umbumbulu project, for example, will require funding for at least six years before Partner Farmers can hand the project over to the local community.

"In Umbumbulu we would get municipal funding for six months because that fitted into their funding cycle, then no funding for three before funds were released again."

Now, with National Lottery funding and a five-year corporate sponsorship deal in place, Partner Farmers is able to fund day-to-day operations while the eThekwini municipality to funded infrastructure development around two new projects.

"Over the period of the project in Umbumbulu, and in our newer projects, we have demonstrated how the model works."

Including Umbumbulu (South Basin) there are three new projects to help small-scale KZN farmers; the Sterkspruit AgriHUB in Hammersdale/Shongweni in the outer west, and the Hambanathi/Greylands AgriHUB in in the north.

As Osborn points out, "You start by building resilient self-sustaining communities; from there you build a nation that can recover effectively from any setbacks."

Sulaiman Philip
MediaClubSA

A necessity for economic growth

South Africa's agricultural sector is an engine for growth and development. Therefore, proper agricultural education and training plays a critical role in the economic and social transformation of the country.

The South African government should ensure that training in agriculture is adequately provided and organised in an effective, rational, and coordinated system. It should provide the necessary skills and knowledge to operate in the industry, and advance a keen sense of the social importance of agriculture development.

Training in agriculture should be made available to the entire population without distinction, however, in rural areas, training programmes or lack of training facilities may be limited in scope and stunt opportunities.

Certain secondary schools across South Africa offer agriculture as a formal subject, and various special agricultural high schools offer learning opportunities with a balanced economic farming unit which provides sufficient agronomic and livestock material for demonstrations and training purposes.

At most of the agricultural high schools the choice of subjects is wide enough to enable scholars to obtain university entrance qualifications. Agriculture higher education is provided at most universities across South Africa with various agriculture segment faculties.

Industry bodies, such as the Agricultural Research Council (ARC) regularly present various specialised training courses and information days which are attended by farmers and delegates across South Africa and neighbouring SADC countries. Specialised exhibitions, training courses and open days with practical demonstrations are used to reach the small-scale farmer.

In 2010/11, over 5 000 jobs were created on state land as a result of the Department of Agriculture, Forestry and Fisheries' (DAFF) Comprehensive Agriculture Support Programme (Casp). With Casp, the department aims to increase support to new and existing smallholder farmers, working in close collaboration with all provinces in achieving these targets.

In the 2011/12 financial year, 15 000 smallholder farmers were targeted, including small-scale foresters and fishers.

A grant of over R1 billion was allocated to the nine provinces.

Casp has been reprioritised to respond to the demands of the Land and Agrarian Reform Project (LARP). The LARP is a joint project of the Department of Rural Development and Land Reform, the DAFF, provincial departments of agriculture, agricultural state-owned enterprises, and sector partners.

The LARP is aimed at accelerating and aligning land and agrarian reform by providing various support services. It focuses on redistributing five million hectares of previously white-owned agricultural land to 10 000 new agricultural producers, thereby increasing black entrepreneurs in the agribusiness industry.

It also aims to increase agricultural production by 10% to 15% under the Ilima/Letsema Campaign. In the Campaign, the DAFF encourages household food production through backyard gardens and programmes such as the Household Food Security, with the main objective to motivate communities to plough, plant and produce their own food.

The LandCare programme is a community-based and government-supported approach to the ecological sustainability management and use of agricultural natural resources through proper environmental management.

The programme implies that cultivation, livestock grazing and harvesting of natural resources should be managed in such a manner that no further degradation such as nutrient loss, soil erosion, loss of components of the vegetation and increased run-off occurs.

The LandCare programme continues to perform a significant role in reversing soil and land degradation through support provided by community initiatives. This programme contributes significantly to green job creation, poverty eradication and food security.

During 2010/11, the programme directly and indirectly benefited 28 161 land users. A total of 66 272 hectares were rehabilitated in all provinces through the construction of soil conservation works, range-land use and protection works, and the eradication of declared weeds and invasive plants.

As part of the LandCare programme, about 15 000 job opportunities were created through rehabilitation and land-use activities with a total expenditure of R57.7-million.

The LandCare programme has been expanded into sub-programmes of WaterCare, VeldCare and SoilCare. WaterCare manages and restores irrigation schemes and promotes development of water-resource management techniques.

The VeldCare programme promotes best grazing systems and erosion prevention practices to improve production and maintain viable grazing areas. The SoilCare programme encourages rural farmers to build innovative structures to combat soil erosion and reduce the depletion of soil fertility and acidity.

The Conservation Agriculture (CA) approach encourages the proactive and sustainable use of agricultural natural resources. It integrates the management of soil, water and biological resources to maintain and enhance land productivity and reduce risk levels.

Junior LandCare encourages young people to develop a sense of responsibility towards the land and other natural resources, and conserve these for future generations.

The objective of Junior LandCare is to empower previously disadvantaged youth by providing training in facilitation and leadership skills. This includes promoting food security at home and in schools, enhancing awareness of sustainable agriculture, and stimulating the formation of youth clubs and projects.

Since 2011, the Junior LandCare programme reached 22 166 young people with a total of 14 815 green jobs being created through rehabilitation works related to soil, water and veld management.

The South African market-led Smallholder Agricultural Development Programme works in the poorest areas of local municipality across South Africa to eradicate poverty. The programme targets poor rural people who are unemployed or whose livelihoods revolve around agriculture. Particular attention is given to women and youth.

Apart from the programme's community empowerment component, it also provides financial support services to smallholders and rural Small, Micro and Medium Enterprises (SMMEs).

This project is the first IFAD-supported rural poverty reduction initiative in South Africa.

The programme has been designed in response to a request from the government for the International Fund for Agricultural Development (IFAD) assistance to deal with the issue of persistently high levels of rural poverty in South Africa.

South African farmers are faced with a challenging global economic and trade environment and rapid advances in information and communication technologies.

Main factors that will help promote the competitiveness of farmers, and the agricultural sector in general, include good governance at all levels of government and industry.

In particular, the country needs institutional innovations for commercial and small-scale farmers, and improved quality of school education particularly in mathematics and science, research and skills training.

Rizel Delano

Taking stock

Understanding the dynamics of futures trading

Futures remain a volatile but profitable source of investment for the successful. With South Africa's agricultural output concentrated significantly on grain, changes in the domestic yield means crucial variables can change the outcome of market conditions - equal risks for purchasers and sellers.

Perhaps the most important variable in an era of globalisation is that South Africa is competing with the world. And yields abroad – projected and actual – do matter despite the shift from West to East. The US market activity renders considerable impact on local prices.

Globally grain futures have been known to take a knock for those invested in South Africa when American forecasts for yields are on an upward trajectory. With global forecasts falling below actual yield in the US for example, some buyers working off

US projections invested in South Africa have been left somewhat poorer, given the release of actual data and the subsequent lower demand for South African grain when the futures contract concludes.

Political interventions to increase output in other parts of the world mean stiffer competition at home for grain sellers, but intentions on the part of oversees governments are hardly conclusive. Apart from the usual political dynamics of electoral cycles where new parties less committed to grain production take the reins, climate change remains the big variable in and of itself that has a major impact on any political programme. However for the bearish, adaptation efforts have helped yields – easing or even avoiding possible losses that may have arisen in the current absence of binding mitigation agreements on the global stage.

Taking stock of all these factors is important. As it stands South African maize futures are down more than 40% as of September - from their record settlement last August, when fears over the US drought were at a peak, as Helmo Preuss reported, writing for *BizCommunity.com*.

Over the past year, Preuss for one highlights that Dow Jones Newswires reported that "US maize prices fell about 2% after US forecasters surprised analysts by raising their projections for the size of this year's crop.

"The corn harvest will total a record 13 843bn bushels, the USDA estimated in a closely watched monthly crop report, slightly increasing its forecast from last month," he noted.

Another factor for journalists following the industry are consumer demands, including for non-human and non-animal consumption – the drastic impact of ethanol a few years ago being a case in point.

With the US Department of Agriculture exceeding expectations in its forecast of grain production, our local maize futures are understandably down by the 40% mark from their record settlement last August. At that point fears of a US drought were at their peak, raising investment into South African grain futures – demonstrating that sentiment in the US is important and driven by data from government sources.

For South Africa that is significant; the largest area of the country's farmland is planted with maize, followed by wheat and, to a lesser extent, sugarcane and sunflowers according to *southafrica.info*, a national government repository of public information. That makes grain significant not just for futures but also the degree to which the government's commitment to agricultural security will impact on the assistance offered to keep agriculture strong.

Views on property rights as part of longer-term land reform objectives have some impact on long-term farming investments, affecting the macro-economic outlook in terms of overall investment into agriculture. But working on shorter futures contracts on a year-on-year basis could render any perceived land reform uncertainty, with respect to property rights, far less significant.

Political and scientific sentiment and resultant policy will be a significant factor in production and investment potential on

the international scale and have an impact on South Africa.

Climate remains a major factor, including effects felt elsewhere, influencing the demand for South African grain.

News and analysis done on the basis of desktop research assesses grain output per region, with fewer academic studies looking at overall global trends. Coupled with assessments of political factors and projected consumer demand, this leaves analysts and individual investors with the task of drawing their own conclusions on any potential investment case.

Domestic regulatory reforms in seemingly far flung (including low yielding) countries are not to be shied away from. Kazakhstan is perhaps better known for its energy reserves and metals than its agriculture is a case in point. The Central Asian economy is now in the top-ten league of grain producers," as Al Jazeera reports.

"A 2010 study (by the European Bank) found that together with Russia and Ukraine, Kazakhstan has the potential to boost production to meet half of the world's grain export needs," reported the news agency shortly after the release of the European report.

Until now the ever-present and influential China has engineered its agricultural outputs in ways not conducive to grain — a risk to competitors is that the environment changes.

"The reduction of grain production in China could be primarily attributed to agricultural restructuring in recent years. So the productive potential can be fully restored by increasing agricultural investment, or recovering agricultural structure in favourable conditions. So we can say that China's current condition of food security is good," says Xiubin Li, writing for the *Chinese Academy of Sciences*.

Despite the risk, reading political decision-making in China through the analysis of Beijing's decisions may mean less volatility than the erratic risks of climate change on yields which are more difficult to predict. Variations are country-by-country when it comes to success. "Preliminary results from a project aimed at helping Malawi, Vietnam and Zambia make the transition to a 'climate-smart' approach to agriculture show that some farmers are struggling to adopt the new methods, while others are finding ways to cope well with climate-change problems like late rains," according to *WorldGrain.com*.

Profits in future may depend largely on global commitments and the resultant new means of financing: "To broaden the options available to farmers, we believe that increased investment, coming from both traditional agricultural finance, as well as emerging climate finance such as the Green Climate Fund, may be required to help farmers make the needed transition," says Leslie Lipper, leader of FAO's Economics and Policy Innovations for Climate-Smart Agriculture (EPIC) Programme.

Garreth Bloor

Arguing for GM crops

The safety assessment process of genetically modified crops in South Africa is based upon principles developed through international expert consultations carried out by the World Health Organization

Genetically Modified (GM) crops are grown by more than 17 million farmers around the world, the majority of them smallholder farmers in developing countries.

GMs are cultivated in 20 developing countries and eight industrial countries worldwide. Soya and maize are the most planted GM crops around the globe, followed by cotton and canola.

GM crops are developed by a process of genetic modification by which selected individual genes are inserted from one organism into another to enhance desirable characteristics or to suppress undesirable ones. GM crops are generally seen as controversial, due to the questions about the risks posed to the environment through gene flows, and to human health through ingestion of toxic substances.

But, Biotech crops are amongst the most extensively tested, characterised and regulated food and fibre products ever developed. All biotech crops currently approved for commercialisation world-wide have been thoroughly assessed by scientific and regulatory authorities throughout the world for food, feed and environmental safety according to internationally agreed guidelines and principles. They have been found to be as wholesome, nutritious and safe as conventional crops and foods. To date, commercial available GM crops have been judged to be substantially equivalent and acceptably safe compared to conventional crops by regulatory agencies in the US, Europe, Australia, New Zealand, South Africa and elsewhere.

In South Africa, the Department of Agriculture, Forestry and Fisheries has implemented a regulatory system that analyses and monitors all potential impacts of GM technology. All applications are evaluated in terms of the GMO Act, Act No 15 of 1997 whereby all GM crop plants to be used as foods or as food products are required by the South African GMO legislation to undergo thorough and rigorous food and feed safety assessment before they can be approved for commercial release. The GMO-industry is thus strictly regulated by legislation, regulations, trials and testing.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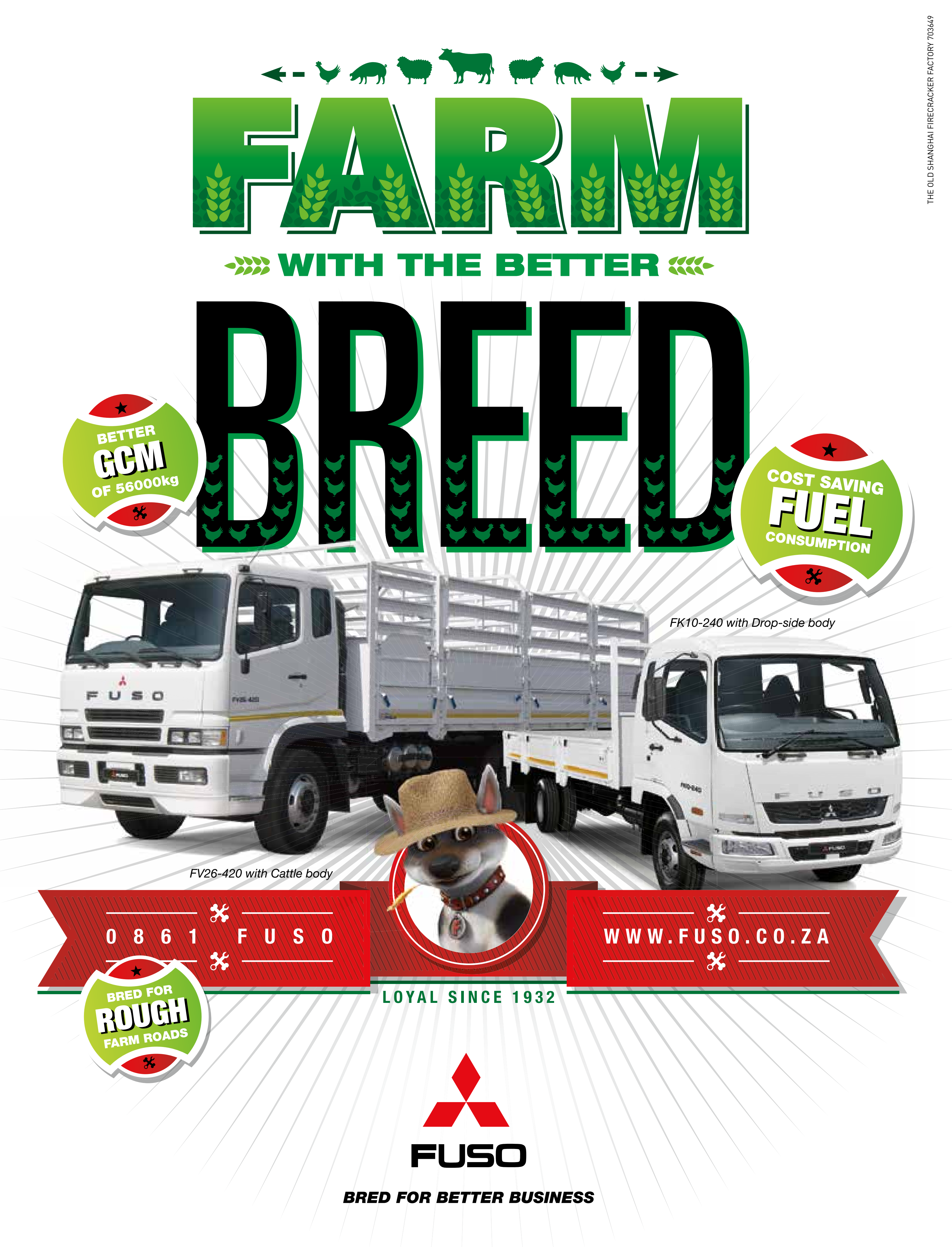
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