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FOREWORD



JANNIE DE VILLIERS
CEO: GRAIN SA

Land reform solutions

During the Green Paper engagements on Land Reform, the negotiations were confronted with a major challenge: How to speed up the land reform process without negative effects on food security.

Nobody argues about any of these imperatives, but solutions were mostly theoretical and speculative. Grain SA commenced by implementing our proposed solution to this contention issue.

The Grain SA development programme for black grain farmers began back in 2004. It is completely funded by the Maize Trust, the Winter Cereal Trust, Oil and Protein Seed Development Trust and Grain Sorghum Trust to the amount of approximately R17 million per annum.

We have trained farmers, planted trial plots and mentored advancing farmers to such an extent that we now have just over 4 000 black grain farmers as members of our study groups. The capacity of staff and infrastructure that was developed during this period is now part of the land reform/food security solution. Grain SA is in the position to connect well trained farmers with well established relationships with mentors and a well-tested support system to partner with

Government to speed up a successful land transformation programme.

Government provides farms and recapitalisation funds and Grain SA provides well trained bona fide farmers and support services to farm successfully and contribute towards food security on a sustainable commercial basis.

This unique partnership started in 2011 in the Free State and is now being rolled out to the North West Province and Mpumalanga. First discussions also took place in the Eastern Cape in October 2012. These practical solutions are very important examples for the Green Paper negotiators and bring a workable solution to the meeting in Mangaung later this year. Political leaders should be pleased to know that the pressure on the negotiations yielded such good results.

The public private partnership of the government support, private sector expertise and willing farmers were blessed by good rains to commence the planting season of 2012. With low world grain stocks and high prices, a good season lies ahead for the grain sector. Good agricultural conditions and a good crop will yield a surplus crop that will lead to the lowest possible food prices for our nation as well as exports to earn foreign exchange. With these prospects, the grain sector is expected to contribute substantially towards the well being of all our citizens.



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EDS NOTE



TRACEE HARVARD
EDITOR

Time to talk is now

It is hard to believe that the final months of 2012 are upon us and that the festive season is here. The festive season usually means time for friends and family, it also creates a space for reflection on the past year and of course, not forgetting that this is the season where we all eat loads of tasty nutritious food and are even a little over indulgent – ok, very indulgent.

In fact, the December holidays for a lot of people are about celebrating in a hedonistic fashion, sharing gifts over Christmas, being with family members and really just being excited that the year has finally ended.

This year has been a tough and stressful year for a lot of people, so the time with loved ones is a very treasured time.

However, there are thousands of families who have nothing. No food on the table, no gifts to share and no feeling of being part of an inclusive society that cares about each other. Grain SA has been striving to reach those in rural areas and educate them to become developing farmers so as to be able to empower themselves and their families and the greater economy through skills development programmes. For many people, when there is no money to put food on the table, they look to the land.

Grain SA helps people learn how to use the land in a sustainable way.

Grain SA believes that to provide food for all of us – even those who will have an extra-ordinary Christmas – that we all have to work together in supporting Grain SA in reaching its goals of providing food for all, if we don't act now, not only will there be no food on the tables of the impoverished, there will be no food on the tables of those who take it for granted.

Climate change, economic policies, skills development, the growth of society in terms of supply and demand of food resources are all elements that affect whether South Africa remains food secure.

We are on the knife edge of being food insecure which means actions need to take place now. The time for playing the blame game is over. None of that matters right now. The South African government and Grain SA need to create a sound platform on which both parties are able to speak to one another, where the past can be forgotten because it is clear that holding on to the past is what will continue to hold our progression as a people back.

It is important that we return to the values which former President Nelson Mandela instilled in us – to share and to grow together as a nation.

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COMPANY PROFILE

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

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

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

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

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

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

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Agricultural TRANSFORMATION

The Grain SA farmer development team talks about rural farmer development programmes, the issues around mining and farming in Mpumalanga and genetically modified organisms

Grain SA has taken tremendous strides over the past nine years by contributing towards the transformation of the agricultural sector along with true empowerment of individuals which has been a long-term but rewarding process.

Grain SA is not managing a social support programme where provisions and money end up in a vast hole, but rather a transparent and evolving development model, where knowledge and skills are transferred from experienced farmers to local individuals on a one-on-one basis. The type of intensive support that Grain SA gives to developing

farmers is now reaping rewards. It is generally unheard of in other empowerment structures and initiatives. Communities are literally being changed from within due to the fact that local individuals are becoming mentors and role-models within their own communities, which in-turn motivates them even more to strive for further development.

A few of the responsibilities which fall under farmer development are listed below:

Study groups

Developing farmers, who have access to land, are encouraged to form study groups which meet regularly to access training and information relating to the grain industry.

There are nine provincial co-ordinators who each have approximately 10 to 15 different study groups which they visit once a month. Study group meetings mainly consist of guidance, information exchange and preparation for training.

It is compulsory for each study group member to attend a set number of meetings before training commences. Study groups make provision for beginner as well as advanced farmers.

We also find that as farmers graduate from the programme, they become very valuable members of the study groups as they can pass on first-hand experience to other farmers.



Farmer's days

Trial plots are established and managed by the provincial co-ordinators where farmers can be directly exposed to the benefits of correct soil preparation, fertilisation, cultivar selection, weed and pest control and harvesting.

The staff involved in the programme co-ordinate the establishment of these trials with other role players in the industry, being the contractor, the seed companies, the fertiliser companies and the agro-chemical companies to expose farmers are exposed to the best possible production information and techniques.

The farmers are able to experience the benefits of correct management first hand and then do the same on their own land.

Farmer Of The Year competition

There is a huge amount of development work that is being done to support black farmers. There is also a perception that there are no black commercial farmers who are performing well.

The purpose of this competition is to give the grain farming industry positive exposure and publicity that is positive and to create role models for other people considering a career in agriculture.

The aim of the Farmer Of The Year competition is to recognise excellence amongst the developing farmers in the grain farming industry amongst the developing farmers and provide role models for others who are entering the industry.

Possible candidates for the competition are supported.

Regular visits to their farms play a important part in improving their production practices, as well as preparing them for the competition.

Training

There are 26 training courses each with their own manual available in various languages.

Feedback has proven that providing study material in a farmer's own language plays a major role in the understanding and full comprehension of certain terms and concepts.

Training DVDs were developed which have added tremendous value to the insight and understanding of the practical elements of the courses.

This gives the farmers more exposure and facilitates their comprehension of certain actions or procedures which logistics, finances or a lack of equipment generally restricts.

Various scenarios, problems and ideals can be communicated to farmers more effectively, which in turn fast-tracks learning and comprehension and ultimately accelerates market access.

A total of 137 courses were presented and 2 389 farmers have received formal training during 2012.

These courses were generously funded by the Maize Trust, Winter Cereals Trust, Sorghum Trust and the Oil and Protein

Seeds Development Trust, as well as the Agri-Seta.

Schools Programme

The Grain SA farmer development programme currently has 11 school facilitators who visit Grade 9 learners throughout the country up to three times per year.

The motivation behind this initiative is to educate learners about the importance of agriculture, to create awareness among learners as to the type of products that derive from agriculture and teach learners about the agricultural production areas in South Africa – what is grown where and also gives a broad overview of soil, the factors influencing it and soil conservation methods.

It also touches on types of inputs required, input costs, risk management and diversification and has a very strong focus on the types of careers that the agricultural sector has to offer. A total of 90 232 learners were addressed during 2012 alone.

Pula Imvula magazine

The *Pula Imvula* is a season-specific monthly magazine and acts as a direct communication medium for developing farmers.

Approximately 20 000 copies are printed in seven different languages and distributed each month. The Grain SA Farmer Development Team is passionate and committed to developing strong, independent and sustainable black commercial farmers.

Jane McPherson and Liana Stroebe





A bird's eye view

The potential impact of mining activities on agricultural production and conservation in a pilot area of the Mpumalanga province

Agriculture and mining have been the key driving force behind the South African economy for a number of centuries. Although their contribution to GDP has shrunk significantly as the economy has developed over time, these two industries remain at the heart of economic growth and the creation of unskilled job opportunities.

With the sharp rise in the world's demand for minerals, driven mainly by India and China, the rate of expansion in mining activities over the past 10 to 15 years has been phenomenal.

The areas where the expansion in mining activities has and is taking place, ranges from desolate areas with limited agricultural

potential to areas where high potential agricultural land, for example in the Mpumalanga Province, is taken over by mining activities. At the current rate of coal mining in Mpumalanga, it was calculated that approximately 12% of South Africa's total high potential arable land will be transformed, while a further 13.6% are under prospecting by the mines in Mpumalanga.

For the purpose of this study, a selected pilot area was identified to illustrate the potential impact of mining on agriculture.

The pilot area under consideration

Based on Map 1 below, the pilot area has an approximate total area of 170 763ha, of which 99 518ha is made up of high potential arable land and 38 020ha is classified as moderate potential arable land. Of the 170 763

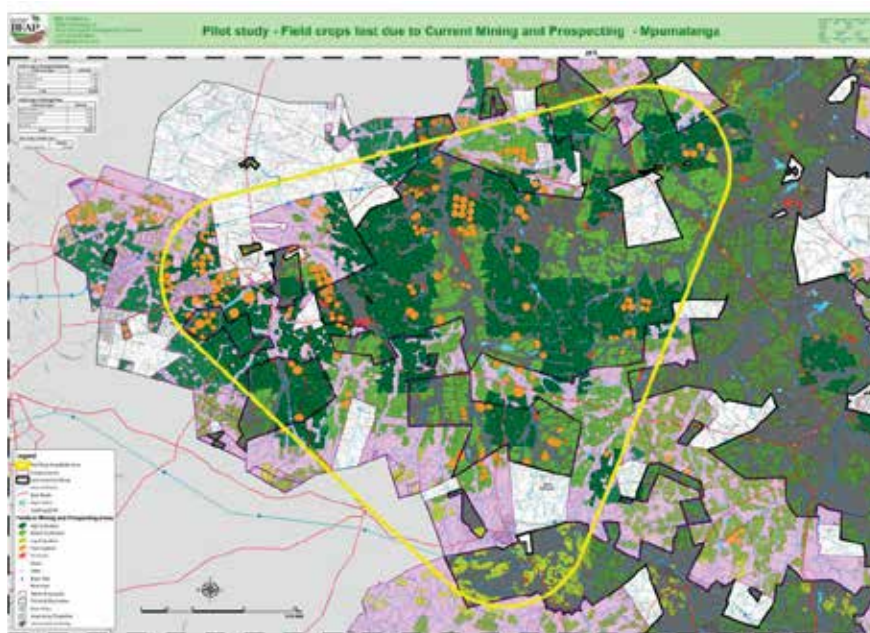
hectares of land, 84 428 hectares are considered to have high to low cultivation taking place on them and a further 5 956 hectares can be regarded as pivot irrigated land.

The total high, medium and low cultivation hectares influenced by current mining are 27 431, 17 178 and 2 495ha respectively, as well as 3 180ha for pivot irrigation.

Then from the proposed prospecting areas another 13 485, 12 448 and 638ha, within the same field crop boundaries as mentioned and 2 488 for irrigation.

This was calculated by TMS Consulting, using ARC GIS mapping, with the field crop boundaries data provided by AGIS, 2011.

For the purpose of this study, it was calculated that an approximate total of 79 967ha (Map 1) of the current cultivated land in the Delmas, Ogies and Leandra districts will



Map 1: Pilot study area containing the field crop boundaries, with current and prospected mining areas. Delmas, Ogies and Leandra, 2012.

Source: Compiled by TIMS

potentially be taken over by the mines. The time frame for this is uncertain, but the most likely scenario is that this area will be taken up by mining activities over the next ten to twenty years.

Economic impact of mining on agriculture in the pilot study area

Based on the findings illustrated in the above map, further calculations can be made. It is important to note that the data from the map provides an indication of potential hectares to be lost since the actual hectares cannot yet be verified by any of the governmental

departments. Evaluating the true economic impact of mining will have to go further than the pilot area, as externalities such as the pollution of the countries scarce water sources and air pollution cannot be left out of consideration.

In order to calculate the loss in maize production, two scenarios have to be taken into consideration. Table 1 illustrates the loss in production, only due to the current mining activities and Table 2 shows the effect if the area under prospecting is also taken into consideration. The tables were compiled based on the average of 75% (Figure 1) maize cropping

for Mpumalanga, and a further 16% soybeans, 4% sunflower and 5% sorghum.

Loss in maize production due to current mining

Without taking expected yield improvements into consideration, it is estimated that approximately 447 581 tonnes of maize could be taken out of production from this area over the next 20 years, if all the current and proposed future mining (on prospected areas) takes place.

Consequences due to change in maize area

The partial equilibrium model was used to provide an indication of the projected long-run impacts on maize markets if 447 581 tonnes of maize are taken out of the market.

It is important to note that this shock was analysed under the assumption that the full potential loss in maize production would occur by 2020, which is not necessarily the case. The shock was simulated in the model by gradually introducing a decline in the area under maize production. The total decline in the area under production towards 2020 amounted to 79 343ha.

It is important to note that this is only the impact of the pilot area on the national market price, in other words, the loss of 79 343ha of crop (maize) land.

In a proposed second phase of the research the magnitude of the impact on national maize markets will be significantly larger as preliminary indications are that approximately 400 000ha of high potential land can be lost in total in Mpumalanga. If the

Table 2: Maize tonnage losses due to current mining activities, 2012.

Loss in maize production due to current mining takes place				
	Hectares	Potential t/ha	Ha if 75 % is maize (fig 1)	Tonnage
High cultivation	27	8.5	20 573.3	174 872.6
Medium cultivation	17	6.5	12 883.5	83 742.8
Low cultivation	2	4.5	1 871.3	8 420.6
Pivot irrigation (assuming 40 % maize)	3	14.0	1 272.0	17 808.0
Total	50		36 600.0	284 844.0

Table 1: Maize tonnage losses due to current mining activities, 2012.

Table 3: Maize tonnage losses if prospecting area is also transferred out of agriculture.

Loss in maize production due to prospecting areas become operational				
	Hectares	Potential t/ha	Ha if 75 % is applied for maize (Fig 1)	Tonnage
High cultivation	13 485	8.5	10 113	85 966
Medium cultivation	12 448	6.5	9 336	60 684
Low cultivation	638	4.5	478	2 153
Pivot irrigation(assuming 40 % maize)	2 488	14.0	995	13 932
Total	29 059		20 923	162 736

Table 2: Maize tonnage losses if prospecting area is also transferred out of agriculture.

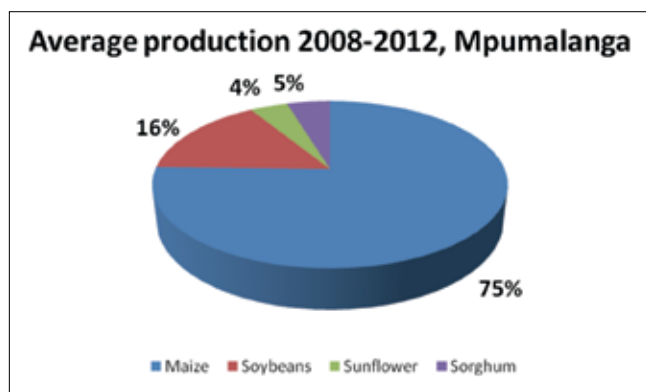


Figure 1: Average share in production for Mpumalanga from the four summer crops Source: Adopted from SAGIS 2012 (compiled by 2012)



Figure 2: Impact of mining in the pilot area on the national yellow maize market. Source: Partial Equilibrium model, model, June 2012

anticipated rotational cropping practices brings soybean up to 40% of the total maize area over the long run, it implies that approximately 240 000 ha of high potential land will be lost to maize alone.

At a conservative average yield estimate of 5t/ha, this implies that 1.2 million tonnes of maize will be taken out of the market.

Naturally, other areas in the country that are currently underutilised will potentially be brought back into production as market prices rise significantly to absorb some of the crop losses, however since the potential of the land is lower than the potential that is lost, the average costs of producing one tonne of maize in SA will increase, which will in the end affect food prices.

Summary

This study has only provided a high-level view of selected economic effects of mining on agriculture in a pilot study area.

Although the short-run economic impacts on farming level as well as medium impacts on maize markets were illustrated, a significant amount of research still has to be undertaken on the long-run macro-economic, environmental and social impacts.

Both mining and agriculture play a critical role with respect to job creation and contribution to the gross value of the country.

Over the short-run mining's contribution to the country's Gross Domestic Product (GDP) exceeds the contribution of agriculture by a significant margin, yet over the long run, agricultural practises are more sustainable. Therefore, the long-run impacts

on food security and employment become even more important to understand.

This paper only illustrates the impact of one small pilot area. In reality, the total province has to be taken into consideration.

References

Dillon Emma J, Hennessy Thia C, Hynes Stephen, Garnache Cloe, and Commins Verena: 2007. *Measuring the sustainability of agriculture. The Rural Economy Research Centre. Athenry, Galway. Working Paper Series. Working Paper 07-WP-RE-01.*

CSIR: *State of Environment Report 2001. 2002. Mpumalanga Province. Prepared for Department of Agriculture, Conservation and Environment, Mpumalanga Province. CSIR, PO Box 17001, Congella, KZN. August.*

CSIR: *State of Environment Report 2003. 2005. Mpumalanga Province. Prepared for Department of Agriculture, Conservation and Environment, Mpumalanga Province. CSIR, PO Box 17001, Congella, KZN.*

Hoffman, T. and Ashwell, A. (2001) *Nature Divided: Land Degradation in South Africa. University of Cape Town Press, p168. (Cited by CSIR, 2005).*

Hoffman, T., Todd, S., Ntshona, Z. and Turner, S. (1999) *Land Degradation in South Africa.*

Prepared for the Department of Environmental Affairs and Tourism, p245. Available at <http://www.nbi.ac.za>. (Cited by CSIR, 2005).

Kellar G and Warrack B. (1997). *Statistics for management and economics. Fourth Edition. Duxbury Press, London.*

Mpumalanga State of the Environment Report. 2003. Prepared for: Department of Agriculture, Conservation and Environment Mpumalanga Province. Prepared by: CSIR, PO Box 17001, Congella, KZN, 4013. Final Version August 2002.

Schoeman J.L, van der Walt M, Monnik K. A, Thackrah A, Malherbe J. Le Roux & R.E. 2002. *Development and application of a land capability classification system for South Africa. ARC-Institute for Soil, Climate and Water, Private Bag X79, Pretoria, 0001. South Africa. April.*

STATE of THE ENVIRONMENT. 2003. *Department of Environmental Affairs. Directorate Information Management, Private Bag X447, Pretoria, South Africa.*

Venter, A., Herselman, J.E., van der Merwe, G.M.E., Steyn, C. & Beukes, D.J., 2001. *Developing soil acidity maps for South Africa. In: Abstracts volume, 5th Intl. Symp.*

Plant-Soil Interactions at Low pH, Bergville, South Africa, 12-16 March 2001, (Cited by CSIR, 2005).

A controlled environment

The regulatory management of genetically modified organisms in South Africa

As early as 1990, South Africa together with other developing countries entered the arena of agricultural biotechnology. Recognising that the issues and concerns around genetic modification involve scientific, economic, social, trade and political aspects, the South African Committee for Genetic Experimentation (SAGENE) was established.

This committee was responsible to advise the government, industry and the public on the safety of activities involving genetically modified organisms (GMOs). Approvals for such activities were granted under an amendment of the Regulations of the Agricultural Pests Act, 1983 (Act No. 36 of 1983).

Since 1999, activities involving GMOs have been regulated under the Genetically Modified Organisms Act, 1997 (Act No. 15 of 1997). The Act is administered by the

Department of Agriculture, Forestry & Fisheries. The scope of the GMO Act includes all activities involving genetically modified organisms. Thus it covers the imports, exports, transit, development, production, use and storage to name a few. Before a decision on the use of GMOs is made, a multi-disciplinary risk assessment process is undertaken involving a scientific Advisory Committee and the cross-governmental decision-making body, the Executive Council.

These assessments focus on all potential risks the GMO may pose to humans, animals and the environment and are carried out in line with the prescripts of international standard setting bodies.

Potential socio-economic impacts are also considered. In contrast to safety issues, socio-economic impacts have a very strong local context and as a result, no harmonised standards exists for potential socio-economic impacts. Recently, the secretariat of the Cartagena Protocol on Biosafety (CPB) undertook several consultations to consolidate the country's experiences and views on the socio-economic considerations relevant to the application of GMOs. The final synthesis of these considerations will be reported at the next meeting of parties to the Cartagena Protocol on Biosafety in India in October 2012.

What is the GMO Act for?

The GMO Act provides for the regulation of different classes of use of GMO including development in the laboratory or glasshouse (contained use), use as food and feed (commodity clearance), limited environmental

release (field trials) and commercial release (general release). It is important to note that no general release authorisation is granted unless performance and safety data generated under various South African environmental conditions are obtained.

Every authorisation is subject to specific conditions; compliance to these conditions is monitored by the inspection services of the Department of Agriculture, Forestry and Fisheries.

When technology holders obtain commodity or commercial release, traders or importers are still required to obtain an import or export authorisation every time a transboundary movement of commodity or seed consignments takes place.

This does not mean additional safety assessments would be undertaken; it merely serves as a means to monitor the imports or exports and ensures that the importers adhere to strict conditions of use and the rules of importing countries.

To ensure a fully participatory process, public comments are solicited on all environmental release or commodity clearance activities. The general public receives

notice of these intended activities through advertisements placed in newspapers as prescribed.

For general release or commodity clearance applications, the public will be informed through notices placed in three newspapers with a national circulation, while field trials must be notified in two newspapers circulated in the immediate release area and one newspaper with national circulation.

The public may submit comments to the Office of the Registrar within 30 days from the date on which the public notice was published. Relevant non-confidential information relating to a particular application may be accessed via the procedure as stipulated under the Promotion of Access to Information Act, 2000 (Act No. 2 of 2000).

The application process and the contact details of the Deputy Information Officers may be obtained on the website of DAFF.

Information on authorisations granted under this Act are also published on the departmental website. Non-confidential minutes are also available at the same location for publication consumption. The South African legislation is also aligned to the Cartagena

Date: 17 – 22 February 2013 Event: World Soybean Research Conference

It is with pride that South Africa is hosting the World Soybean Research Conference (WSRC) next year February. This event provides a global forum for the world's soybean researchers to exchange information and research findings across all segments of the soybean industry.

Attendees from around the globe are set to converge at the Durban International Convention Centre in Durban for this conference. Participants will hear from producers, researchers and industry leaders as they explore the entire soy value chain from growing and processing soybeans to transporting, using and marketing soybean products.

This year's theme of 'From China to Africa – can research close the gap between soy production and increasing global

demand?', will highlight diverse topics in both plenary and concurrent break-out sessions, including: food security; sustainability; health and nutrition; genetics and breeding; processing; applications; agronomy; transportation and storage as well as an overview of commodity markets.

Keynote speakers

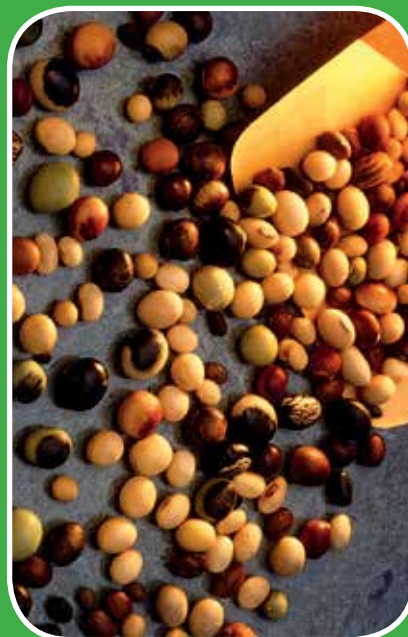
We have the great pleasure of announcing two confirmed keynote speakers; Mr Thomas Mielke and Mr Kip Cullers.

Mr Thomas Mielke, executive director of Oil World, will be one of the headline speakers on the opening day of the conference on the 18 February 2013.

Mr Kip Cullers will be joining us on the Agronomy day on Thursday 21 February. Kip farms in Purdy, in the southwest corner of Missouri, USA. His 4 000+ acres of corn and 600 acres of soybeans are located in seven of Missouri's southwest counties.

For more information on registration, exhibition or sponsorship please contact Ms Cheryl

Marsh (Project Manager) on +27 21 555 4152 or wsrc@paragon-conventions.co.za or visit the website for more details www.wsrc2013.co.za



Protocol on Biosafety which is a protocol which emanates from the Convention on Biological Diversity.

The objective of the Cartagena Protocol on Biosafety is, "to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (genetically modified organisms in the South African context) resulting from biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health and specifically focusing on trans boundary movement".

The protocol is therefore concerned with the common steps to be undertaken between exporting and importing during the trans-boundary movement between two countries.

South Africa has already commercialised three genetically modified crops, namely maize, cotton and soybean.

These crops have been modified to be resistant to certain insects and/or tolerant to a certain herbicides. Field trials aimed at ultimate general release authorisation continue for new GM maize, cotton and sugar cane. In the health sector several clinical trials are being carried out with GM vaccines aimed at HIV and tuberculosis. Several GM animal vaccines are already available in South Africa.

The application of the GMO Act allows South Africa to conduct a science-based case-by-case assessment of the potential risks that may arise from the use of a particular GMO. In

addition, this enables the country to collect information on the impact and implications of the deliberate release of a particular GMO. To date, evidence suggests that the Act allows the authorities in South Africa to effectively manage activities involving GMOs.

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The big question: Are GM foods safe?

According to The World Health Organisation, "Different GM organisms include different genes inserted in different ways. This means that individual GM foods and their safety should be assessed on a case-by-case basis and that it is not possible to make general statements on the safety of all GM foods. GM foods currently available on the international market have passed risk assessments and are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved. Continuous use of risk assessments based on the Codex principles and, where appropriate, including post market monitoring, should form the basis for evaluating the safety of GM foods."

Unity in Agriculture – a step forward

The leaders of Agri SA, The African Farmers Association of South Africa (AFASA), The National Farmers Union (NAFU), The TLU SA, Ag Business Chamber and SA Ag Processors Association (SAAPA) have decided to sign a declaration of intent to co-operate as far as possible to achieve consensus on policy matters and to talk with one voice. This group will be called the Agrisector Unity Forum. Its main purpose is to represent Agriculture with one voice and to focus on policy matters. The Agrisector Unity Forum will also promote the image of agriculture as a whole and place emphasis on the importance of this sector as part of the economy. Ms Ntombi Msimang (Chairperson of the National Marketing Council - NAMC) was elected as chairperson.



The voice



of reason

Chairperson of Grain SA, Louw Steytler, believes that co-operation, a return to the values of President Nelson Mandela, and a great leap of faith will forge a path that will allow both the government and Grain SA to work together to secure food for South Africa

Louw Steytler, Chairperson of Grain SA, is not who one would imagine a stereotypical member of Grain SA would be. In fact, he is a man who represents an organisation that understands the need for co-operation between commercial farmers, rural developing farmers, the government and the private sector in order to secure a future for the South African nation.

He literally speaks the language of the people and is the best placed individual to drive home the requirements of both Grain SA and the government to ensure that jobs are created and that South Africa remains food secure. One of the reasons he is perfectly positioned today is because of his upbringing and the influence his father had on the family growing up.

His father, Jan Steytler, was involved in politics and well known in the apartheid era as a voice against the regime. He was also a doctor. "My father gave his entire professional career and his life to the voice of reason, non-racism and justice for all. It has served us and held us in good stead because we have learnt from his example how to project

ourselves and conduct ourselves in the non-racial society that we now have in South Africa".

Jan Steytler seemingly was a 'salt of the earth' kind of man who understood how the world worked and had great empathy for the people he was surrounded by.

"He understood the aspirations of normal people, because he came from the agricultural community in which he was subjected to the hardships that were endured by both the Afrikaaners and English speaking South Africans and our black countrymen in the rural areas. This definitely played a huge role in his way of thinking about justice equality and human dignity."

As a child growing up, Louw's father instilled in his children the same values he lived every day of his life.

"By virtue of the example he set for us and the way that he reasoned with us as children, it rubbed off on us. All the children hold these liberal views on society, the constitution, and rule of law which is of critical importance."

These values are what Louw and his family hold so dear. "It was an absolute pleasure to grow up in that environment because it simply enhanced our ability to engage in this new free society that we now have."

Lost opportunities

Despite his progressive upbringing, and despite how South Africa was born into democracy nearly 20 years ago, Louw is deeply disappointed about the levels of corruption that afflict our society.

"I am gravely concerned at the level of racism that is practiced in South Africa and I just appeal to the voice of reason, because the voice of reason is held by all kinds of South Africans over the colour line and the culture line. I maintain that the majority of us are still reasonable people.

These reasonable people will determine the future of South Africa."

The principles that Louw's father instilled in him and his family, he has managed to translate into the work that he does.

Ten years ago, Louw Steytler was appointed president at Free State Agriculture where he used democracy as a foundation.

"We instilled constitutional economic argument as the premise of departure within the greater debate.

"This is something that has stood us in good stead and, in actual fact, has been an example to other institutions within the ambit of organised agriculture," he says.

His position as chairperson of Grain SA was based on his values and the principles that his father instilled in him.

"My chairmanship of Grain SA was determined by the membership on a democratic basis and they chose to elect the 'verligte'. I speak three languages and I committed totally and utterly to the future of South Africa. We serve to uphold the Constitution."

Question is, what about the those who aren't as embracing of the 'New South Africa'?

"Even those individuals understand that we need to negotiate, that we need a premise of departure other than race in itself. In my opinion, we have influenced the opinions of those people and black farmers have been attracted to the philosophy," he says.

But there will be marked differences between new farmers and commercial ones according to Louw.

Louw very candidly admitted that despite efforts to bring the colour lines together there will always be problems, but hopefully, they would – if the government and Grain SA partnered together – be surmountable.

"There will always be a clash, but as long as adhere to the principles that are set up in the Constitution I think we can find common ground to go forward."

The biggest problem Grain SA is facing, is the lack of partnership with the South African government.

"The relationship between the government and Grain SA is based to an extent on mistrust due to our historical past, which we are simply now by virtue of the mannersism of our argument and the way that we conduct ourselves within the greater civil society will be changed."

What Grain SA needs and wants is to partner with the government to ensure food security for all people, through job creation and skills development.

"What we need, is for people within the confines of government to take the same stances that we have taken and to engage with Grain SA so we can change the very philosophies and historical differences we have inherited," says Steytler.

Unfortunately, the amount of time it has taken to get to this point – while working towards a better future – is going to take more time than South Africa has.

"It's not happening fast enough because the mistrust is so deeply ingrained, its going to take a massive effort to change that. Those perceptions will go and what we are all looking for is the voice of reason where both the Constitution and economics will prevail."

To import grains from other countries is far too costly, and seemingly a waste of resources when we are not utilising our own efficiently.

"The world deals with food insecurity, where SA consumers can be fed on the production capacity of countries elsewhere in the world. We need to cherish our own food security, and see to it that we enhance that. We will enhance that by virtue of the fact that we are involved across the colour line with South Africans to enable them to partake in the production capacity of commodity production in South Africa to enhance household food security and food security for our nation."

When asked what he would say if given a chance to speak to the government, Steytler says: "I would say, Minister come and join us, because we are going to succeed in creating an environment where all South Africans across the colour line can join and take part in the national economy and in the agricultural economy and in so doing, can address the plight of the poorest of the poor."

At this stage, while there is mistrust and fear and a deep dark history, a big leap of faith is necessary.

Everybody knows that the biggest sticking point for Grain SA and the government are the issues of land reform.

Steytler believes that South Africa squandered the window of opportunity that President Mandela left us with.

Going back to what worked

"In the Mandela era, there was co-operation between people. We need to return to the inclusive mannerisms and policies of President Mandela in which all South Africans were engaged. We cannot operate and be successful in silos of colour. We need to return to those processes of President Mandela because we will in that way attain the necessary successes that we so need," he says.

Grain SA, which has a solid foundation of progress through leaning on democracy, will not succeed entirely in its mission unless

it has the support and co-operation from those in government. "We know there are grassroots problems. We have a very direct and honest engagement with civil society."

"The message to the farming community is exactly the same message that we have for government. We need co-operation, the farmers have bought into the approaches as to the new co-operation that we need," he says.

Diesel taxation

One of the biggest challenges farmers have at this point, is the diesel taxation that the government has placed on them.

"The reality is on the basis of good governance, the government is trying to glean as much tax as they can from civil society. Given the fact that we have the financial environment that we have, we have a deficit. South Africa needs money to fund critically important social programmes and we see that SARS itself is trying to address the corrupt element in the agricultural and mining sectors when it comes to the diesel rebate."

Unfortunately, what results from this, is that innocent and honest people are now being affected negatively by the actions of SARS.

According to Steytler, "SARS was party to the creation of a system that was accepted nationally as the premise, and as the way of doing things which led to the Diesel rebate."

The matter has become unmanageable and if it continues will be destructive to the relationships Grain SA is trying to establish with the government

"The whole thing has now turned around and the law is being applied. In reality they are now charging the farming community and holding them responsible for a methodology that was instilled partly by them and that in itself is destructive."

"We need to discuss this in a very reasonable open minded manner if we are not going to affect the civil liberties of the individual firstly and secondly, impinge on our ability to feed ourselves as a nation."

"We need a moratorium between all parties concerned so we can minimise the negative affect on our ability to produce food in South Africa," he concludes.

Sarah King



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Growing a new future

Andries Theron, wheat farmer and member of Grain SA: The past is not going to help us, working together will

Andries Theron, a senior member of Grain SA, was raised and brought up on a farm in the Swartland area of the Western Cape. Farming is inherently in his blood – his father was a farmer, he grew up to be a farmer, and he is currently guiding his son in farming practices too. Andries believes that while he may have grown up with the belief system that farming is a business, it's an attitude that he embraces, where managing his team of workers by guiding them and supporting them, is far more important than farming itself.

While his wheat producing farm is one of the oldest farms in the area, it has over the years diversified its operations to include sheep

farming, and in the future Theron is looking to expand into legumes and barley.

It was only once his father passed away in 1984 that Theron took over the responsibility of running the farm, and becoming a farmer once he had completed his studies.

Theron has always been involved in organised agriculture, it was only seven or eight years ago that he became a member and representative of all the grain farmers in the Swartland area.

The relationship between the South African government and the white farming communities has for years been tainted by mistrust and resentment for the mistakes of the past on both sides. In many instances, while South Africa has grown into a country that still embraces the essence of what democracy means, it has been a case of two steps forward, five steps back.

Theron is optimistic however that these issues can be laid to rest.

"The government obviously has a lot of say in what happens in our country, but as an optimist in South Africa, the grain industry is the industry to be in because by being a wheat producing farmer, I'm grateful for contributing to what most people in South Africa have on their breakfast table either in cereals or in milk or in bread. And while there are those who are not fortunate enough to have bread at their tables every morning, which for many, is a staple diet, I see Grain SA's role as ensuring that South Africa remains food secure through job creation and skills development. At the moment, we import our wheat which means we are providing jobs for people in other countries, and not our own. It's all about expanding

the wheat industry here, by increasing jobs which will contribute positively to food security, which will also decrease the grain price, which in turn will decrease the high price of practically everything else we consume. If you can't buy what you need, it's of no use to you," says Theron. In terms of Grain SA's mandate, food security is at its core with regards to the future. "I believe that South African farmers are the most experienced and knowledgeable farmers in the world. We are prepared to share that knowledge with our fellow upcoming farmers and the farmers of Africa. We must always include Africa because South Africa is the threshold to Africa".

Theron believes there is no point being open to partnering with the government if the past doesn't become part of the past.

"Let's forget about the political issues of the past, let's learn from them but don't let them hold us back.

"My employees from the farm are a part of my business enterprise. People who start to farm are of no threat to me. They are part of the solution. Let's help the people to start farming as commercial farmers," he says.

Theron admits that he is made mistakes in the past.

"One of the biggest mistakes I've made in my life was being influenced by people's negative thinking. I lost opportunities that came my way because I was so negatively influenced.

"That is why I say, let's make use of the opportunities we have now to make a difference, and to do things better. There are huge opportunities for those farms that the

South African government bought, to be a success. Let's rise to the challenge and make them a success. The farmers in South Africa are willing to contribute to changing the wrongs of the past by participating with the

"We are prepared to share that knowledge with our fellow upcoming farmers and the farmers of Africa"

government," he says. For Theron it really is about working together.

"Let's learn from the past. There is no colour in farming. There is no difference between a black, brown, white, or green person farming next to each other, there's only a fence. Each of us have the same needs.

"Our challenge is to produce food for ourselves, our families and future generations," Theron says.

The biggest message Theron had was explaining that what Grain SA is trying to do, will take time but if given the opportunity, the fears, resentment, anger and unfairness that arises between the government and the white farmer, will be negated when the proof that what they are doing is trying to correct the wrongs of the past, by helping developing farmers to become sustainable and profitable, and allowing them to become empowered by owning their own farms, and being able to feed, educate and look after their families.

"It's a natural process that will happen with people coming into farming and let's use people who are capable of farming sustainably. It's not necessarily going to be the guy who has been working on the farm for 15 or 20 years who will end up being the farmer. It could be that young guy who's finished matric and university training, who has the best ability to do it" he says.

In essence, Grain SA is striving to find the best people to train and educate in matters of farming.





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"Let's use the best people – we do have them, to ensure that we have food security."

Agriculture is not one of the highest contributors to the South African GDP.

In other countries, this sector is one of the largest contributors because in rural communities the world over, it is a means of creating sustainable communities. In South Africa, it is two-fold: Creating sustainable communities, and providing food for those in rural communities. Theron believes there are big obstacles in the way, before agriculture in South Africa can be recognised as one of the biggest economic contributors. "Some of the constraints in South Africa are communication, road infrastructure and the like which is putting strain on sustainable farming in these farming areas. We need to be doing more," he says. There is enough for everyone. "Big companies will survive if we start looking after people on ground level.

The population is increasing, which means there will be demand for products and services from the big companies, they will not be affected.

"We need to equip our people to live in a more sustainable manner. There is no need to maintain focus on primary agriculture.

The value chain has a lot of value and a lot of opportunities for people to participate in agriculture in South Africa," according to Theron. A variety of elements have increased the price of grain and it doesn't seem set to stop according to Theron.

"I'm a bit reluctant to say this, but unfortunately I do think the availability of grain in the world is going to have a huge impact on the price of South African wheat. It's going to put price pressure or inflation pressure on food," he said. Climate change has impacted on the price of grain, but there are ways around that. The one principle that is most important is agricultural conservation, which has unfortunately been neglected. However, there have been surprising results using conservation methods in the country.

"South Africa is a dry country, it's a semi-desert and so conservation agriculture in areas where there is very little or very low rainfall, has been of great benefit. I have seen fairly good yields with conservation agriculture, where you make use of what you've got for now and in the future and simultaneously you create a sustainable farming enterprise that's building on the fertility of the land." Good government

policies and correct procedures around agriculture can help to produce cheaper food.

This however, would all mean nothing unless there are programmes to share and distribute knowledge and expertise. "It's important that we equip people with knowledge, with skills, with education to become successful in whatever they're doing. If they're a farmer they must be successful, if they're a farm worker or tractor driver or a combine operator they must be successful, they must be taught and equipped to do that.

We are prepared to do that, and are doing that.

We are prepared to help. I'm prepared to take a young guy from university and teach him as I've taught my son and put him on a farm and teach him how to farm successfully," Theron says.

According to Theron, no man is an island. "We need one another to succeed in the endeavour of food security. We all have a hand in making things better for our children and their futures. Complaining doesn't help. Action does," he concludes.

Calvin Jones



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Sensako

Plant breeding architects for food security

It soon becomes apparent after shaking hands with the co-'head honchos' of Sensako (Pty) Ltd, undisputed market leaders in wheat breeding in southern Africa, that the unassuming manner of these two gentlemen is misleading.

They are super-charged with enthusiasm for their business. "We sleep, breathe and eat our plant breeding programmes," says Dr Francois Koekemoer, Director: Research & Development with a meaningful grin.

With a B.Sc in Agricultural Economic Science, a postgraduate degree in Economics and a B.Compt, Patrick Graham, the Commercial Director, looks after the financial side – which includes tax, auditing, finance and all other business matters.

Based in Cape Town and comfortably dressed in a trendy pale pink shirt, teamed

with smart jeans early on a mild, but uncharacteristically grey, spring morning in Cape Town, Patrick Graham's frank, blue-eyed gaze is uncompromising when he says: "We are a proudly South African, innovative company, with no international entity pulling the strings.

We align ourselves with expertise in order to be the best at what we do to the advantage of the farmers, millers and bakers who are our clients. The company's vision is to help optimise cereal production and profitability for the benefit of cereal producers and processors alike.

Dr Koekemoer, dark-eyed and affable, heads up the three breeding programmes, which are serviced from two sites – one in Bethlehem, home of the analytics laboratory, germ-plasm development, irrigation and winter wheat programmes, and the other

in Napier in the Western Cape, where the Doubled Haploid and Cape breeding programmes are based. His B.Sc (Agric) degree (majoring in agronomy and genetics) led to postgraduate studies and ultimately a PhD in plant breeding.

For the benefit of the uninitiated, he explains that germ-plasm is the inherent genetic background of a seed and adds that there is currently no genetically modified, commercially grown wheat in the world. Sensako's breeding strategy – known as modified pedigree selection – incorporates key breeding technologies which, coupled with the use of molecular marker selection and high throughput quality analytics, which maximise efficiency and productivity.

The programmes focus on producing wheat varieties for the key commodity and quality markets in South Africa, incorporating key agronomic characters, such as increased yield, adaptability and consistency, straw length, milling and baking improvements and disease resistance.

What is their potential?

Patrick Graham: "To continue developing our core competencies and values, dedicated to making a difference going forward in contributing to food security in Southern Africa in the future."

Dr Koekemoer adds, seamlessly continuing his colleague's train of thought: "The benefits that accrue to the wheat industry through breeding programmes, all the way from the miller to the consumer, are massive. I would go as far as to say that countries who do not have their own plant breeding programmes could find themselves in huge difficulties in the future. You have to have the research infrastructure to deal with the threat, say, of a





new disease which could have the potential to wipe out years of wheat production."

"According to the International Seed Federation, over the past 50 years, food production internationally has increased by an average of 2% per year, with half coming from genetic improvement. Plant breeding has delivered major advances in the yield, quality and performance of wheat and remains a vital industry to keep the South African wheat industry competitive.

South Africa currently imports between 40-50% of its wheat needs – not a very encouraging state of affairs when we consider that world food demand is expected to increase 50% by 2030 and 70% by 2050, and this staggering projected increase is in essence the effect of changing weather and disease patterns.

We are continually evaluating and developing new germ-plasm varieties, with the emphasis on important aspects, such as disease resistance, milling extraction, hardness (water absorption) and dough mixing time. Sixty per cent of our turnover goes into research."

We met on the eve of their departure to Ethiopia, to an international conference on food security in Africa. There is an obvious synergy between these two leaders of the formidable Sensako team, which clearly stems from many years of collaboration and a shared passion for their goals.

Sensako was originally founded in 1958 as a co-operative which was controlled by co-operatives whose role was to develop seed for various other co-operatives. With the deregulation of the industry in 1990 the

co-operative structure fell apart and ran into financial difficulties. In 1999 Monsanto, the controversial American multi-national agricultural biotechnology company, bought Sensako.

Around 2006, when Monsanto wanted to exit the wheat industry in South Africa, Sensako did a management buy-out, which was accomplished in 2008. Since that time the company has been operating as an independent organisation.

The company constantly seeks to broaden its research and support infrastructure by interacting with research partners and networks worldwide, exchanging information and keeping up with the continued release of new and improved wheat varieties.

They have visited breeding programmes in Australia, Argentina, Mexico, France, the Netherlands, Britain, Russia, the USA, Germany and Syria and are proud of the relationships that have been fostered in the process, with huge benefits for Sensako and the South African wheat industry.

The company has ventured into neighbouring African countries, such as Zambia and Namibia, but challenges involving intellectual property have thus far prevented Sensako from moving further north into the continent with their plant breeding activities. But because they understand conditions in Africa, they do believe they can make a contribution there in the future.

It takes roughly ten to twelve years to release new cultivars and it is critical for plant breeders to be absolutely dedicated. Sensako is proud of its very able team as they

can justly be called 'architects of new plants'. Dr Koekemoer states that their work requires them to weave many disciplines into one – entomology, agronomy, plant pathology, cereal chemistry and plant physiology – and that takes time.

Their staff complement consists of 22 people – 15 people working on research and development of which six are plant breeders. Between them, their wheat breeding team possesses over 100 years of combined experience. Together they have produced 75% of the most recent provisional or final wheat cultivar releases for the country. Sensako wheat cultivars also account for approximately 75% of all wheat grown in South Africa.

One of their main aims in mind when buying the company was recognition of the importance of the human element. "We invest in our people like a family", says Dr Koekemoer, "the result being that most of our staff members have been with Sensako for an average of 14 years. Our staff now owns 40% through a staff trust."

The way forward for Sensako?

"We are one of the few privately owned South African programmes with its own research facilities and breeding teams, which give us core competencies to make progress in germplasm development. We are well-positioned to expand our product portfolio to crops other than wheat. Our current niche market is wheat and wheat products, but if we want to grow as a company, we need to start looking at crops, such as maize, soya, sunflower and barley.

To illustrate further the importance of plant breeding, Dr Koekemoer recalls the late Dr Norman E. Borlaug – also known as the plant scientist who fought famine – who brought about the green revolution in the 1960s in South East Asia and whose work earned him the Nobel Peace Prize in 1970.

"We subscribe to the same motto as that of the Free State University's Agricultural department: 'a country that does not look after its agriculture is not looking after its future'. As a dyed-in-the-wool South African company, the subject of food security is close to our hearts and we believe we can contribute in a big way to providing enough food for the citizens of this country in the future."



The answer
is at our feet



Far from becoming a scare-word, the challenge of food security is a serious problem in these times of global economics. *Harvest SA* discovered that numbers alone can drive fear onto everyone's dinner plate

Worldwide, up to two billion people lack food security with about 925 million chronically hungry due to extreme poverty. Six million children die of hunger every year which equates to 17 000 every day.

The United Nations forecast that the global population will reach around nine billion by 2050, with major growth taking place in developing countries. Analysts say South Africa's population by then could be around 55 to 60 million.

This severely jeopardises food security which is usually associated with poor health, dietary deficiency, malnourished children, decreased physical activity and lowered immunity. It also has a major impact on sustainable economic development, environment, and trade.

The Rome declaration on world food security and the world food summit plan of action, called on all United Nations members to halve the number of chronically undernourished people by the year 2015. The plan of action sets a number of targets for governments and non-governmental organisations to achieve food security at the individual, household, national, regional and global levels.

It is a human right for people to have access to sufficient and nutritious food that meets all dietary needs and preferences to maintain a healthy and active lifestyle. But food security remains a complex sustainable development issue. If left unaddressed, food security sets in motion an array of outcomes that perpetuate malnutrition, reduce the ability of adults to work, raise women's inability to give birth to healthy children and erode children's and young adults' ability to learn and lead productive, healthy and happy lives. This stunting of human development undermines the country's potential for sustainable economic development.

Minister of the Department of Agriculture, Forestry and Fisheries (DAFF), Ms Tina Joemat-Pettersson, said in a presidential statement that the agricultural sector is a key sector of the economy to promote food security. It is one of the six job drivers identified in the New Growth Path developed to create much-needed jobs, eliminate poverty, unemployment and inequality.

The DAFF's major role is to encourage South Africans to participate in agriculture and produce in rural areas where malnutrition levels are higher than in urban areas. The Department promotes participation in various forms of subsistence agriculture, encouraging people to contribute to the growth of commercial agriculture.

Farmers' incomes and agricultural job creation are also highly dependent on global economic conditions and global markets. These conditions, combined with challenges such as climate change and uncertainty around land reform, have resulted in a decrease in the number of commercial farmers.

If left unaddressed, food security sets in motion an array of outcomes that perpetuate malnutrition...

It has also led to a decrease in total production levels, a higher volume of food imports and higher food prices. In future, farmers will need improved support in the form of finance, market access, agro-processing, implements and inputs, training, and capacity development.

The government is committed to the provision of finance, the opening of new markets globally and provision of implements and inputs. While looking at the need to increase food production, transformation in the agricultural sector should also be prioritised. At the moment, commercial agriculture is currently producing 90% of the agricultural output, consisting of about 37 000 members. People living in the rural areas produce only 10% of the agricultural output through subsistence farming with over 25-million members. More support for emerging farmers would improve their participation in commercial agriculture.

Since 2009, 11 000 new smallholders have been established out of a 50 000 target that

was set to be reached by 2014. Support has been provided to both new and long-established farmers through many programmes including Letsema, the Recapitalisation and Development Programme and through the funding agency MAFISA. Despite the support, only a marginal number of 5 381 smallholders are involved in agri-businesses and a mere 3 910 are linked to markets. The minister said an improved programme of financing should be created, involving the National Treasury, the Land Bank and established farmers, envisaging that the cost of land reform be spread between all stakeholders. It involves new financial instruments being designed to facilitate land reform.

More investment in clean technology and agricultural research and development is needed which should be used more strategically. The growing challenge of climate change means South Africa needs to look at ways of making agriculture more sustainable. This includes paying greater attention to alternative energy, soil quality, minimum tillage, and other forms of conservation farming.

According to the FAO, food prices are already at close to record levels, having risen 1.4% in September 2012 following an increase of 6% in July.

According to Ernst Janovsky, Absa Head of Agribusiness, the rise in agricultural commodity prices poses a threat to food security, and investments in agriculture are crucial.

Chief executive of Land Bank, Phakamani Hadebe, said at the signing of a multi-billion rand agricultural loan between the Land Bank and Afgri, a new approach was needed to sustain food security.

"For the world to be able to produce sufficient food, we'll need to improve our technology. We need new systems to enhance our productivity, we also have to work smarter," says Hadebe.

The Land Bank recently raised R1 billion from the African Development Bank, and a further R830 million from the South African capital markets to pump into the sector. Policymakers should also focus on financing and strengthening infrastructure distribution networks that facilitate regional and international trade. Food is the basis of human development, therefore sustainable food security should be seen as a survival imperative.

Rizel Delano

AVCASA - the farmer's partner



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A thing of the past

Stalk borers (causing one of the biggest headaches for maize producers) which can destroy more than 30% of a harvest, are a thing of the past

A limited quantity of this maize seed was introduced commercially during the 2011/12 season. Farmers in Lichtenburg and Jan Kempdorp, where minor problems were experienced with the control of stalk borers with YieldGard® I (MON810), experienced no stalk borer infestation with YieldGard® II during the past season.

"With YieldGard® II stalk borers are a thing of the past," says Kobus du Preez, well-known maize producer from Grootpan, Lichtenburg.

He has been planting GM maize of which 80% is GM, on approximately 2 000ha for the past 10 years. In 2006, he was elected the Agricultural Writers SAs Farmer of the Year for the Northwest region. He planted 45 ha YieldGard® II, 78-45 BR GEN stack gene, white maize under centre pivot at a plant population of 50 000/ha in row widths of 760mm. His yield was 14.1t/ha. No stalk borer infestation was observed.

In the same block next to the new maize, and under centre pivot, he also planted 30ha of the old Bt MON 810 at the same plant population. Here stalk borers were found. The yield was 13.8t/ha. With conventional maize his yield was 12t/ha. The difference in yield with the new technology is 300kg/ha more. At an average price of R1600/t this means an additional profit of R480/ha for the farmer. On a 100 ha this amounts to a considerable R48 000.

A distinct characteristic of the new technology is that maize plants now contain two proteins that lead to the undoing of two stalk borers, namely *Busseola fusca* and *Chilo partellus*. Another advantage is that with this stack gene, Roundup Ready® Plus (L7769, Act 36/1947) can be sprayed over the top of the maize plants up to the eight leaf stage

to control late germinating weeds. Although MON 810 still experiences minor stalk borer resistance, Du Preez harvested 20t/ha on 60 ha, 62-80 BR GEN, Bt yellow maize under centre pivot with a plant population of 100 000/ha, last season. He had to spray for stalk borers only once. This is an ultra-fast grower that reached physiological maturing within 112 days.

Spray cost per tractor amounts to R130/ha and aerial R160/ha, chemical cost excluded. With the new technology where spraying has become unnecessary, the saving on spray cost must be added to the additional profit of R480/ha. With a saving of R130 tractor spray cost, this amounts to a total of R610/ha extra profit.

"Presently, YieldGard® II is the best technology available to us. It takes approximately 10 years and US\$ 100-million (R894.5-million) to launch a new product in the market.

"I urgently appeal to farmers to protect this technology by planting the required refuge areas.

"To realise high yields under irrigation, you need adequate sunlight, soil depth, soil moisture (water) and the correct cultivar choice (and population). Fertiliser must be right. If one of these is lacking, you again revert to lower yields," Du Preez emphasised.

Koos Bredenhann from Jan Kempdorp who planted 125 ha YieldGard® II under centre pivot, says he experienced no stalk borer damage. He planted the cultivar (DKC) 64-78 BR GEN, a yellow maize, ultra-short grower, at a plant population of 80 000/ha in row widths of 900mm.

Says Bredenhann: "Three seasons ago, I experienced serious problems with stalk borers. In the past I had to spray twice per season for stalk borers. Last season there were no signs of stalk borer with YieldGard® II. This also gave a significant saving on spray and labour costs. The maize was planted

on 20 December and was physiologically mature within 114 days. This suited those of us who planted wheat and followed up with maize on the same field. This maize shows improved standability, disease resistance and a higher yield potential.

"This development of the Bt-maize technology made a significant difference to the farmer's profitability. Twelve years ago my yield with conventional maize under irrigation was less than 10t/ha. With the Bt-maize this increased dramatically to 13.4t/ha. During the past season with fluctuating climate conditions, it was 10t/ha with YieldGard® II. I am very satisfied with it," concludes Bredenhann.

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Du Preez's fertilising programme comprised:

- 280kg N, 45kg P and 50kg K/ha;
- Prior to the first ploughing or chisel tillage, 1500kg gypsum, 500 kg 20:7:3 (30zn)+s fertiliser and 200kg chicken manure/ha are applied to be ploughed in;
- At planting, 200kg 5:3:4(19)+ZN plus 8kg flow trace/ha are applied;
- The rest of the nitrogen as 7:0:1(18) is applied in four increments up to and including the eight week stage;
- At the six-leaf stage, Gliogrow is applied with the high-sprayer and then again shortly before tassel stage;
- Leaf sap is monitored throughout the season; and
- If necessary, KNO₃ technical is also applied before the tassel stage.



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The science of food

Various challenges hinder global food production – to ensure food is more readily available, science and technology have stepped in

The agricultural sector has been confronted with a number of challenges in recent years including high production costs, decreased profit margins and rising food prices. Climate change has left the country's national food system vulnerable. But, addressing food security is a global issue and its estimated that by 2050, 20% of the world's population will be at risk of hunger.

In a report published by the Food and Agriculture Organisation for the United Nations (FAO) *How to feed the World in 2050* it was revealed that food production must increase by 70% to meet the demands of the world's growing population.

Locally, rural communities will feel the biggest impact of the challenges faced in agriculture and food production and have sparked a trend among food farmers to increasingly look to science and technology and research institutions for help to meet the growing global demands for food.

Harnessing advancements in science, partnering with successful research programmes and adopting innovative technology have all become increasingly more important to increase food productivity while at the same time, applying sustainable practices.

The private sector, research institutes and the government have collaborated in an effort to empower farmers with the necessary skills needed to elevate the nation out of poverty and hunger; skills transfer from

private companies to farmers in particular has attracted investment from government and highlighted the need for skills development within the sector.

Syngenta, a prominent agri-business company believes that farmers could produce enough food to meet the world's demand by focusing on and implementing sustainable production systems. Their approach is based on the principle that technology, land and people collectively form part of the solution. These three components can build a solid foundation for sustainable production systems which uses resources efficiently and meets the ultimate goal of securing food. It is on these principles that Syngenta believes that South African cane growers could produce twice as much sugar cane as they are

currently by using a new technology for planting sugar cane called 'Plene'.

Plene technology was first introduced in Brazil, one of the largest producers of sugar cane in the world. The technology simplifies sugarcane planting, using buds that are less than 4cm in length and are treated against diseases and infestations. Although current sugar cane production accounts for 70% of global sugar needs, the industry as a whole has been slow to develop new technologies to improve production and increase profit margins. Syngenta has made significant investment into sugar cane production and adopted Plene technology with the aim to offer Plene to South African cane growers to suit local production requirements. In addition, Syngenta has also entered into a partnership with the Council for Scientific and Industrial Research to explore modern-day scientific fields of biosciences and nanotechnology for the continent's agricultural development.

The sugar cane industry has also engaged in a partnership with government to fund an empowerment project which supports co-operatives of small and medium-size growers in KwaZulu-Natal and Mpumalanga. KwaZulu-Natal's provincial government has allocated R185-million to assist farmers who have received farms through the Land Reform Programme with skills training, infrastructure development and technical support facilitated by Tongaat Hulett. Operation Vuselela (Revive) Project is another public-private partnership between the KwaZulu-Natal Department of Economic Development and Tourism and other stakeholders to empower up and coming cane farmers through education about technological advancements in cane farming methods such as Plene, to yield bigger crops and increase the turnover necessary to sustain a sugar cane farming business.

Also providing skills development is Ububele Holdings, a food-processing and agri-chemicals company.

The company's core business is the production of agricultural chemicals, specifically pesticides, providing farmers with agricultural crop protection. The company buys the finished produce from the farmers they supply pesticides to and create value add products such as sugar concentrate before selling the product locally and also exporting to Europe and the far east.

The agri-business giant has formed multiple partnerships with the government and other agri-businesses such as Syngenta to provide skills development and training for first-time farmers. This helps them make their new business ventures sustainable and reinforces the importance of their role in strengthening food security in the country.

Investment in the farming community from corporates is on the rise and provides training and skills development that ranges from giving expert advice on soil management and field-crop production to educating emerging farmers on best practices.

Such a corporate is Omnia Holdings who run various training programmes in rural communities. Omnia has collaborated with several contractors in QwaQwa to support farmers in acquiring and using farming equipment and has since resulted in farms yielding bigger crops.

Omnia has also partnered with Grain South Africa on its small scale farm initiative called Vlakfonteins Sizanani Project that aims to support enterprise development for emerging maize and wheat farmers in the Nigel area.

As part of the programme, farmers are supplied with fertiliser, training and agronomic advice by Omnia.

Earlier this year, Sasol announced the establishment of the Sasol Agricultural Trust with a goal to improve the competitiveness and viability of the country's agricultural industry and support up and coming farmers.

Sasol donated R30 million to the trust to support initiatives targeted at enhancing education and training programmes in the latest farming technologies over a three year period.

Research conducted by the World Bank predicts that the global population will increase by up to 60% in the next 50 years and will naturally result in an increased demand for food.

The challenges faced by farmers are being addressed locally by the adaptation and adoption of science and technology and vigorous skills transfer across the agricultural sector.

By combining all the right elements: the skills, the land, the technology and the people, stand the country in good stead to not only adequately feed ourselves but the rest of the world too, proving a fool-proof method of farming is one that means we can just add water.

Taryn Springhall



Keeping a competitive edge

Grow your bottom line through skills development



Due to the current economic climate, which is forcing organisations to explore tactics to remain competitive, outsourcing the relevant skills has become prevalent in South Africa. The reason for this is simple. While all agricultural-related employers want and need experienced, accountable, competent and engaged employees who display a strong work ethic; the reality is that many organisations are facing the dilemma of workforces severely lacking in (often basic) workplace skills.

Regardless of the company or sector, its competitive edge is derived from skilled employees who are customer centric, passionate about quality, creative, innovative and apply their knowledge and skills.

Due to this, employee talent is becoming increasingly important in the face of globalisation, economic and political pressures, changes in technology and other external pressures on organisations. Improving employee skills creates agile employees who work smarter and more efficiently, resulting in increases in output, profitability and growth. According to

the Statistics SA labour force survey for the first quarter of 2012, the number of unemployed people increased by a shocking 282 000, reaching 4.5 million and accounting for 25.3% of the population. The recent Adcorp employment index also highlights that permanent employment has fallen from 11 million to 9.1 million since 2000. This is due to many South African companies realising that outsourcing highly skilled individuals has become the answer for many businesses as it offers simple, effective and 'real world' human capital solutions – which is essential in achieving business results.

It is clear that South African companies have become leaner, more efficient and have realised that skilled employees create value.

And if they don't, agricultural related employers need to figure out what they can do to contribute more directly to skills development in their organisations to ensure success. In turn, once employees realise that high-quality work is crucial to both business success and their own job security, they are likely to become more conscientious. They will understand what is expected from them and how they fit into the bigger picture as well as recognising how to orchestrate their



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By achieving the target, not only will both employees and employers benefit from skill development, but also society, as higher productivity will contribute to the overall tax base of our country

knowledge, skills and attitude to meeting business challenges.

So why do so many agricultural related employers still not utilise skills development as a strategic business imperative to grow their business? During the past few years, the agricultural sector has witnessed a decline in sector employment which is largely linked to a reduction in the sector, and has been characterised by the need for

highly skilled and qualified farm managers and technical staff on the one hand, and large numbers of unskilled and semi-skilled workers on the other.

Many managers of emerging farms are mainly untrained and unqualified – which can only lead to disaster.

It is the role of the Department of Labour (DoL) and NEDLAC, with their employer and organised labour stakeholders, to find

ways of balancing the need for protection of vulnerable workers by creating a framework that encourages the creation of jobs and improved job security. While the DoL and NEDLAC are focusing on training the unskilled workers, no thought has been given to middle and top management.

This dilemma is being echoed by the Department of Rural Development and Land Reform where they still need to identify the real challenges – retention of skills, skills transfer and skills development during the transfer of land, as well as retaining national food production to avoid loss of production so they can mitigate to meet the 2025 target.

By achieving the target, not only will both employees and employers benefit from skill development, but also society, as higher productivity will contribute to the overall tax base of our country.

This will enable more investment in our infrastructure, which will fuel more growth. It is imperative to ensure that skills development and knowledge creation occurs in such a way as to improve the sector's viability and allow companies and enterprises to become more sustainable, profitable, improve productivity, competitiveness and innovation.

An organisation can only benefit from any skills development initiative if they:

- Have a clear vision, mission, as well as short-, medium- and long-term strategic plans and objectives that direct their efforts in meeting business challenges and exploiting their benefits;
- Understand what competencies employees must have. They must continuously ensure that employee competencies are evaluated, updated, aligned and developed; and
- Create an enabling environment that deals with skills development as an on-going priority.

While the DoL, NEDLAC, the Department of Rural and Land Reform and the Agricultural SETA are talking the talk, it seems the only way to resolve this dilemma is to outsource the key skills until the sector is sustainable.

*Debbie Lieberthal,
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Phakamani Hadebe, CEO of Land Bank

As the Land Bank observes 100 years of existence, CEO Phakamani Hadebe, the man credited with its turnaround, shares insights with *Harvest SA*

The Land Bank's history is rooted in the founding of the apartheid regime, and played a key part in the early stages of mechanisms that saw the rise of agriculture and the country's political economy.

The Land Bank was founded in 1912, followed by a series of laws imposed by the then government to formalise the exclusion of Africans from land ownership, including the most prominent of all, the Native Land Act of 1913, which gave birth to a series of similar laws which sought to make sure there was land available for white farmers, and that blacks were left disenfranchised.

From that time, all kinds of laws were promulgated to support white farmers, and to make sure the Land Bank was lending cheaply.

The Land Bank's agenda was politically driven to support the laws and Land Acts of the time. All systems implemented by the bank worked to support the political agenda of the government of the time, and to ensure growth of agricultural activity among white farmers.

The Agriculture Credit Board (ACB), for example, was structured to make sure that farmers received cheaper funding to assist them in accessing finance, and also make sure that the Land Bank gave farmers access to affordable funding, providing cheaper loans to ensure reinstatement instead of repossession.

This went on until the early 1980s – by then government began to adopt open market operations, where the forces of the market were allowed to have an influence on the agricultural sector and continued past the new political dispensation and into the late 90s. Then, all of a sudden open markets began to determine price efficiency in agriculture.

Our long-term vision is to play an active role in the determination of food pricing, to ensure we have some form of control over matters impacting on food security

The unfortunate part of it all is that this continued even when new players entered the market, when the new government took over and during a time when emerging farmers and rural development was being

prioritised. So, when the new players, who were the emerging black farmers came into the picture, they were already excluded from this system.

This meant these black farmers struggled, because they couldn't consolidate and couldn't be part of the new 'old' team.

Emerging farmers had the Land Bank on the one hand, which had been reliant on government, but all of a sudden did not have the backing of government and, therefore, had to obtain loans at market-related rates. This made it even more difficult to grow the emerging market space. Five years into the new democracy, in 1999, the managing director of the Land and Agricultural Development Bank of South Africa at the time, Helena Dolny, was removed from her role to allow for the mechanisms of transformation to take place. The idea was to open opportunities for new leadership, who would drive transformation within the sector, to devise and implement strategies aimed at grooming and growing agriculture led by black farmers.

Resulting from theft in some instances, wasteful expenditure in other instances and misappropriation of funds on expenses unrelated to the bank's rural development plan, not much progress was made to help groom and grow black emerging farmers.

Government spent more than R4 billion trying to keep the Land Bank afloat – and still there was no turnaround.

In 2008, then Minister of Finance, Trevor Manuel, appointed Phakamani Hadebe from Treasury, to stabilise and improve the conditions of the Land Bank.

"Our vision is to play an active part in determining the price of food and ensuring food security in South Africa and Africa," Hadebe

performance, people-oriented culture, introduce standardised processes and increase sales focus to improve turnaround times.

"At the time (in 2008), when we started with the new strategy and implementation of the new growth plan, investors wanted nothing to do with the Land Bank, given their

If you look at countries like China and others in the developing world including Brazil, India, Chile among others, the one system that has worked in agriculture, is that of government playing a bigger role in providing support and a safety net for farmers

told *Harvest SA* on the eve of the Land Bank's Centenary commemoration.

Rebuilding Land Bank

When Hadebe took over as CEO, the bank's strategic focus shifted. Its mandate remained focused on growing emerging farmers and providing support for rural development, through the provision of financial assistance to farmers, and its focus moved to a more structured approach to stabilise and rebuild the Land Bank to regain its values and vision.

"Fit For Future (FFF) is where we started, and all our goals have been driven by this strategy which we are using as a vehicle for the bank to achieve its sustainability goals.

"The implementation of the FFF model, initially focused on the review of the Bank's business and operating model. To re-instate the Land Bank's function, focus was placed on establishing a unit, dedicated to emerging farmers and to stabilise and establish a high

previous experiences with it," says Hadebe.

"Since the Bank is not government funded and is dependent on money from the money markets, we had to work extra hard to regain investor confidence and build new relationships. We reassured investors through our control systems, credit and risk policies and developed from there.

"We recovered non-performing loans, which were 26% of its loan book, cut those down to 11% of the now R19-billion loan book, then we could start really talking to investors.

"We are seeing improvements in the performance of black farmers," says Hadebe.

Between 1998 and 2005, the failure rate of black farmers stood at 56% and between 2007 and 2012, it dropped substantially to about 10%.

In the 2009/2010 financial year, the Land Bank recorded a profit to the tune of R354-million, a remarkable breakthrough under the circumstances.

Food security

The food security topic remains top of the African agenda. The Bank's vision is to become a sustainable, modern and efficient Development Finance Institution (DFI) that will make contributions towards the growth of emerging farmers and rural development.

"South Africa faces the steepest increase in food inflation in comparison with countries such as Japan, China, Brazil and the United Kingdom. Our long-term goal is to play a part in structuring of food prices," explains Hadebe.

Our long-term vision is to play an active role in the determination of food pricing, to ensure we have some form of control over matters impacting on food security.

The agricultural element in South Africa is societal and about the provision of food and, most importantly, creating job opportunities and economic growth through exploits.

To be able to adequately grow agriculture in the country, for it to start making significant contributions in the economy, support structures from government need to be in place, and this is a three-way relationship between the Land Bank, government and farmers.

Looking back at the old system and how the Land Bank was supported, it is without doubt that support by government to the Land Bank and the farmers played a key role in the success of the farmers at the time, some of whom still remain successful.

The relevant structures to ensure the success of this plan are already in place. The strategy is to foster the three-way relationship and ensure a buffer is created for today's farmers to become successful.

Manuel's National Development Plan Vision 2030, is estimated that agriculture has the potential to create close to one million new jobs by 2030.

To achieve this, government has a number of plans in place, including expansion

of irrigated agriculture by substantially investing in water resource and irrigation infrastructure, creating security of tenure for communal farmers, to secure income for existing and entry level farmers.

"By introducing flexible systems of land use for different kinds of farming on communal lands, agriculture will extend beyond traditional means of farming, introducing new players to the field, thereby creating jobs and opening more opportunities for food security.

"Progress has been made, but it's not enough, we still need to review the agriculture and rural development policies.

"Government is beginning to adopt that line, and the more involved government is in agriculture, the more successful the sector becomes.

"If you look at countries like China and others in the developing world including Brazil, India, Chile among others, the one system that has worked in agriculture, is that of government playing a bigger role in providing support and a safety net for farmers.

"Through the provision of trucking systems, logistics, after-care for farmers who receive loans to help them manage their finances and prioritise their needs for the business – these strategies have helped entry level farmers take off, and played a key role in growing agriculture in those countries," Hadebe says.

South Africa currently faces the steepest increase in food inflation, according to the National Agricultural Marketing Council. In 2010, food prices increased by a mere 1% and in 2011 by 10.6%. This is higher than in countries such as Brazil, China and Portugal.

"If you look at these statistics, the biggest contributors to high input costs include fertiliser, farm feed (which contributes the highest towards the general running of farms) fuel and transport costs, animal health costs and

crop protection, packaging material, maintenance and repairs.

"Leveraging off our relationship with government, more can be done for farmers, to help bring down some of these costs, which in turn influences food prices," Hadebe says.

"Through relevant partnerships, the re-introduction of rail transport for farming could play a significant role towards cutting down the cost of farming.

"Fertiliser can be provided to emerging farmers by government at a much cheaper cost than what most emerging farmers are currently paying. Integrated systems will go a long way in dealing with some of these issues.

"There is a need for a comprehensive rural development strategy to address these challenges and we are working on playing a part in influencing all parties to realise the importance of this approach.

"Our strategy is focused on ensuring that in the next 100 years, the Land Bank is able to actively make contributions towards food pricing, that's our long term strategy," Hadebe told *Harvest SA*.

Prosperous future

"There is a difference between what the Land Bank does and what commercial banks do. The Land Bank is not here for the bottom line. The objective of the Land Bank is food security. Along the way during the 100 years, we lost our direction, but we have regained it, and the success of the Land Bank is directly linked to attainment of food security," Hadebe says.

The bank has begun structuring services tailored for emerging farmers – with the aim of driving a more demand-driven business and not supply-driven initiatives, to be able to grow farming for food security, not only in South Africa but Africa as a whole.

Countries that have succeeded in achieving this had the full support and

backing of government. At some point we missed the goalposts, and we are at a point where we have realised where the goalposts are, and we are aiming for them.

Monitoring of progress of its clients remains a key part of the work that the bank is focused on, to make sure the appropriate support systems to sustain emerging farmers are in place for them to perform at their best.

"We need to create support structures for emerging farmers, and mechanisms to help reduce costs for emerging farmers. The whole value chain is important so that we provide loans to emerging farmers at reduced costs, enabling their productivity and contributions towards the economy. Our goal is to retain a high market share and have an influence on food security and the price of food.

"Our focus now is to attract talent to the bank and to retain it, so that our plans are able to continue uninterrupted and drive the vision of the bank towards its anticipated growth. Our forecast is that by 2016, we will have a market share of 35%. Because we grew really fast between 2008 and now, we are currently sitting on 32% of the market share. Within the next two years, 35% looks more achievable. There are a couple of things that need to be done to reach that goal. We also anticipate an increase in our loan book to between R30 billion and R35 billion. FFF is designed to take us through to 2016. We are currently focused on elementary farming, and are working on commercial farming and the provision of better products and after-care services tailor-made for individual clients, including emerging, commercial and elementary farmers.

"We are now sustainable, having put together the Land Bank 2016 plan.

"If we can reach this level, then we can live another 100 strong years," Hadebe says.

Ntokozo Ndlovu

Mother Nature's solution

Teach a woman to farm, and a community will flourish





Women are a key to sustaining food security in Africa. Food security remains top of the African agenda, and the contributions women are making in farming cannot be underestimated.

In sub-Saharan Africa, women grow 80% to 90% of food requirements and make up an average 43% of the agricultural labour force in the region, according to the Food and Agriculture Organisation (FAO), quoting the United Nations Report of March 2011.

For this reason, there is a need to invest in female farmers, even though women in agriculture still face challenges such as not being able to access the same agricultural resources as men – which could increase production on women-run farms by between 20% and 30% – and thereby raising total agricultural production in developing countries by 2.5% to 4%.

In turn, this could reduce the number of hungry people in the world by 12% to 17% or between 100-million and 150-million people. In South Africa's North West Province, agriculture plays an important economic role, contributing about 60% to rural livelihoods. Crop and livestock production contributes substantially to that areas economic growth, with 80% of the labour force comprising women.

Even in the face of such challenges, however, there are notable successes by women farmers. Lydia Matladi, formerly a day-care teacher in Limpopo, ventured into farming in 2004, determined to change her family's fortunes. Today, she is a self-employed successful farmer, owning just over 160 hectares of land in Rossenekal, Limpopo.

For this country to develop successful black farmers, we need to encourage young people at university to consider farming as a career choice

"When my husband received his pension, we took one of our biggest risks to date. Then I used to earn R500 a month, and with my children's school fees to pay, there wasn't much left to live on. Therefore, our decision to buy a farm with my husband's pension was as bold as it was risky. Even so, we had neither farming

background nor farming equipment in the form of tractors to aid in our new venture. We only had about nine cows and five goats, and had to do everything manually," she relates.

"None of us really came from a commercial farming background – we grew up helping our parents in their garden or patch of land on which they grew crops for consumption, which really is not farming in the true sense of the word, compared to the scale of activity we are involved in now.

"Initially, we hired equipment from neighbouring farms to start our agro enterprise.

"With God's blessings, I have two boys and three girls – as such, during their school holidays they helped out with ploughing, herding the cattle, since we couldn't afford to hire a shepherd to mind our livestock.

"But whenever our children went back to school my husband and I did the donkey work by ourselves," says Matladi.

Since they had to rely on nature – in the form of rain – for the farm to thrive, she and her husband made a conscious decision to grow beans only, on account that they consume less water. They also milked the few cows and sold the fresh product to the community.

Because the beans grew so well, they were able to get a few medium-sized orders and made some money – but still not enough to buy equipment to fast-track the pace of production. "We couldn't get loans because

it was very difficult for small farmers to get funding," says Matladi. Between 2006 and 2007, a delegation from the Department of Agriculture, Forestry and Fisheries (DAFF) visited their farm and were highly impressed with their progress as black farmers.

Instead, they resolved to focus on crop and vegetable farming and, as the farm progressed, so did their client base. They were able to hire four permanent staff to help out, and during peak harvest time took on 10 casual workers as extra hands.

For this country to develop successful black farmers, we need to encourage young people at university to consider farming as a career choice

They requested Matladi and her husband put together a year-round farm strategy including rotation and a sales plan, and how they planned to sustain the farm.

"They were happy with our presentation and extended a grant to the tune of R1.5-million to assist us in modernising the farm.

"We built an office, bought equipment, acquired second-hand tractors (to save on money) and installed sprinklers on the farm.

Later, these developments helped us obtain a loan from the Land Bank.

"Our work became mechanised and quickened the pace of production. Quickly, I learnt to drive a tractor and work the land using modern machinery. As part of a programme that assists black emerging farmers, the DAFF put me on a three-year course, where I learnt the ropes of commercial farming. We were taught how to grow different crops and vegetables for certain types of land, pest control etc. It was intense, and one of the most useful programmes I've attended since we started farming," Matladi notes.

On completion in 2010, they decided to try their hand at sunflower farming, but that did not work out as planned. Sunflowers require a lot of moisture, which proved very challenging for Matladi. The crop was very expensive to process, in that they lacked the necessary equipment and subsequently resorted to hiring fellow farmers to process it for them – another costly undertaking. So, they sold their sunflower harvest to farmers with the right equipment for processing. "It is a lesson we learnt the hard way," she says.

"We still do a lot of the administrative work by ourselves, as we believe in being hands-on with all aspects of our farming venture, including working the field with our employees. To this day, I still drive tractors and perform similar tasks as I did when we just started, only now there are more hands on deck.

"We rotate what crops to sow at a given time, depending on season of the year. Our farm mainly supplies a range of vegetables including potatoes, sweet potatoes, butternut, cabbages, tomatoes and beans. We also supply chickens and milk to our community – however, we did not have capacity to deliver wholesale milk orders just yet."

Now that they are able to produce on a larger scale, they have registered to supply markets in the greater Limpopo area, Pretoria and other parts of Gauteng.

"Farming is a risky venture – as a result, many people don't get drawn to it, due to the high risk factor," says Matladi.

"The sector is dependent on nature (weather fluctuations), heat or too much rain and pests. Cattle can be endangered – if your livestock grazed on toxic pastures, they could die. Harvests, too, can be affected by a number of factors. Besides, you can't embark on growing farm produce without establishing ready markets first. When people take all these factors into account, they shy away from pursuing commercial farming.

"Many people, women especially, despise menial work and the thought of swapping an office job for life on the land is inconceivable

for most. I had to make a decision about what I wanted for my family, and getting my hands dirty was never an issue, and I've never been happier since I took up the cudgel."

Although there have been challenges along the way, such as competing against farmers with over 50 years' experience, preserving the farm, rotation of crops, among others, Matladi's farm is seeing exponential growth on a scale she never imagined when she first started.

"Every day is an opportunity to learn for us because we want to make a success of this.

We visit other farmers – the old hands in the area – to get more insight and learn more from them, then apply such lessons on our farm.

"We are now researching yoghurt, cheese and milk production. It's the next step in our journey; we aspire to rank among the few black farmers producing cheese and yoghurt. It will be expensive, but this is our vision," says Matladi in parting.

Dr Makgoshi Priscilla Masipa, a lecturer in the School of Agriculture at the University of Venda says: "For this country to develop successful black farmers, we need to encourage young people at university to consider farming as a career choice. Not enough is being done to grow the number of black farmers, and this is because young people are not encouraged to take up opportunities in farm ownership."

She is founder of the university's Floriculture Project and the Ramatjowe Food Gardens, a community development scheme helping community members engage in small-scale farming to supply vegetables and crops to the Venda community and surrounds.

"Yes, there are a number of competitive black farmers in South Africa, but not enough – we need more with a university education and for young people to be encouraged to get into this field.

"Those studying agriculture at university are more focused on seeking office work, government or relevant agricultural research institutions, where they could provide intellectual and consultancy services on farming and agriculture. Very few have an interest in actually becoming farmers.

"We need to groom more young people, especially young women, to look at farming as a viable career avenue because there are many opportunities in agriculture," she explains. Currently, primary agriculture contributes about 2.5% to gross domestic

product and an estimated 8% toward formal employment.

In 2001, agriculture contributed R27 billion to the economy, increasing to R36 billion in 2007.

Many opportunities

"It is apparent black communities' understanding of farming does not go beyond the traditional family livestock activity. There are so many opportunities in agriculture; for instance, the University of Venda's Floriculture Project produces flowers and supplies flower seeds to farmers, florists. Equally, there are farmers earning a living from marula trees.

"The Venda area is particularly known for pecan nuts, macadamia nuts, papayas, litchis, mangoes, avocados, bananas and various types of vegetables. Palaborwa produces some of the country's wine, made from wild fruit and grapes. This area is rich in arable land.

"In 2009, we started the Ramatjowe Food Gardens Project as a pilot, growing vegetables on hired land, to create employment for women from the community. As it grew, community members began realising the potential of growing food in the area.

The project currently has eight women and three men who grow vegetables, tomatoes, spinach, cabbage, butternut and recently introduced garlic farming – which has a huge market in South Africa and is more of a money spinner than most vegetables," she says.

She notes that though farming comes with attendant challenges such as unpredictable weather patterns, it is still one of the most viable means of generating an income and helping reduce poverty in our communities.

"If only we could increase the number of black farmers, we could go a long way in poverty alleviation," Dr Masipa states.

Mohammed Sizwe, head of Retail Emerging Markets at the Land Bank – the mandate of which is to provide finance for land acquisition – outlined his department's process for granting finance, and how the new finance support is more flexible for entry-level farmers.

"In the beginning, there was a strong drive to give loans to emerging clients, and so we granted loans with very minimal monitoring criteria. We had some clients who didn't have the ability or knowledge to support farming

operations; for instance, we would get clients who had been farm labourers for 20 years, who thought they qualified to become farmers.

It didn't necessarily mean they could do commercial farming. We gave the wrong people loans – and when we gave the right people loans, they didn't have enough support to sustain themselves, so the default rate was high.

"Later, we changed our criteria for loans, making the processes more stringent, requiring collateral and a deposit. This didn't work out either, especially in assisting emerging black farmers.

"So we reviewed our processes and re-focused our approach toward providing finance supported by a number of projects designed to assist farmers, financed by Land Bank, to become more sustainable," Sizwe says.

"We now provide finance on very lenient terms: no collateral required or security of land or a 10% deposit. Opportunities for accessing finance are greater now than previously.

"We monitor our clients' progress, and provide support programmes to enable them

to perform at their best. They are contributing toward food security, and our programmes are tailored-made for their success," Sizwe added.

"Although we are only beginning to structure specific services for emerging farmers, there's still much room for improvement. Our aim is a more demand-driven business and not supply-driven initiatives, to be able to grow farming."

He noted the bank is currently focused on assisting women and youth-run projects.

"The average age of a farmer in South Africa is between 60 and 65 – a group fast approaching retirement. If we don't groom the next generation of farmers, we are likely to have huge challenges. There are many opportunities, but not enough young people entering the sector.

"We see improvements in the performance of black farmers: between 1998 and 2005, the failure rate stood at 56% and between 2007 and 2012, we saw a drastic decline in the failure rate of black commercial farms to just under 10%," Sizwe concluded.

Ntokozo Ndlovu



Department of Agriculture, Forestry and Fisheries (DAFF)

Minister Joemat-Pettersson dedicated to the Agricultural success of the nation



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Minister Joemat-Pettersson has previously served as a **Member of the Executive Council (MEC) of Agriculture and Land Reform, and before that, an MEC of Education, in the Northern Cape Province.** **Ms Joemat-Pettersson was one of the youngest MECs to serve after the first democratic elections and is credited with leading her portfolio with tenacity and a clear vision to make a tangible change to reverse poverty and unemployment in South Africa.**

She has enjoyed an illustrious political career dating back to student politics. After joining the African National Congress in 1989, Joemat-Pettersson rose through the party ranks and assumed many leadership roles.

In 2012, the Minister was bestowed the highest order for her contributions to agriculture by the French government.

In the same year, agriculture turned the corner when Statistics SA released a report that showed a shift in employment trends in agriculture. For the first time since the 1970s, agriculture recorded positive and steady employment growth. In 2012, the Minister was named the Africa Agriculture Minister of the Year. In an exclusive interview with Harvest Magazine she outlines more about her role as minister.

What is the vision and mission of the DAFF?

The vision, mission, values and objectives of the department of the Department of Agriculture, Forestry and Fisheries are to be a leading, dynamic, united, prosperous and people-centred sector.

The vision will be achieved through developing and sustaining a sector that contributes to, and embraces, economic growth (and development), job creation, rural development, sustainable use of natural resources and food security.

Tell us more about the strategic goals and objectives of the DAFF?

There are six strategic objectives and goals for the Department of Agriculture, Forestry and Fisheries. Among these are; an increased profitable production of food, fibre and timber products by all categories of producers (subsistence, smallholder and commercial), sustained management of natural resources; effective national regulatory services and also risk management.

A transformed and united sector, increased contribution of the sector to economic growth, development and effective and efficient all round governance.

What is the Department doing about food security?

The Department of Agriculture, Forestry and Fisheries has devised policies that recognise

the roles that small-holder farmers and co-operatives can play towards diversifying food production from commercial farmers.

There have been good opportunities for commercial farmers. Co-operatives can play a very important role in curbing the triple challenges of poverty, inequality and unemployment in South Africa.

We have to be creative about food security and how to ensure how every South African household can have a constant healthy supply of food. South Africa has 230 000 land reform beneficiaries and emerging farmers and 35 000 commercial farmers.

The current challenges in the agriculture sector include a shrinking commercial farmer community, inadequate assistance to smallholder farmers, increasingly rising food prices and climate change.

Some of the constraints that smallholder farmers face relate to lack of access to land, poor physical and institutional infrastructure. Most smallholder farmers are located in rural areas and mostly in the former homelands where lack of both physical and institutional infrastructure limits their expansions. Lack of access to proper roads, for example, limit the ability of a farmer to transport inputs, produce and also access information.

The primary goal the Department is to develop SMMEs while balancing this with the needs of the commercial sectors.

Our government is working extremely hard to assist smallholder farmers to

become commercial farmers. As this will ultimately improve the nation and improve the farmers livelihoods.

For example, through the Masibambisane Rural Development Initiative (MRDI), we have managed to assist communities in rural areas in KwaZulu-Natal, Mpumalanga and the Eastern Cape with the infrastructure development. In the Eastern Cape, our engineers are building milling plants, irrigation schemes and other infrastructure that needs work.

Our mechanisation plan has assisted eight provinces that are in need of implements, tractors and seeds.

How can smallholder farmers be assisted?

Farmworkers require three forms of assistance. These are; access to skills, access to markets and the difficult access to finance. In the past, South Africa's commercial farmers received financial assistance through government subsidies.

With finances available, the farmers could focus their energies on advancing their farming skills. This paved the way for competitiveness and focusing on entrenching South Africa's place as one of the key countries for agriculture.

Importation of goods is one of the main services provided by the Department, how is this going to be managed during the African Cup of Nations Cup Tournament?

All imports of animals and animal products, plants and plant products, honey and honey products as well as any other regulated goods may only be imported into the country by means of an import permit, unless exempted.

It must be declared with DAFF inspectors for inspection at ports of entry before entering South Africa.

Inspectors from DAFF will conduct luggage and consignment inspections at the ports of entry by means of visual inspections and sniffer dogs to ensure compliance with the import permit requirements.

These import control measures are in accordance with the Republic's relevant legislation, which is aimed at preventing the introduction, establishment and spread of pests and diseases from any other parts of the world.

Please provide some information on World Food Day and how DAFF contributed to the event?

The Department had an event at Kwa Sokhulum Village in Bronkhorstpruit. This year's theme was marked by a theme relevant to the current global food security challenges being experienced.

The theme was "Agricultural co-operatives – key to feeding the world". Tractors were mounted with various implements to work on communal land.

Which training and mentorship programmes are provided by DAFF?

In responding to government's call of bridging the skills gap, promoting rural development, skills acquisition and elimination of skewed participation, the Department of Agriculture, Forestry and Fisheries have made the effort to promote and implement the following training programmes.

The Experiential Training, Internship and Professional Development Programme which consists of the following pillars:

The Young Professional Development Programme targets young graduates in possession of requisite Bachelor's degree or postgraduate qualification in Agriculture, Forestry, Fisheries or Natural Science who would like to further their studies at Honours, Masters and Ph.D level in the area of research leading to innovation in the crucial critical scarce skills in agriculture, forestry and fisheries.

Agri Export Technologists Programme: this is an incubator programme targeting young people with the urge and vision to become future Agri Export Technologists in the export industry.

Successful applicants are placed within all the regions of the Perishable Products Export Control

Board (PPECB). The Entrepreneurship Development Programme: This category calls for young people with the commitment, passion and interest to be entrepreneurs.

International training programmes, career awareness programme and external bursary schemes, to promote scarce and critical skills and opportunities available within the sector to young people.

The department introduced Commodity Based Master Mentorship and ABET programmes in 2005.

We also run programmes with the three line functions SETAS: AgriSeta, FoodBev SETA and Fibre Processing and Manufacturing SETA), to provide skills to farmers/ producers as well as farm staff in the sector through learner-ships, skills programmes, bursaries, apprenticeship, internships, workplace, ABET as well as New Venture Creation.

Agriculture colleges provide support for small and emerging farmers in the provinces and even outside their provincial borders within which they are located.

What strategic partnerships does DAFF have, can you provide a brief synopsis on the role of each partnership?

Through the Service Delivery Forum; the Minister interacts with agriculture, forestry and fisheries stakeholders.

CEO Forum; This is the principal medium for interaction between government and the stakeholders in the sector at the most senior operational level.

Lastly, senior management members of the department are deployed to the commodity groups of agriculture, forestry and fisheries with the aim of strengthening relations between the DAFF and the industry.



Minister Tina Joemat-Pettersson is seen with Dr Nico Schutte from the Milk Producer's Association (MPO) and CEO of the Agricultural Research Council (ARC) at the World Dairy Forum which was held at the Cape Town International Convention Centre in November.

An opportunity to harvest

**Decent rain and changing farming
practices bring cautious relief for
hunger-stricken East Africa**



For decades, East Africa has been subjected to failed crops and some of the worst famines in history. This year, some cautious relief is expected, thanks to decent rainfall and increased awareness among farmers that they have to change their agricultural practices in order to cope with the effects of climate change.

Remembering the devastating famine that struck Ethiopia in the 1980s is not difficult, far from. Most of us certainly remember the heart-wrenching images of emaciated infants, lying lifelessly in the arms of their crying and dying mothers. Some 400 000 lives were lost in the northern part of the country between 1983 and 1985, making it one of the worst famines in recent history.



The destruction that struck Ethiopia might be one the most famous tragedies of its kind, other countries in East Africa have suffered similar catastrophes. Take the region of Sudan and South Sudan. Since the 1990s, this area has been hit by rampant food shortages, with fatal consequences for tens of thousands. In 1998 alone, over 70 000 residents of the Bahr El Ghazal region in southwest Sudan perished from hunger.

One of the photographs that captured this particular tragedy with all its might was the one of a vulture preying upon a withered toddler, taken by late South African photographer Kevin Carter in 1993. He ended his life not much later, shortly after winning the prestigious Pulitzer price for the image in 1994.

While food insecurity in East Africa no longer makes headlines, the situation is far from optimal. Today, almost 20 years after Carter took his famous picture, 16 million people in Sudan, South Sudan, Somalia, Ethiopia, Kenya Djibouti and Rwanda have not enough food to survive. That equals the entire population of The Netherlands.

The main causes of these and past stints of food insecurity, hunger, and famine in East Africa were, and remain, conflict and erratic weather patterns, including unexpected and prolonged droughts and rainfall.

However, some cautious relief seems to be on the cards. In Sudan rainfall in June and September was above average, which led to optimistic crop prospects in non-conflict areas.

The same counts for other East African countries, say the writers of the October 2012 *East Africa Food Security Outlook* – a monthly report by Famine Early Warning Systems Network and the United States Development Agency (USAID).

According to the document, improved rainfall has increased the availability of food at the household level in most parts of the region.

“A relatively good start of the harvest, which kicked off in September and October, has improved the availability of food at the household level for consumption and for sale,” the researchers suggest, adding that the availability of pasture and water in, for instance, Sudan has substantially improved, resulting in the improved physical condition of livestock and the availability of milk.

This will have a positive impact on the food security situation of millions of people who

were uprooted from their home towns by conflict and subsequently forced to other parts of the country, often in camps that lack services such as water, electricity and other key infrastructures.

Statistics by the United Nations show that Sudan alone is home to some 2.2 million Internally Displaced People (IDPs) people who can be classified as refugees in their own country.

“Food security of the IDPs in Darfur is expected to improve with the start of the harvest, as these people had increased cultivation this year and crop prospects are good,” the Outlook report states. “A good start of those harvests have led to increased availability of food at the household level and also improved supply to the market.”

Another positive element mentioned in the October 2012 Food Security Outlook is that the harvest prospects have led to declining staple prices. However, main staple foods such as sorghum remain expensive.

“Prices are more than double the five-year average in most markets across the country because of inflation, local currency devaluation, increased transportation costs and the high cost of production this year,” the researchers say.

The weather may be an important reason why food security in Eastern Africa has improved, credit however needs to be given to local farmers.

A survey by the Consortium of International Agricultural Research (CGIAR), which explores the links between climate change, agriculture and food security in the region, shows that many farmers in Ethiopia, Kenya, Tanzania and Uganda have changed their agricultural practices in an attempt to increase their production while dealing with the effects of climate change.

Of the 700 households that participated in the research, which took place between 2010 and 2011, 55% is growing at least one crop with a shorter growing cycle. After all, the sooner you can harvest, the smaller the risk of crop failure. In addition, 56% of the households that partook in the survey are growing at least one drought-resistant crop that is able to overcome dry spells.

Lastly, 34% of cattle farming households have reduced their herd sizes, and 48% have started to grow crops specifically for

their cattle instead of using crops for human consumption.

East African governments have also come to the table to increase food security. Two years ago, the East African Community

infrastructure such as wholesale markets. The agreement furthermore calls for more investment in agro-industries and for the East African Community partner state to spend 10% of their budget on agriculture

Maize, one of the most important staple crops in East Africa, is extremely vulnerable to climate change

– comprising Kenya, Uganda, Tanzania, Rwanda and Burundi – adopted a Food Security Action Plan.

In short, the initiative comprises 17 recommendations to fight hunger and malnourishment in the region. These include the elimination of non-tariff barriers, which hinder the transfer of food from surplus food production zones to areas with deficits and the improvement of transport infrastructure including rural feeder roads and other food market-supporting

while enacting legislation to provide legal frameworks for regionally co-ordinated weather, indexed insurance for agriculture and rural livelihoods.

Kenya in addition has recently kick-started a national programme to stimulate farmers to replace maize and other weather-sensitive crops with drought resistant plants such as sweet potatoes, cassava, sorghum, and millet. As part of this initiative, the Kenyan government will provide drought resistant seeds to farmers free of charge.

Maize, one of the most important staple crops in East Africa, is extremely vulnerable to climate change. Scientists from Stanford University and the International Maize and Wheat Improvement Centre in the United States predict that African maize yields could decline by 65% for every degree celsius in average temperature rise.

The aim of the Kenyan plan is to prevent history from repeating itself: In 2011, persistent droughts affected over 3.5 million Kenyans and Somalis.

While of the above is good news, it doesn't mean the eastern part of Africa is out of the woods. The region has a long way to go when it comes to providing food for all. However, a start has been made. Particularly the awareness among farmers that they don't have to be a victim of erratic weather patterns is important. With the help of civil society and government, they are starting to realise that they in fact can work their way around climate change in order to have food on the table – today, but also in years from now.

Miriam Mannak

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The influences of climate change

Extreme weather conditions influence the futures of grain

Traders around the world, increasingly realise the lucrative investment opportunities available in grain futures trading markets. Futures trading are mainly speculating on the price of a commodity such as maize, soy, oil, wheat, seeds and rice, to either go up or down in the future. Futures markets make the overall economy operate more efficiently through price discovery and risk transfer.

Speculators and hedgers don't have to buy or sell the actual physical commodity, just the paper-contract that holds that commodity, and can exit contracts before the stipulated delivery date.

A hedger is the producer of the commodity (farmer or oil company) who trades a futures contract to protect himself from future price changes in his product. For example, if a farmer thinks the price of wheat is going to fall by harvest time, he can sell a futures contract in wheat then exit the trade later by buying it. That way, if the cash price of wheat does fall by harvest time, he will make a profit on the short-sale of the futures contract.

Speculators are independent floor traders and private investors. They make a profit buying a futures contract which they expect to rise in price, or sell a futures contract they expect to fall in price.

Futures prices are determined through a continuous worldwide flow of information that influences the supply and demand

expectations of traders. Long-term price discoveries are affected by emerging market economies, crop conditions, consumer preferences, government policy, trade agreements and technology. Whereas breaking news, extreme weather conditions, disasters, the exchange rate and emotions influence the market on a daily basis.

Weather has always been a major factor in grain trading since it affects everything from planting, to crop condition, to harvest, to yield. Traders need to know what's produced in each region of the world and need to be acutely aware of weather patterns and soil moisture levels to fully grasp how the supply picture changes.

Global climate change and extreme weather conditions in any part of the world can have a dramatic effect on grain prices as seen in the recent Hurricane Sandy that hit the US east coast. The disaster caused futures prices to slump with a drop in investor confidence and floor trading in New York had been closed for days.

Because grain markets are global, difficulties in one area will spur price changes in another area. For instance, wheat futures fall due to export demand for the US grain not picking up, even though export competition from the Black Sea dried up, and production slowed in regions such as Ukraine and Russia after droughts curtailed production.

The FAO Cereal Supply and Demand Brief released in early October this year forecasted, at the current level, a decline of 2.6% in world cereal production by the close of seasons in

2013, caused mainly by severe droughts in the US, Europe and central Asia.

Demand for agricultural commodities, a decline in world grain stocks, recent price spikes, and ever-increasing population numbers have raised concerns that climate change could increase food insecurity. Agriculturists say climate change induced by increasing greenhouse gases is likely to affect crops differently from country to country. Crops need warmth, water, and carbon dioxide to produce the best yields.

Warmth is abundant during global warming, and in many areas which are now too cold to grow crops, higher temperatures will greatly increase new land availability for use. However, in the traditional crop-growing areas, temperatures will also rise, and if there's a lack of water or soil moisture, it would retard crop growth and development.

Plants need carbon dioxide to survive, and the more they have, the faster they'll grow. Growers of greenhouse plants often inject carbon dioxide into their greenhouses, up to three times the normal atmospheric concentration to aid in growth and development with unequivocally positive results.

In South Africa, fluctuating weather and grain market conditions have led to a decrease in total grain production levels, a higher volume of food imports and higher food prices. Limited access to farming technology will undoubtedly affect farmers' ability to adapt to the negative impacts of climate change.

Although Gauteng agriculture MEC Nandi Mayathula-Khoza said in September this year

78.8% people have access to food, a good indication that South Africa is food secure, there's still 6.5% lacking access to food. She said it's a priority to strengthen the ability of rural and urban households to play an active role in sustaining their livelihoods through agriculture, and aggregate them into larger co-operative units.

Farmers will need support in the form of finance, market access, capacity development, modifying crop rotations, altering planting dates, developing new crop varieties and investing in new technologies, for example the expansion of irrigation infrastructure.

At first glance, expanding irrigation seems the obvious means of increasing

productivity, but all of South Africa's irrigable land is already cultivated with irrigation. Of particular concern is that irrigation is by far the biggest water use in South Africa.

South Africa is one of the most water-scarce countries and characterised by variable rainfalls. Climate change predictions for SA are that rainfall will be more infrequent but more intense which will further shrink the country's arable land and increase agricultural unpredictability. Farmers will find it increasingly difficult to increase productivity to meet the growing demand for food. This highlights the need for sound cropping and rangeland production practices to retain soil integrity, despite these predicted intense rainfall events.

There are still many uncertainties to uncover in regards to climate change impacts on agriculture and food security. Particularly because of the lack of information on many specific farming regions, the effects of clean technology on productivity, global food demands, and the numerous possibilities of adaptation.

For speculators hoping to make a profit on short-term movements in grain futures contract prices, trading remains positive if they know the market and industry well. For hedgers it remains a secure, affordable and flexible instrument to manage agricultural price risk, protecting themselves against adverse price movements in markets.

Rizel Delano



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