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Harvest SA

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Since its formation HydroTek has performed very well to become a leading provider of water storage products in the Africa Southern Hemisphere. At the beginning of 2011 the ownership of HydroTek exchanged hands when it was taken over by new management, making it a fully-fledged BEE company whilst at the same time retaining its existing and experienced labour force.

Its new management and owners, Robert Mhlambi (MD) brings with him Banking and Corporate experiences; Darren Elliott 15 years of water storage; Des Elliott 40 years of agriculture and related fields.

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With serious focus on empowering our previously disadvantaged staff HydroTek International (Pty) Ltd is looking forward to becoming the largest and most significant supplier and manufacturer of water storage solutions and systems for South and North Africa.

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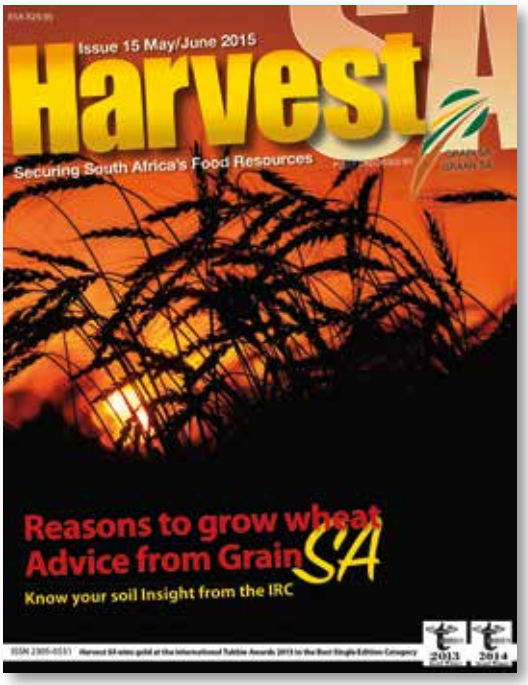

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EDS NOTE

GREG PENFOLD
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Much like rain, good news is a precious resource in increasingly short supply, so it always brings relief when it arrives.

The source of the latest good news is the Western Cape, where Wesgro, the province's economic development agency, has been extraordinarily active in promoting exports and trade with other countries.

First, there is Angola, a country blessed with incredible fertility but cursed with the legacy of a bitter and protracted civil war. Recently Premier Helen Zille and Economic Opportunities Minister Alan Winde, together with senior Wesgro representatives, spent three days in Luanda to boost ties in the region, especially with regard to tourism and agriculture.

The visit falls under the Khulisa Project, which is the Western Cape's strategic initiative to focus on those sectors that offer the greatest opportunity to yield economic growth and jobs.

Although the Western Cape is currently exporting a great deal to Angola (more than R2 billion in 2013, with 30% growth in the past year), the oil-dependent country is looking for means to diversify its economy, particularly in tourism and agriculture. As Winde recently said, "We know that Africa has the world's most arable land and we need to make sure Africans lead the way forward. To this end, agri-processing has been selected a high priority sector for the Western Cape. There are some types of produce which will thrive in the Angolan climate and we will be exploring partnership agreements between agri-businesses in the two regions."

Another early windfall from the Khulisa Project is the competitive advantage that the Western Cape enjoys in the $2.3 trillion global halaal goods export market, especially in Africa and the Middle East.

This flows from a visit by MEC Winde to the United Arab Emirates and Malaysia in April. In the pipeline is a dedicated halaal agri-processing park here, with provincial economic planners preparing the province to better exploit high demand in the multi-billion rand markets of Africa and the Middle East.

This emerges from Economic Opportunities MEC Alan Winde's visit this month to the United Arab Emirates and Malaysia.

Currently South African agriculture is not taking advantage of a massive demand opportunity. Winde told the Weekend Argus that, for example, estimated demand for halaal products stands at $750 billion in Africa alone, but "only $36bn of halaal-branded products are going into that market"

Winde told Weekend Argus that African demand for halaal products was estimated at $750 billion, but that "only $36bn of halaal-branded products are going into that market, so there's the demand, but not the supply".

Initiatives to change this include trade agreements and a potential halaal agri-processing park.

According to Winde, "This would enable agri-processing factories to form a cluster operating in one space. There's scope for incentivising business, so that international and local companies will be keener to jump in, and existing companies will feel more confident about reinvesting, particularly in an environment of uncertainty and lack of confidence, given what's been going on in the country."

Here's hoping that these initiatives will bring hope to struggling farmers throughout the land.

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MASISIZANE FUND
Partnerships for a brighter tomorrow

For almost a decade, the Masisizane Fund, an initiative of Old Mutual, has focused on creating opportunities for marginalised South Africans.

With an emphasis in rural and peri-urban communities, the Masisizane Fund aims to contribute measurably to job creation that in turn contributes to poverty eradication in South Africa. This is achieved through enterprise financing, encouraging entrepreneurship and capacity development of micro, small and medium enterprises (SMMEs)..

Mrs Elizabeth Mbhalo, founder of the Simba Mabhele Farm

The Masisizane Fund is a Section 21 Company, capitalised from proceeds of the sale of Old Mutual's unclaimed shares when the company demutualized in 1999. It strives to become a leading development finance institution that contributes visibly to economic transformation by enabling sustainable development of a large number of Small, Medium and Micro Enterprises (SMMEs), facilitating job creation, increased financial and business skills, and significant social benefits.

Simphiwe Somdyala, Chief Executive Officer of the Masisizane Fund, says: "At Masisizane we're determined to continue driving meaningful transformation in South Africa. We do that by identifying and supporting long-term development initiatives that sustainably empower the communities in which we operate."

The Masisizane Fund focuses on some of the key developmental areas identified by the National Development Plan, namely enterprise development and skills capacity building. By investing in empowerment, Masisizane Fund makes a positive impact on the socio-economic development in our country.

"South Africa faces many challenges with unemployment, poverty and education. But whatever the need for social and economic development, it's worth looking at the zeal with which ordinary people grasp the opportunities they get" says Somdyala.

To date 1 453 jobs have been facilitated through direct enterprise funding and 46 057 through Microfinance partnerships. 34 agri-businesses have been supported with almost R35m disbursed, contributing further to job creation, skills and entrepreneurship development.

Building businesses

One example is the Simba Mabhele Farm, a beneficiary of Masisizane Fund, founded in 1998 in Margate, KwaZulu Natal. This is a 46-hectare, mixed-farming unit that is privately owned by Elizabeth Mbhalo.

Mrs Mbhalo resigned from her professional nursing career in 1997 to pursue full-time farming on behalf of the family.

With financial backing from the Masisizane Fund, the Simba Mabhele Farm has grown its business activities from an initial 40-sow piggery unit, to a 100-sow unit with the latest feeding and rearing technology, a 2000-broiler unit with abattoir, as well as 25 hectare of sugar-cane.

Mrs Mbhalo is upbeat about how the Masisizane Fund has helped her business to grow.

The Simba Mabhele Farm now supplies two abattoirs, in Camperdown and Baynesfield. She's also delighted that her family is involved in the thriving enterprise, calling her children "her legs" and adding that they make a good team.

Flagship Initiative

The development of agri-clusters is the cornerstone to the Masisizane Fund's approach in agriculture. Agri-clusters entail the clustering of small scale farmers to ensure that the farmers benefit from economies of scale with the focus on value chain financing, agro-processing and leveraging partnerships.

In 2013 the Fund initiated a project in Kokstad and Matatiele comprising of 15 farmers trading in grain and dairy products.

Matatiele farmers in front of their maize and harvesting

In 2014, funding focused on the development of value-adding activities such as mechanization, storage and micro-mils. Through strategic partnerships with Omnia and Grain Farmers Development Association, the farmers have increased their planting from 1000 ha to 3 300 ha in 2014 with the plans to increase the overall target to 10 000 ha over the next three years. Additional funding was channeled towards Grain Co as a result of this success.

It is estimated that this project will positively impact 10 000 individuals in the Kokstad and Matatiele area over the next 5 years.

Enabling positive futures

Mr Somdyala says these farms provide inspiring examples of rural economic development and demonstrate ways to get the rural economy out of a low-growth paradigm. It dovetails neatly with the National Development Plan, and it also holds potential for addressing land restitution. It also helps create an upward spiral of up-skilling and economic development where subsistence farmers are able to become commercial farmers.

This reduces the need for state intervention. Farmers are prey to increasingly unpredictable weather and to input costs, which may be subject to a weaker rand.

Employment in South Africa's commercial farming sector is in sharp decline. The NGO TIPS, which focuses on trade and industrial policy, found that in the 11 years from 1988 to 1998, for example, the commercial farm sector shed 140 000 regular jobs, a decline of around 20%.

"A visit to any small town in our country will expose you to the desperate circumstances of the rural poor. Of course, every challenge brings an opportunity: an efficient, empowered and well-resourced agricultural sector can be a driver of growth. It could reduce the rate of urbanisation and reverse the decline of rural towns and villages." Says Somdyala

Cross-sectorial partnerships to stimulate growth

The agro-industrial sector could increase its contribution toward GDP, and increase the number of people it employs. How much it could increase and how many people it could employ can be debated, but what's certain is that achieving this cannot be left only to the government to provide solutions.

"I believe this provides a splendid opportunity for enterprise development financiers and for corporate social investment," he adds.

The Masisizane Fund has already invested great effort in capitalising on this opportunity: it has established a pool of R1bn for development finance. The fund's focus is on stimulating to drive entrepreneurship in underdeveloped areas with high job-creation potential.

In the agri-business and agri-processing sectors these include grain production specifically linked to small-scale milling, piggery and poultry linked to small-scale processing, irrigated crop production as well as drying and packaging.

The DTI, Masisizane Fund and FABCOS have agreed to make a collective investment of R300m to SMMEs in agro-processing, grant-funding, loans and capacity development over the next five years. This will focus on KwaZulu-Natal, the Eastern Cape, North West, the Free State, Mpumalanga and Limpopo.

The objective is to enable entrepreneurship that not only allows sustainable livelihoods and dignity, but which enables a self-funded, self-sufficient nation and reduces reliance on foreign inflows. These efforts help increase South Africa's local talent base and help break the generational cycle of poverty.

Strengthening societies, creating brighter futures

"It's a powerful example of cross-sectoral partnerships that help create jobs and fight poverty, inequality and unemployment. We need more such efforts. By strategically and systematically investing in individuals and organisations across these communities, we begin to strengthen the very foundation of our society, helping to create brighter futures," adds Mr Somdyala.

Agri-business and agri-processing has become a key focus of the Masisizane Fund.

As part of its flagship initiatives in the Eastern Cape, focus has been placed on areas where the potential to produce at scale, build on local economic success, add value to local produce and establish new markets are high while aiming to create solid partnerships with the private sector and government, in order to extend our reach and impact.

Mr Somdyala also notes that the Eastern Cape Socio Economic Consultative Council estimates unemployment in the province to be nearly 27%. A number of NGOs have had to shut down or reduce their services, meaning even less support for the poor.

"Clearly the solution isn't to wait until the economy improves, but to focus on empowering people to become entrepreneurs, and over time, employers."

"Our most important task now is to ensure that as many people know they can be empowered through the Masisizane Fund. In this way we can enable more South Africans to do great things and contribute towards a positive change in the lives of their communities."

www.masisizane.co.za

Wheat producers…Why aren't you planting wheat?

An investigation by Estie de Villiers, SA Graan/Grain magazine

For the past few years, South Africa has been struggling to produce even 45% of its annual wheat requirements locally. We spend almost R6 billion per annum on importing the rest — money that is earmarked for production in rural areas and that is now going overseas.

We are aware of the fact that despite excellent yields and record harvests in the Western and Southern Cape and in the cooler irrigation areas, profitability is still under great pressure, without even taking the Free State into account. What is the reason then? Why is wheat so uncompetitive on your farm?

I visited a couple of wheat producers to find out if any solutions can be found for this dilemma.

The producers who participated in the discussion were:

- Mr Richard Krige – Caledon district
- Mr Andries Theron – Moorreesburg district
- Mr CD du Toit – Riversdal and Napier districts
- Mr Jaco Breytenbach – Fouriesburg and Bethlehem district
- Mr Koos Blanckenberg – Koeberg area in the Durbanville district

Our discussions with the producers revealed that yield, and yield once more, is a great need—if not the greatest need—among producers. Producers are looking for new cultivars that can provide them with a higher yield.

Producers also feel that they are not paid a big enough premium for the quality of the wheat they produce. South African farmers produce some of the best quality wheat in the world, and feel that the buyers are exploiting them by importing poorer quality wheat and blending it with local wheat.

Producers point out that they compete with a subsidised, poor-quality imported produce and feel that they cannot compete with this.

Richard Krige from the Southern Cape made it clear: 'It is of concern to me that, despite the fact that South African producers are at the forefront of technology and are some of the

best producers in the world, they still cannot compete with imported wheat.'

Andries Theron from the Western Cape gave the following opinion: 'The quality of wheat and yield has a negative correlation. Breed wheat cultivars for us that have the same quality as that being imported, with higher yields.'

Wheat prices and input costs are naturally a further important point about which producers feel strongly. Diversification and risk distribution also contribute to wheat plantings being scaled down. But let us look more specifically at what the producers who participated in our discussion had to say:

Does wheat production play a role in your crop rotation system?

Richard: Yes, definitely. We do not have many alternatives in the region and produce on dry land in a winter rainfall region. Summer crops are not an alternative. The market space for barley is limited and we cannot produce only oilseeds (canola), as we have to follow a rotation plan.

Our crop rotation mainly consists of medics/clovers, with wheat every second year – so wheat remains our main cash crop. However, the profitability of wheat in marginal soils forces us to farm with stock if there is not a lot of high-potential land available. Here we bring in oats as a grazing crop. Oats prices also remain low compared to imported oats.

Over the past ten years, stock beat the crop figures on our farm seven out of ten times.

Andries: Wheat has always and will in the future still play a core role in my farming activities. The lack of viable, sustainable alternative crops in the place of wheat will ensure the role that wheat plays on my farm at least in the short term, but the size of the role that wheat will play will be reduced in my crop-rotation system.

Approximately 20 years ago I was involved in a 100% monoculture wheat system. Since then—up to last year—I had a 50% wheat, 50% medics, lupine and canola system. Currently we are changing over to a third system: Wheat (only a third), canola (one-third) and medics (one-third).

CD: Yes, wheat still constitutes 50% of the cash crops we plant.

Jaco: As far as crop rotation is concerned, it is an excellent crop and this is the way in which we have applied crop rotation in the Eastern Free State over the past 20 to 30 years. If we have fields that become infested with weeds and we struggle to get rid of them with the chemicals at our disposal in the summer crops (for instance thorn apples and/or large cockle bur), it is a very good idea to change to wheat to clean the fields.

Koos: Wheat is our main grain product. We employ a full crop-rotation system with it and canola, medics and oats.

Which practices in wheat cultivation cause problems for you?

Richard: We have started spraying our wheat with a fungicide up to three times as a standard practice. Resistance to disease decreases over time, and the yield increases we obtain in this way justify the practice—even with the new cultivars that are resistant to certain diseases on release.

In my opinion, the quality of our wheat is too high. Not the quantity of the protein, but definitely the quality. I feel this is at the expense of yield.

There is nothing that compensates like yield, and I feel that too much emphasis has been placed on quality by the role players involved in approving new cultivars in our country. Producers are looking for new cultivars that can provide them with a higher yield.

It is of concern to me that, despite the fact that South African producers are at the forefront of technology and are some of the best producers in the world, they still cannot compete with imported wheat.

We have employed all available technology to improve production practices and have adjusted cultivation practices to increase our efficiency. At the moment we have 12,8 kg/mm rainfall in the season across all soil types, and with the cultivars available to us at present, we are struggling to increase this. For example, one cultivar was released in 1998 and this year still constitutes roughly 25% of the plantings in my region. This does not make sense, does it?

New cultivars do no replace the old ones quickly enough – particularly in the wheat in the Western Cape. Take Australia, for example, where cultivars like Mace constituted 60% of the plantings in Western Australia within three years.

I estimate that canola cultivars last a maximum of five years before a better cultivar replaces them and the old ones are phased out. In other words, not enough improved wheat cultivars come to the market in the Western Cape.

Andries: The restrictive factors in the production of wheat do not lie in its cultivation, but in the environment in which I have to cultivate wheat – unfair rules of the game that apply only to the one team.

Here are my frustrations:

The unfriendly policy environment, specifically with respect to competition with a subsidised imported product.

A lack of sensitivity with respect to self-sufficiency. It could happen that we have the foreign exchange in our hands, and then there is no wheat available.

The infrastructure that is deteriorating; railways that cause the surplus production form the Western Cape to be transported to the north by road, and as a producer I have to pay for this without having the benefit of rail transport, which is supposed to make the cost of transport more affordable.

Port facilities that no longer make bulk exports of wheat possible and have restricted us to the local market.

My frustration in the wheat industry is furthermore the four major buyers who bully the entire industry and abuse their positions of power by setting product standards for me as wheat producer with which the imported wheat does not comply, and then they use my quality product to their benefit without any price benefit to me as producer.

If I were unable to utilise the benefit of minimum till on my farm, wheat would probably have been totally uncompetitive.

CD: To us the resistance of weed to herbicides is a major problem.

Jaco: We do not have any practice with respect to wheat cultivation that causes us problems. I might mention that in the Eastern Free State we plant when we do not get rain and harvest when it rains. If you plant wheat, you also require fewer tractors than when you plant summer crops. The preparation for wheat occurs at a time of the year when it is very quiet with respect to summer production.

The margins for wheat have reduced increasingly and that is why producers have started using other crops to implement a

crop rotation system. Here in our region the producers mainly use soybeans these days, and to a lesser extent sugar beans as opposed to maize. In the warmer areas, just outside the Eastern Free State, producers also use sunflower.

If a producer has failed to plant wheat once, I think they fall into a rut of comfort and then no longer plant wheat, because the end of December, which would have been their harvest period, is now very peaceful during the festive season (when labour is sometimes a problem).

The main thing is probably the work pressure that is only on summer crops at the end of the year, because everything has to happen at the same time: hoeing, chemical spraying, management and caring for a growing summer crop. Another important point to remember is the fact that if you no longer produce wheat and you want to start again, you have to purchase implements and equipment that you no longer require for summer crops – for example planters and combine harvester tables.

I did plant wheat this year, but no longer the same hectares as before. In addition to the price that is risky at present, you have to collect water in the soil when you do not plant, you plant when it does not rain and you have to hope that the rain comes at the right time. With a summer crop it is easy to plant only after there have been good rains. The wheat price is a major risk and the price of wheat must be more than R5 000/ton before the producers here in the Eastern Free State will plant wheat on a big scale again.

Koos: Weed resistance is a problem, but we overcome that with the right strategies.

If wheat does have an important role, what is this role?

Richard: The risk of wheat cultivation is lower than that of barley, particularly with respect to rain in harvest time and sprout resistance and grade damage that accompanies rain. In contrast to wheat, barley has shown dramatic increases in yields over the past few years with the new cultivars that were released by SABBI.

However, against the background of the risk and limited market space, wheat is still our main crop.

Andries: The Swartland is a wheat region —the best quality wheat with good yields is in its natural environment here. We can produce wheat, we can produce food, and this in an environment where few other crops can be cultivated.

If not, why not? Do other crops fill this role?

Andries: The restricting factors in the wheat industry forced me to use medics as an alternative crop initially, in the first place so that I could use the benefit of nitrogen fixation to the benefit of wheat and reduce inputs, as well as risk distribution with a greater livestock factor.

Currently canola plays a critical role in my farming activities because of the competitive edge offered by oilseed prices. These competitive alternatives will cause the role of wheat on my farm to be reduced even further. This led to my decision to spread my risk and plant more canola and less wheat.

Leaving the price of wheat out of the equation, and if you do farm in a recognised wheat production area and did not plant wheat this year, why didn't you? What reasons would you give for planting wheat not being profitable?

Richard: Profitability would have caused us to sow more. We sow 40% cash crops. We would increase this if the enterprise (compared to livestock) were more profitable.

Andries: Profitability is definitely the main consideration. If I cannot make money from wheat farming, I have to look at alternatives.

Globally a large supply of wheat is currently available and we had to accept that prices will remain under pressure. Input costs also increased enormously because of the exchange rate. The fuel prices have removed us from the race completely. After having taken all these uncertainties into account, I decided to spread my risk and plant more canola and less wheat.

Koos: There was no decrease in plantings in our area—in fact, a little more wheat was planted.

If input costs are restrictive, name those inputs?

Richard: The availability of chemicals that are registered on the crops we plant remains a problem, as does the price, naturally. The Registrar of Act 36 of 1947's system of minor crop use partially addressed the problem, but companies still fail to register all products. Because we remain up to date on technology, we know when a new active ingredient or product is released overseas. However, these products take a year or two to reach us. Our inputs still tend to be higher than what it can be acquired for overseas, but this gap has been reduced over time.

Andries: Input costs are all high, with increases that do not keep pace with the prices of the products produced. The

instability of our exchange rate really does not do a lot to stabilise this dilemma.

Jaco: The input costs of wheat are lower than those of summer crops per hectare. So this is not a major problem here in the Eastern Free State.

Koos: We did not experience a decrease in plantings. All input costs are naturally always a restricting factor.

What would you propose to further reduce these input costs?

Richard: The use of fertiliser and manure still requires a lot of work. We can reduce our production costs with respect to fertiliser even further with the aid of nitrogen-fixing crops. Most of our other expenses are already cut as far as possible and economies of scale are starting to play a bigger role in mechanisation.

The machinery is becoming bigger and bigger, but we will reach a point where it becomes unaffordable to producers. I think we are very close to this point. There is a very fine line between cost-effectiveness and the need to mechanise.

Andries: I feel that, seeing that crop rotation, minimum till, mechanisation, the optimum use of the best-performing cultivars and critical management are already being employed, we will find it difficult to reduce inputs even further – in any case not to the extent that it will have a positive effect on the amount of wheat that is planted.

Koos: Input costs can always be reduced by applying better tilling practices and by following a good crop rotation system. Crop rotation reduces input costs and also risk as far as the weather is concerned.

Does the quality of the wheat play a role?

Richard: Yes, but the premium paid for the cost of producing premium wheat is not big enough. The wheat price over time was at least two grades too low (roughly R270) and the transport differential also harms producers financially.

Andries: Wheat quality and yield unfortunately have a negative correlation. We produce the best quality wheat in the world, which the buyers are exploiting to their benefit by importing poorer quality wheat and blending the two. The reality is that this inferior product determines the price of the better wheat.

CD: Yes, the wheat quality is too high and the yield too low.

Jaco: Wheat quality always plays a role because in the Eastern Free State we harvest when it rains. Yet we manage to produce a good-quality crop every year.

Koos: Wheat quality always plays a role because we are remunerated according to grading regulations and realise a better price.

Suggestions to the wheat breeders

Richard: Yield with the retention of minimum quantity and quality specifications. Drought resistance is important. We must know how specific cultivars react to standard chemical treatment, as is announced with the cultivar release in Australia.

Many standard chemical treatments are applied in our country, but from Australian data it is clear that each cultivar reacts in a different manner to treatment. This can lead to an increase or reduction, but we have no idea how much of our crop we 'spray away' with the standard treatments.

Andries: My request to wheat breeders is the following: The only way to save the wheat industry in South Africa is with higher yields. Breed wheat cultivars for us that have the same quality as that being imported, but with higher yields. We have been bullied and misled for long enough. We have nothing to lose. The poorer quality of imported wheat sets the price in any case.

If the millers want our good quality wheat, our message to them is: Pay us a premium and we will produce it.

Perhaps the time has come for us to produce GM wheat. We will have to focus on hybrids to increase yields.

CD: Breed cultivars similar to those that millers/bakers import from Russia and the Black Sea, in other words cultivars with greater yields and lower quality, so that the price will consequently be fairer.

The four buyers steal about R300/ton to R500/ton from the producers annually by playing down our wheat price against the cheapest wheat they can obtain on the global market.

Jaco: The wheat breeders should attempt to provide a cultivar that will increase the yield and may perhaps compromise on quality. Our wheat is in any case blended with the poorer quality wheat that is imported.

Over the past few years the breeders could not succeed in breeding cultivars with abnormally high yields.

Koos: We as producers in the region would like to see new cultivars become available more quickly. The genetic progress that is made is slow.

Suggestions to the wheat researchers

Richard: Nitrogen management and further conservation farming work are required where cover crops, nitrogen-fixing crops and alternative crops are investigated.

Lentils are one example of this, but they are not cultivated locally. We must accept that we will have to adopt overseas cultivars, as our market is too small to place certain crops in breeding programmes.

Greater access to cultivars and alternative crops must be obtained through end point royalty (EPR) agreements with seed breeders overseas.

Focus on yield with the retention of minimum quality as a way of ensuring the future of agriculture. It will be essential for us to increase our water-use efficiency in wheat cultivation by improving cultivars, tillage and cultivation practices and our soil quality.

Andries: Researchers, please move closer to me as producer. I try to survive. Help me to do so. I would like to contribute to research, but if it cannot add value for me, it is worthless.

CD: Cultivars should be more disease resistant.

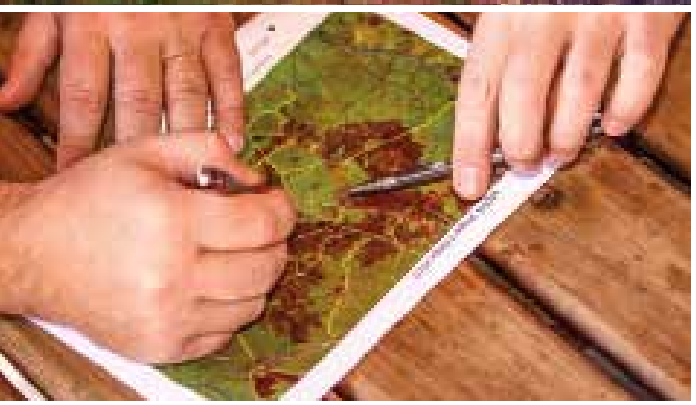
Jaco: I think researchers spend time and money on research that is no longer worthwhile. We are involved in a battle for survival, so all time, money and research should be spent on new cultivars.

Koos: I don't know, perhaps researchers are already doing this, but I think they should cast their net wider to bring technology used by other breeders in the world to South Africa. This can help us to progress more rapidly.

Recognition is given to the ARC-Small Grain Institute, and particularly to Dr Cobus le Roux (General Manager: ARC-Field Crops Division), who assisted in drafting the questionnaire.

WoF Commercial - professional expertise in wildfire

Offering South African landowners the benefits of professional experience in integrated fire management



The Working on Fire (WoF) Programme is acknowledged as the South African Government's most successful government-funded job-creation and skills development programme in the prevention and suppression of unwanted wildfire.

Now thanks to WoF Commercial, landowners throughout South and Southern Africa can benefit economically and manage their environment more successfully thanks to the professional services of WoF Commercial - pioneers in the globally accepted practices of Integrated Fire Management Services (IFMS).

Under WoF, wildfire fighters are recruited from marginalised communities and trained in wildfire awareness, wildfire prevention and wildfire suppression skills. Once trained the wildfire fighters, drawn from the most marginalised communities, are deployed in "Hotshot" squads from bases around the country.

They are constantly on standby, fit, trained and ready to answer the call for assistance to prevent the scourge of unwanted wildfire in which lives are lost, communities are deprived of livelihoods and the South African economy loses billions of rands annually.

Implemented on behalf of Government by the Kishugu Group of companies, the WoF programme addresses the prevention and control of unwanted veld and forest fire, to enhance the sustainability and protection of life, property and the environment through the implementation of Integrated Fire Management (IMF).

The multi-million-rand job creation programme is primarily geared towards assisting government to fulfil its job creation and social upliftment promise to the people of South Africa. WoF currently has more than 5 000 beneficiaries, 85% of whom are young and 29% of whom are women - the highest percentage of women deployed in any comparable fire service in the world.

Now thanks to WoF Commercial Operations and the WoF Academy, landowners throughout the country are able to benefit from training courses and interventions as well as products to assist them in the management of their land.

WoF Commercial has also developed a pool of highly qualified and experienced wildfire fighting managers, based across all the fire-prone regions of South Africa, who are responsible for supervising any prescribed fire and suppression operations.

Wof Commercial has a wide range of unique fire and land management products and services to fit specific needs for landowners in South and Southern Africa.

Among the services offered are:

- Insured turnkey integrated fire management systems which include wildfire prevention, fire detection, and fire suppression;
- Ecological fire management including research and development of fire management plans;
- All types of ecologically prescribed burning including removal of moribund vegetation, high intensity fire for the control of invasive and old vegetation, and fire breaks;
- Invasive vegetation management in the forms of herbicide control, as well as manual clearing and mechanical bush clearing.

Our comprehensive fire suppression resources include:

- Initial attack strike teams equipped with fast moving 1 ton and 3 ton 4 x 4 and 4 ton 2 x 4 vehicles;
- Extended attack hand crews which are equipped with 8 ton and 3 ton 4 x 4 and 4 ton 2 x 4 vehicles;
- Supply of suppression resources and aerial support if required.

Working on Fire (WoF) offers a wide range of fire management activities and services, including:

- Modern fire detection systems.
- Supply of different size structural firefighting teams, with HAZMAT training, to the client's prescription – any additional specific training and equipment specified can be provided.
- Fire awareness programs for communities affected by fire and neighbouring communities.
- Fire management training which is internationally accredited and covers all disciplines of fire management.

For a comprehensive list of all our services, contact us on www.workingonfire.org or 013 741 6461.

WORKING ON FIRE

Water licensing

Getting to grips with water

SA's farming sector is still getting to grips with the issue of water use licences after these became a legal requirement for many businesses five years ago, according to leading engineering consultants, SRK Consulting.

"Most farms that use water for irrigation—or for watering livestock in feedlots—will be required to apply for a water use licence, in the same way as the mining and industrial sectors," said Lindsay Shand, principal environmental geologist at SRK's Cape Town office. "The aim of this process—driven by the National Water Act (Act No. 36 of 1998)—is to ensure that the distribution of this increasingly scarce resource is fair and sustainable."

Obtaining legal authorisation as a water user allows farmers to strengthen the risk profile of their business, said Shand, as it may become difficult to sell or re-develop the property if the entity is not fully compliant. Without carrying out the investigations required for licencing, there is the danger of impacting negatively on neighbours and other water users, possibly leading to expensive remediation processes in the future.

She said there was still a lack of knowledge in the agricultural sector about the need for these licences, mainly because this sector was traditionally not required to hold them. Now, however, any farmer taking water from a surface water or groundwater resource, storing water, discharging effluent water, altering banks or impeding and diverting the flow of water in a watercourse falls under Section 21 of the National Water Act – depending on the volume of water involved and the present aquifer status of the quaternary catchment in which it is situated in.

The licencing process was initially hampered by long delays within the then Department of Water Affairs in getting the applications processed and licences issued. There were also numerous incidents of content errors within the issued licences, making it difficult for the water user to strictly comply.

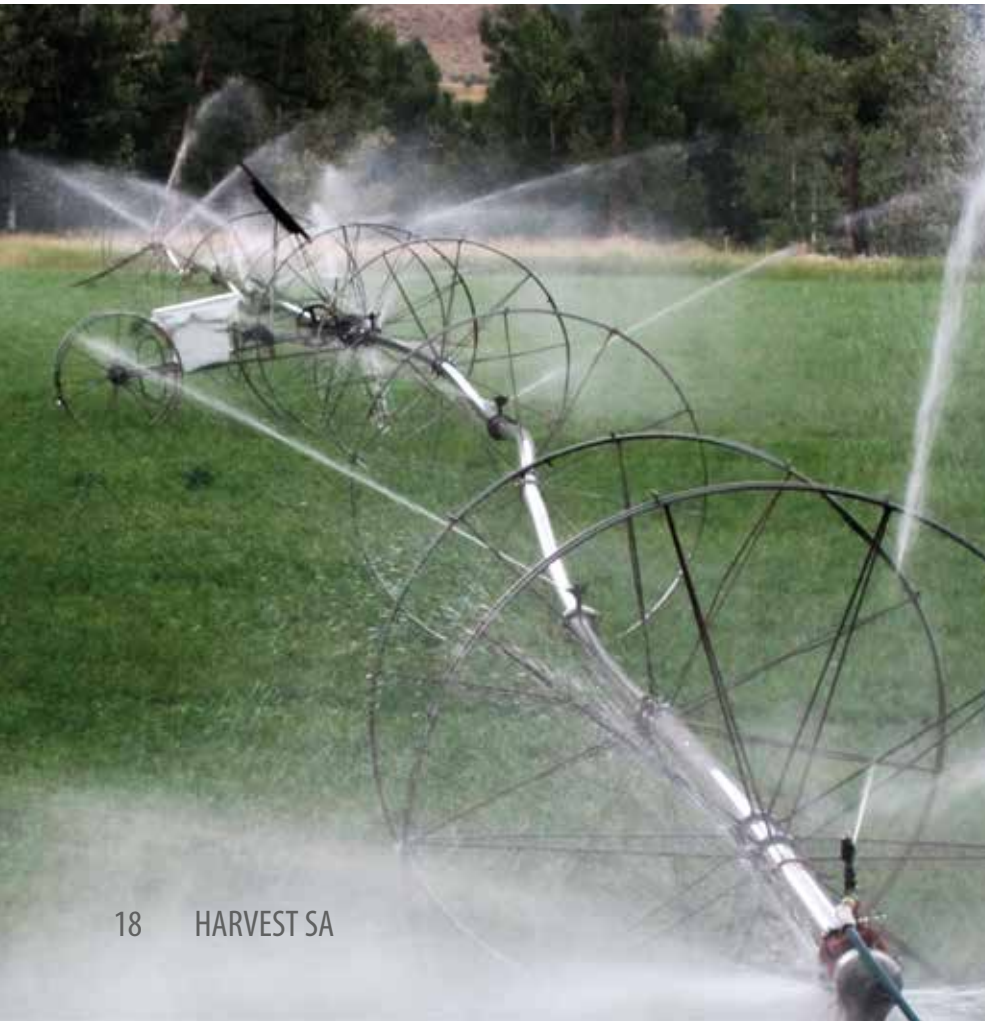
"Fortunately, there have been better systems put in place in recent years to speed up the licencing process, so this need not deter water users from pursuing their applications," said SRK hydrogeologist Candice Lasher.

Businesses such as wineries, food canneries and feedlots that discharge waste water—or dispose of waste in any way that may affect a water resource—are also subject to the Act, according to Desmond Visser, associate partner and principal hydrogeologist in SRK's Cape Town office.

Visser said SRK's specialist services can help farmers not only to comply with the licencing regulations, but also to audit their water use and understand their water use patterns in more detail—to the benefit and sustainability of their business.

"We work with clients on a range of issues such as groundwater supply, water quality assessment and dam design, deploying experts including geologists, hydrogeologists, geo-chemists, geotechnical engineers and hydro-engineers," said Shand.

Farmers are legally obliged to apply for water use licenses



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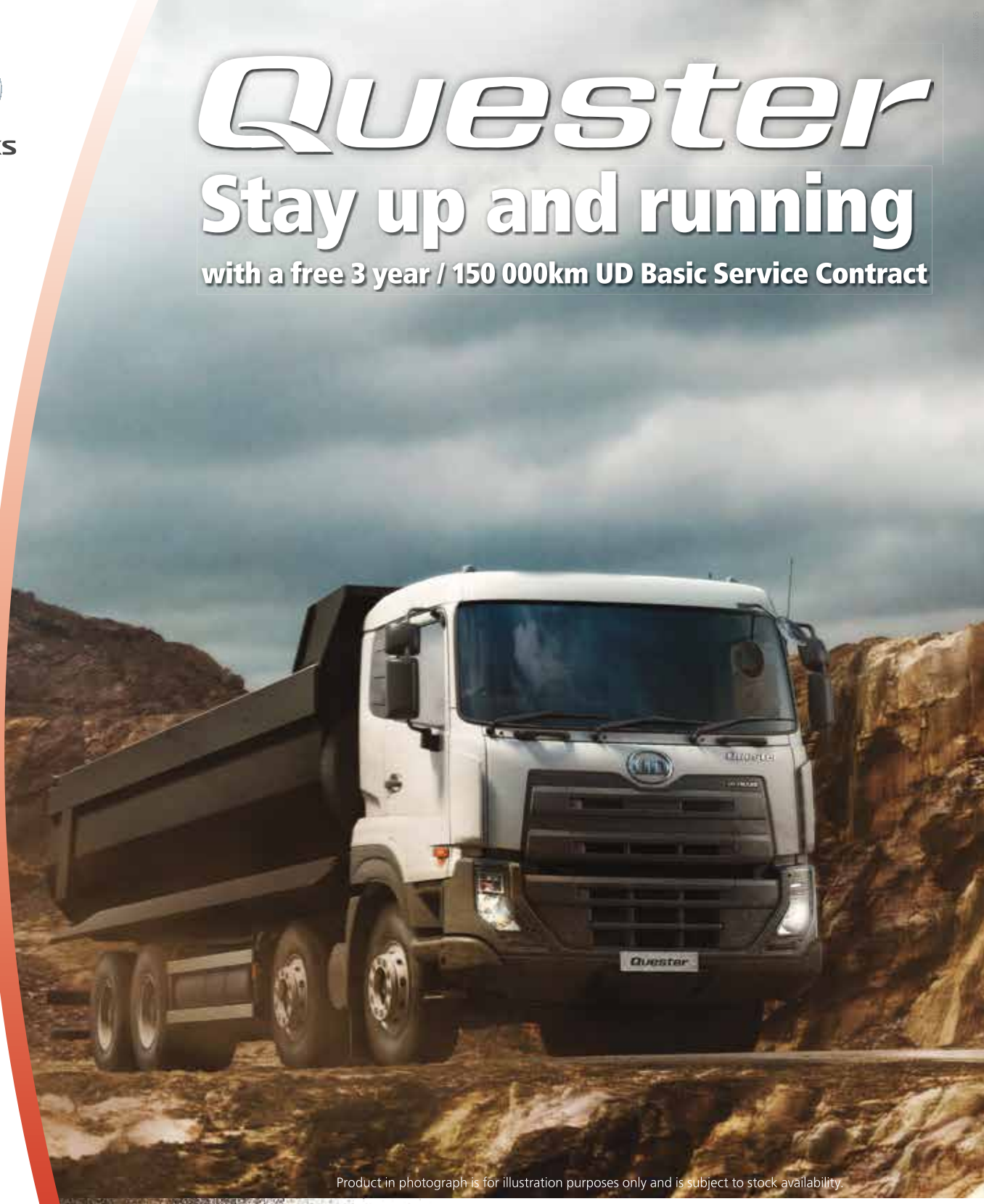

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Going the extra mile

Fast-tracking transformation

Operation Vuselela has brought sugar cane farming back to the people

To accelerate socio-economic transformation, the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, in partnership with Tongaat Hulett, has undertaken a public-private sugarcane development initiative which commenced in 2009.

Operation Vuselela, the isiZulu word translates; "to revive", focuses on reviving sugarcane farming amongst rural communities as part of government's strategy to stimulate economic activities. This operation has 31 participating agricultural co-operatives.

The co-operative model brings countless benefits to the members including the sharing of costs, risks and financial dividends. As a partner, Tongaat Hulett helps to establish infrastructure and provides the co-operatives with seedcane as well as training, on-going extension services and capacity building to promote good administrative practices and to ensure the sustainability of the co-operatives.

Having reached its maturity, Vuselela has empowered various communities in the KZN region where they can further form their own associations. The farmers who benefit from this project do so as members of co-operatives and not as individual farmers on small land holdings. This method of collective farming has proven to be far more efficient and economical than the old

Kwasa Co-operative members, from left, Myekeni Mncwanga (Vice Chairperson), Pankraiz M.Mnguni (Secretary), Zanele Mkhwanazi (Tongaat Hulett Area Supervisor), Walter Sibiya (Tongaat Hulett Area Manager), Ntombenhle Zibani (Treasurer) and Hlengiwe Dlamini (Vice Secretary)

small scale model. In this model, members consolidate their individual plots into a co-operative. This is then farmed as one farm unit. Members get a guaranteed rental from the co-operative and they also get dividends as shareholders in the co-operative. Those co-operative members who elect to work in the Co-operative receive additional income in the form of wages.

In conjunction with empowerment, skills transfer has been one of the successes of this operation, which is how it seeks to maintain its sustainability.

One of the successful co-operatives in the Felixton growing area, north of KZN, Kwasa was established in 1998 with just 19 members farming 11.5 hectares of land. Over the years, the economic spin-offs of the project became evident to the surrounding community members. Through their successful participation in Operation Vuselela, the co-operative has gradually grown to a current total of 86 growers on approximately 85 hectares of land. The Kwasa members have used some of their income to purchase a bakkie that is utilised in their day-to-day operation.

Kwasa Chairperson, Mr Ntuli, attributes the success of the co-operative to the member's ability to define their own needs and the power to change the things that don't work. He also acknowledged the good working relationship that the members have with Tongaat Hulett and the Department of Economic Development, Tourism and Environmental Affairs. This has contributed to the viability of the co-operative.

Located in Mabhokweni, near Gingindlovu in northern KZN is the five-year-old Sizamelamabhoko co-operative which has maintained sustainability through Operation Vuselela. It has economically empowered its members to invest in a tractor, a herbicide mixing tank and a steel container that is used for storing fertiliser and weedicides. All of the above was purchased with their profits from the co-operative.

"The purchase of a tractor has a cost-saving advantage for us," said Florence Ndlovu, chairperson of Sizamelamabhoko Co-operative.

"We no longer have to appoint contractors to conduct field maintenance and operations on our behalf as we are now in a position to conduct most of the work ourselves.

Florence Ndlovu, Chairperson of the Sizamelamabhoko Co-operative

Nkonzo Mhlongo, Tongaat Hulett Socio-economic Development Manager said: "Tongaat Hulett provides agricultural and extension support to co-operatives through the company's Small Scale Grower unit which falls under the helm of the Cane and Rural Development Unit. Furthermore, the company has enabled 5 young people from the community to attend the 3 week Junior Certificate Course in Sugarcane Agriculture. This was undertaken to ensure that the youth utilise their knowledge to support the Cooperative and other growers in the community.

"The Small Scale Grower unit employs qualified graduates from various agricultural institutions to mentor and coach emerging sugarcane farmers to improve their farming capabilities."

To feed the economy

The agro-processing value chain can get the economy back on its feet

The reviving of agriculture and the agro-processing value chain is key for radical economic transformation, says Trade and Industry Minister Rob Davies.

"Much more value is created in agro processing than it is in agriculture. There are high quality jobs if we actually process the products that we produce. Agro-processing can exist and add value where there is agriculture. But agro-processing can also drive agriculture and create a market for farmers," said Minister Davies.

The Minister was speaking at the Eat Well, Eat Safe, Eat Local campaign at Cofimvaba High School, in Cofimvaba village, Eastern Cape on Monday.

Minister Davies said it is important that more of the food that people consume should be produced in the country as this will assist with growing jobs and the economy.

"The choice of buying locally produced products is for everyone, and it should be a priority. Right now, too much of the food that we consume in this country is not produced locally, it is produced somewhere else and imported," he said.

The Minister further highlighted that there are different instruments that government is using to support the buy local campaign.

"We support infrastructure that can sustain agriculture, and we provide incentive programmes to support agro processing

Rob Davies, South African Minister of Trade and Industry

Potatoes are a strategic crop to ensure household food security

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

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

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

The average potato was compared to other commonly starchy foods and the comparisons revealed that potatoes are favourable in terms of lower energy and carbohydrate yields, and higher in vitamin C and potassium per 100g serving, cooked with skin:

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

Source: Nutri-Vation, ARC, University of Pretoria

Potatoes provide important dietary diversity for rural households

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

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

Potatoes South Africa's Small Growers Development Programme

Over the past eight years 60 projects were established through the Small Growers Development Programme, with an average of 57 rural growers per project and more than 4 000 smallholders participating.

potatoes aartappels SA

www.potatoes.co.za
Enquiries: Nomvula Xaba, nomvula@potatoes.co.za

and aquaculture. We also use trade policy instruments.

"With the new regulations that we will be introducing, it will be a necessity for all manufacturers to reduce salt and sugar in processed foods. Not every product made in South Africa is healthy," he said.

Minister Davies said in an attempt to ensure that majority of people eat nutritious food, government has introduced regulations that will see to it that maize meal, is fortified.

The event was hosted in partnership with the Eastern Cape department of Rural Development and Agrarian Reform, Chris Hani District Municipality and Ntsika Yethu Municipal Council.

Gauteng puts agro-processing at centre of reindustrialisation

A successful two-day Agro-Processing Industry Summit took place during March in in Kliptown, Soweto.

Gauteng MEC for Economic Development, Environment, Agriculture and Rural Development, Lebogang Maile, said the summit shows that the province has placed agro-processing at the centre of its drive for increased localisation, reindustrialisation and job creation.

"In this summit, we will build from the premise that we are closer than we have ever been to crafting a common vision that will define and shape Gauteng's agro-processing sector over the years to come," he said.

The MEC described the summit as historic, as this is the first time that government, farmers, financial institutions and the research community are gathered under one roof to dissect, explore prospects for transformation and further development of the sector.

He said agro-processing, as one of the priority sectors identified by the provincial government, carries significant weight and has an important role to play in the realisation of the vision to build a transformed and modernised Gauteng that boasts industrial capability, social cohesion and equality.

"… There are many who wonder why a highly urbanised province such as Gauteng places such importance on agriculture. After all, Gauteng only occupies 1.4% of the country's landmass, which is minuscule when compared to the 30.6% landmass occupied by Limpopo province," he said.

MEC Maile said they believe that agro-processing, along with a clear strategy for economic diversification, can give the economies of the West Rand and Sedibeng a new lease on life.

He said these two economies, which are still reeling under the pressure imposed by the global economic crisis, are currently growing at 1% and 0.7% respectively, with worrying levels of unemployment.

"We are of the firm view that with the decline of mining activity and the attendant consequence of deindustrialisation, the agricultural industry presents real possibilities for a shift in the orientation of these regions.

"More importantly, as an industry that can propel growth in other sectors, agro-processing will place Gauteng's economy on a different economic trajectory," he said.

The MEC urged summit delegates to reflect on the concrete steps they can take to multiply the efforts born out of cooperation between the State and the private sector.

"As the leadership of the province, we are alive to the challenges that are facing the sector. We must emerge out of this summit with a strategy that merges our agenda to promote food security, integrate black farmers, lessen our dependence on food imports, and empower poor communities to take charge of their nutritional needs by supporting community and household food gardens on a massive scale," he said.

MEC Maile said the agricultural sector is an integral part of radical transformation that they want to see in the province.

"We must emerge not only with a declaration and resolutions but a resounding commitment to use agriculture as a launching pad toward the realisation of the transformation, modernisation and reindustrialisation programme," he said.

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Touching the market

Tru-Cape's strategy involves working more directly with key customers

With the launch of Tru-Cape Fruit Marketing's new City Deep, Johannesburg, facility the company completes its Closer-to-Market strategy.

According to managing director Roelf Pienaar for Tru-Cape, the largest distributor of South African apples and pears and a significant role-player in the country's R6 billion fruit industry, the new 4000m2 offices, storage and distribution centre is five times larger than their previous building.

"Our previous facility served Tru-Cape and our grower owners from Ceres Fruit Growers and Two-a-Day for 30 years and this new building will help us achieve our goals for the next decade and more," he says.

In addition to investing in infrastructure, Tru-Cape has reduced operating costs through joint-venture partnerships with key customers, further closing the gap between the grower and the consumer. "Our focus has always been on establishing a good, strong local market brand and this continues with renewed energy," he says.

Pienaar says that based on trees already in the ground, the company will have 18 million cartons of fruit to place within the next five years. "We will now have capacity for 1152 palettes of fruit as well as administration and meetings spaces. This will allow us to better and more frequently replenish our local customers but also to plan to further expand our cross-border business into Africa, already 36% more year-on-year," he says. "The building will have three loading bays, five cold-storage rooms to each accommodate 240 palettes as well as a holding and inspection facility. This will allow for quality and phytosanitary inspection in our own facility and for cold-sterilisation where necessary," he says.

Pienaar says that Tru-Cape's Closer-to-Market strategy sees the company working more directly with key customers, focusing specifically on Africa and the Middle East. "This will ultimately lead to greater management of the value chain and increased returns to our grower shareholders," he says.

At the helm since January 2014, Pienaar says that 2014 was a year of focussing on people, processes and technology. "We have increased our operational efficiencies so that we are extracting the maximum value and this will maintain our leadership position and continue to make us relevant for this decade and next," he says.

"In addition to two meeting rooms we will have the Hannes Rossouw Boardroom which is dedicated to the memory of one of Ceres Fruit Growers' engineers who worked closely with the Johannesburg building and passed away suddenly recently.

There will be three plug-in points for Refrigerated Containers to effectively maintain the cold-chain but the biggest benefit of our new facility is the ability to immediately replenish local retailers which were previously subjected to a 48-hour delay, while fruit was freighted from Cape Town. The end result for the consumer will be a better quality product that has had less storage time in retailers' fridges," he says.

Tru-Cape is also eyeing new customers and plans to grow its 60% share of informal market business by these advances. "We are also growing our basket by adding other fruit and veg lines adding greater value to our growers by managing more of their total crop and not only apples, pears and cherries.

"Increased cross-border business with our neighbours in Mozambique, Lesotho, Tanzania, Botswana and others is the most significant growth trend with road freight leaving from Johannesburg into sub-Saharan Africa ever more frequently. We have created spaces in our new building especially dedicated to offering these customers a working and rest space, including shower facilities while purchases are being loaded. "As apples and pears are not grown to the North of our borders, City Deep, Johannesburg is a convenient collection point for our fruit as customers also shop at the nearby municipal markets for other produce," he ends.

Brian Berkman
See www.Tru-Cape.co.za, follow @TruCapeFruit for more information.

Tailor-Made Transport Solutions for the Agricultural Industry

Transport in the agricultural sector is truly a very unique animal. From deciding which truck model would be most suited to your kind of business, the configuration of trailers, to road and operating conditions – all very important considerations before you make the investment in a new truck.

And above all, it needs to be dependable and smart worker, and able to handle itself in some tough situations.

According to Rory Schulz, Managing Director of UD Trucks Southern Africa, there are two fundamental application concepts that can be considered to transport livestock or produce from the farm to the market. They are rigid freight carriers with drawbar trailer or truck tractors with two-axle semi-trailers.

"The case for the rigid vehicle lies mainly in the flexibility to transport a wider range of goods and should a larger load required to be moved, then the trusty drawbar trailer can always be utilised," said Schulz. "Depending on the farmer's intended use of the vehicle and working conditions on the farm, it might be an advantage to use the rigid combination as the flexibility of this rig far outweighs that of the truck tractor combination."

Vehicles Made Africa-Tough

When advising customers which specific model and rig to use, transport consultants at UD Trucks' nationwide dealer network take a number of factors into consideration. Most importantly, it is the payload productivity factor that often determines which specific combination to use, which combines payload, average speed and average fuel consumption figures.

"At UD Trucks we believe that the selection of the correct vehicle not only allows the customer to run his operation efficiently, but also forms the cornerstone of dependable service," said Schulz. "Our transport consultancy service ultimately allows us to advise customers on the best truck for the job at hand."

The truck-tractor models in UD Trucks' extra heavy Quon range are ideal for the long distance transportation of, for instance, grain or milk. Quon leads the way with its driveability and overall efficiency, maintaining UD Trucks' commitment to provide transport operators with the lowest lifecycle costs possible.

Especially in this long-haul application, the Quon's cab offers a driver-friendly, safe and comfortable environment for occupants, ensuring ease of operation and subsequently higher productivity levels.

The newly-launched Quester range is ideal for the agricultural market, with the 6x4 rigid derivatives offering truck owners 330hp at 2 200 rpm, and 1 200NM of torque at between 1 200 and 1600 rpm.

The Quester range come standard with a standard roof sleeper cab and bunk bed. Standard is Fuel Coach to advice the driver the best suitable driving conditions to help save fuel, as well as a three-year or 150 000 km UD Basic Service and Telematics Service, also included in the purchase cost.

"The Quester range combines UD Trucks' Japanese quality heritage, with global resources and the insight and expertise of our local experts," said Schulz. "Robust and easy to maintain, it is essentially a business tool that can handle tough daily use, especially off-road. It stands for quality and durability, and all of this is backed up by a wide range of configurations with easy body mounting that offers our customers a tailored and purpose-built-solution for all types of applications."

Schulz concluded by saying that UD Trucks' passion is to make fleet owners' working day simpler and more productive, whether they are in regional distribution or long-haul transportation.

Quester is expected to be UD's most cost-efficient truck yet," explained Schulz. "The new range will cut fuel costs and maximise uptime, giving fleet owners quick dependable payback that will help them succeed in their farming business."

CHRIS HANI
DISTRICT MUNICIPALITY
SUSTAINING GROWTH
THROUGH OUR PEOPLE

Chris Hani District

The Chris Hani District is, both geographically and figuratively, the heart of the Eastern Cape, named after the heroic freedom fighter. The area has played its part in producing many of the giants of the country's liberation struggle. Their lives and values they stood for are well captured in the Chris Hani District Municipality (CHDM) liberation heritage route project.

Our district played a singular role in the struggle and almost in every small town and remote rural area, one can find traces of local heroes and heroines who made the ultimate sacrifice in the fight for freedom.

Special Economic Zone a Catalyst for Economic Development in the Chris Hani District Municipality

An aspired Special Economic Zone (SEZ), Chris Hani District Municipality has reaffirmed its readiness. An SEZ is defined as a geographically limited area administered by a single body offering certain incentives and benefits to businesses physically located within the zone.

This economic policy tool will see the Lukhanji Local Municipality being the economic hub of the district. Other local municipalities will either be Free Trade Zones (FTZs), Export Processing Zones (EPZs), Industrial Development Zones (IDZs) or Sector Development Zones (SDZs).

The approval of the SEZ will increase foreign and domestic private sector investment through export growth and diversification. Develop industries within the district and upgrade skills and technological transfer.

The Municipality has investigated various economic development instruments that are integrated and inclusive of the eight (8) Local Municipalities (LMs). The SEZ will be biased toward the agro-processing sector and will take advantage of the region's agricultural strengths. The proposed SEZ will be located near the old Queenstown industrial area.

the heart of the Eastern Cape

Local municipalities under the jurisdiction of CHDM will form sector nodes that will yield primary production so that the Agro-processing Hub (the Queenstown SEZ) has adequate quantity and quality of input raw materials. This approach is inclusive and it ensures that economic activities and job creation occur not only in the proposed SEZ, but also in LMs of the District and possibly adjacent District Municipalities as suppliers.

Four major corridors have been identified and are defined as follows:

- The east corridor [Corridor1] that runs along the R61 and links Ngcobo, Cofimvaba, and Tsomo to Queenstown.
- The North-east corridor [Corridor2] links Elliot, Cala, and Lady Frere to Queenstown along the R394
- The west corridor [Corridor3] links Middelburg to Cradock along the N10 and then Cradock and Tarkastad to Queenstown along the R61.
- The north-south corridor [corridor4] links Sada / Whittlesea through Queenstown to Molteno.

Each of the above corridors transverse through Queenstown and the town has a strong existing business and support service base. Queenstown was therefore selected as the location for the proposed SEZ.

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In pursuit of priorities

Farming communities are being uprooted as a result of the energy boom

Africa has about a third of the world's mineral resources, but most of its citizens remain desperately poor and don't receive the benefits of their natural resource wealth.

These resources could generate substantial social, economic and political benefits for Africa, but only if they are pursued in a transparent and accountable way that respects peoples' fundamental human rights.

Oxfam has been working on extractive industries in West Africa for more than 10 years, and we're expanding our work into a total of 15 countries in Africa this year. In February we met in South Africa and heard about the challenges our partners are facing across the continent.

There is incredible variety: Oxfam partners are working in countries that are just discovering and beginning to develop resources, like Mozambique, Uganda, and Kenya, as well as countries with a long and often troubled history of natural resource extraction like Ghana, Nigeria, and South Africa.

We want to highlight three key priorities of their work in Africa, and three key trends we've seen emerge over the past several years.

1. Protect the rights of communities and citizens

When drilling or mining starts, communities often face negative economic, social and environmental impacts. In many cases, the

failure to respect and protect communities' rights is a major cause of conflict. For years a key part of our work has involved protecting the rights of affected communities to participate in decision-making over whether and how natural resources will be developed and managed. Rarely is the consent of communities obtained before mining or oil operations start – but ensuring the right of free, prior and informed consent is essential to prevent negative consequences, conflicts and disruptions.

Resettlement also poses a risk to human rights. In Mozambique, for example, Australian mining company Rio Tinto operates coal mines in central Mozambique that displaced hundreds of families from their homes. At our meeting last month, staff shared stories from visits to these communities that showed the serious shortcomings in government resettlement policy and company implementation. Largely self-sufficient farming communities were uprooted and resettled to arid lands far from rivers and markets and with inadequate compensation – resulting in food insecurity, water shortage, and other problems that disproportionally impacted women.

2. Give communities their fair share

Most African countries are not getting a fair share of the value of their mineral and hydrocarbon resources, and this is exacerbated by histories of poor governance and corruption. A few people continue to capture the profits from resources that should serve the majority of citizens' needs.

We're focusing on transparency—shining a light on contracts, revenues and payments companies make to governments—and tracking how this money is spent as a means to improve accountability. This includes fighting for transparency regulations here in the US, as well as in the UK, Canada, France, and in Africa. Transparency can help ensure that revenues benefit communities instead of being captured by a handful through corruption and tax avoidance. Extractive companies sometimes use tax dodging and tax avoidance strategies and benefit from unnecessary tax incentives. The so-called "Mbeki panel report" on illicit financial flows in Africa (launched the week before we met in South Africa) makes this abundantly clear.

Once transparency is in place, it becomes easier to track these revenues and hold local and national governments accountable for how they spend this money. In Kenya, the government has committed to making Production Sharing Contracts public and operators like Tullow Oil have stated their commitment to full disclosure of petroleum agreements. Our staff in Ghana also shared how in 2013, they had campaigned with local partners and allies to convince the government to invest more of its oil revenues in agriculture – their campaign experience, and the "Oil 4 Food" model, were valuable lessons for our staff across Africa on how oil revenue distributions can be improved to benefit small-scale farmers and reduce poverty.

3. Address the negative impacts on communities and the most vulnerable

Natural resource development can have negative social, environmental, and economic consequences that can devastate communities, especially the most vulnerable. Environmental and social impacts of extraction can have long legacies—with some environmental health impacts, if ignored, being experienced two or more generations into the future.

Across Africa we're focused on reducing these impacts through improved, independent, Environmental and Social Impact Assessments before operations begin. This will encourage companies to clearly identify their likely effects on the most vulnerable and take measures to minimize them. Disclosing anticipated project impacts is information that communities need to be able to exercise their rights to free, prior, and informed consent.

Oil, gas, and mining activities also disproportionately affect women, children and the most vulnerable – silencing their voices and taking away their livelihoods. Women often bear the brunt of these impacts and are rarely included in decision making—yet they are at risk of lost livelihoods, violence and sexual harassment, trafficking and prostitution and health risks of water and soil contamination.

In Ghana, we are supporting two organizations that are training village women to become paralegals, who then

teach others their rights under mining laws and Ghana's constitution, negotiation skills, how to analyze an environmental impact assessment, and water quality monitoring.

3 Key Trends:

The key to Oxfam's work is to empower communities and citizens to know and defend their rights – that's why most of our work in-country focuses on local partners and organizations who know the context and are best positioned to fight poverty and inequality. Based on these relationships, here are three key trends we've been watching over the past few years and the workshop underlined their importance as they impact our partners' work:

1. New foreign actors: Non-Western companies—specifically Chinese and Indian—are investing heavily in Africa. Our African teams are unified in saying that we have to engage these companies effectively to reduce poverty
2. New players in the oil and gas boom: There are major natural gas reserves off the coasts of Tanzania andMozambique, and both countries are competing for the first liquefied natural gas processing and exporting facility in southern Africa. Ghana has begun oil production, and Kenya is in the early stages of an oil and gas boom. The possibility of oil and gas deposits under Lake Malawi has heightened tensions between Malawi and its neighbor Tanzania. Independent organizations and experts need to be involved with new producers and discoveries so that forecasts and expectations are realistic – discoveries may offer much-needed revenues for governments, but "boom" forecasts can be widely overstated. When governments can realistically expect to receive the first payments, and how much, year-by-year, they are actually likely to receive, depends upon complex sets of fiscal terms that are rarely disclosed. Communities have the right to be engaged in the pre-approval reality testing processes in order to protect their rights.
3. Closing of civil society space: "The closer we get to real power, the higher the risks for our staff and partners," says Adriano Nuvunga from the Centre for Public Integrity in Mozambique. It is becoming more difficult in many countries for civil society groups to work on these issues. Too often communities and human rights defenders who speak up when rights are at risk are erroneously framed as "anti-development," a political tactic used to silence them. Or worse, governments seek to place legal restrictions on the activities of civil society groups or find other ways to muzzle activists. Once this space is closed it is extremely hard to re-open it – so it's urgent that we prioritize the rights of free speech and protect civil society in restricted countries.

This is an interesting time for Africa – many people are talking about how to end the so-called "resource curse" as part of an "Africa Rising" narrative popular with some observers. New discoveries and demand for fuel and minerals could help reduce poverty and inequality – but only if they do not undermine peoples' rights to know and decide. And that's a big "if."

Alex Blair
Oxfam America

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Engineering food security

Biotech (GM) crops can help feed a global population of 9 billion people by 2050

The case for biotech crops was presented by The Right Honourable Owen Paterson MP (UK), former Secretary of State for Environment, Food and Rural Affairs in the UK (2012-2014), at the annual South African agricultural biotechnology industry / ISAAA (International Service for the Acquisition of Agri-Biotech Applications) media conference in Pretoria on Tuesday 24 February 2015.

Feeding a population of over nine billion people in 2050 is one of the most daunting challenges facing mankind during the remaining years of this century. From the phenomenal global results achieved during the past 19 years, 16 in South Africa, it is evident that biotech (GM) crops can make a major contribution to meet this challenge, said Mr Owen Paterson MP.

Speaking at the annual South African Agricultural Biotechnology Industry / ISAAA media conference in Pretoria, he said currently there are globally 870 million chronically hungry people, the majority in sub-Saharan Africa. Two billion are malnourished. Biotech crops can make a difference to alleviate hunger and poverty.

In the past 18 years (1996-2013), biotech crops produced an additional 441.4 million tons of food, fibre and feed on existing crop land. If it were not for biotech crops, an additional 132 million ha of conventional crops would have been required to produce the same tonnage.

Pictured are from left: Mr Owen Paterson MP, Tepsy Ntseoane, Molatsi Musi, Mrs Bubbi Aphane; Dr Mpumi Obokoh, CEO, AfricaBio; Motlatjo Makaepea, director research technology and development, Department of Agriculture, Gauteng Province, and Alfred Mahlangu, chairperson AFASA (African Farmers' Association of SA), Gauteng. (Photo: Hans Lombard)

Significant multiple benefits offered by biotech crops are not punted by the industry, Paterson continued, but are confirmed by the latest independent global meta analysis of 147 studies in the last 20 years by German economists, Klumper and Qaim 2014.

They concluded that on average GM technology adoption has reduced chemical pesticide use by 37%, increased crop yields by 22% and boosted farmer profits by 68%.

The latest provisional data for 1996 to 2013 showed that crop production value increased by US$133 billion and from 1996-2012 saved 500 million kg active ingredient of pesticide. In 2013 alone, CO2 emissions were reduced by 28 billion kg, equivalent to taking 12 million cars off the road for one year.

During 1996-2013 the cumulative economic benefits for industrial countries amounted to gains of US$65.2 billion and for developing countries US$10.1 billion. In 2014 the global value of biotech crops estimated by Cropnosis was US$ 15.7 billion. The estimated global farm gate revenues of the harvested commercial biotech crop "end product" are more than US$157 billion.

Biotech crops continue to grow at a phenomenal rate. In 2014, according to the ISAAA report, for the 19th consecutive year (16 in South Africa) a record 181.5 million hectares of biotech crops were grown globally by 18 million farmers in 28 countries (27 in 2013) where more than half the world's population (4 billion) live. This was an increase of more than six million ha from 2013. One new country, Bangladesh, came on board with the first Bt brinjal.

Of the 28 countries, 20 were developing and eight developed countries. For the third consecutive year developing countries with 16.5 million poor smallholder farmers, out of the total of 18 million farmers, planted more biotech crops than industrial countries (1.5 million farmers).

Status in Africa

South Africa continues as the leading biotech country in Africa. Biotech crops—maize, soya and cotton—were grown on 2,7 million ha (2.9 million in 2013). The drop was primarily due to late onset of rain, lower commodity prices and adoption rate approaching saturation point. Nearly 86% of maize area is GM, soybeans 92% and cotton 100%. Maize is estimated at 2.5 million ha (2.73 million ha 2013). Biotech maize comprised 2.14 million ha (2.36 million 2013).

Soybean plantings in 2014 increased from 520 000 ha to 600 000 ha, with 92% biotech, with all 552 000 ha being herbicide-tolerant trait (92% and 478 000 ha in 2013). Total cotton area is estimated at 9 000 ha (8 000 ha in 2013).

It is estimated that the economic gain from biotech crops for South Africa for the period 1998 to 2012 was US$1.15 billion. In 2012 alone, the gain was US$218.5 million.

South Africa with its 2.7 million ha ranks eighth in the adoption of GMOs after the USA with 73.1 million ha, Brazil second with 42.2 million ha, Argentina third with 24.3 million ha and India and Canada fourth, both with 11.5 million ha.

According to the report steady and promising progress is being made in Africa. Sudan increased Bt cotton hectarage by nearly 50%, to 90 000 ha. Burkina Faso is the third African country growing Bt cotton.

It is encouraging to note that seven African countries in 2014 continued with field trials with a wide range of biotech crops, i.e. Cameroon, Egypt, Ghana, Kenya, Malawi, Nigeria and Uganda. A major breakthrough in Africa was the launch of the first non-GMO drought-tolerant DroughtTEGOTM maize developed by WEMA (Water Efficient Maize for Africa) in conjunction with the African Agricultural Technology Foundation (AATF) and Monsanto, who donated the technology royalty-free. Successful trials were conducted in South Africa by the Agricultural Research Council.

Trials done in Kenya showed increased yields from 1.8t/ha to 4.5t/ha. The Bt GM drought-tolerant maize is expected to be released in South Africa by 2017. Yields are expected to increase by 20-35% to produce an additional two million MT of maize in drought years to feed an additional 14-21 million people in sub-Saharan Africa.

EU Developments

Five EU countries continued to plant biotech crops on 143 016 ha (148 013 in 2013). Spain led with 131 538 ha of Bt maize, followed by Portugal, Romania, Slovakia and Czechia. In addition, the EU imports 30 million tons of grain, more than 90% being biotech, mainly soybeans, soymeal and maize, from the USA and Latin America.

New Products

New GM products approved for planting in 2014 were Innate potato and alfalfa (lucerne) USA; brinjal, Bangladesh; HT plus IR soybean, Brazil; and drought-tolerant sugar cane, Indonesia. In the pipeline are some 71 new biotech crops listed for commercialisation during the next five years, subject to regulatory approval.

A proliferating network of anti-GMO activists are spending millions of dollars annually to convince the world to reject scientific fact in

favour of activist myth. "This is eco-terrorism. It is witchcraft," emphasised Paterson.

This is often done with NGO and even EU support and in spite of overwhelming scientific evidence of GMO efficacy and safety.

Less than a year ago an organisation closely allied with Greenpeace, MASIPAG, violently attacked and destroyed a field trial of Golden Rice in the Philippines, while Greenpeace openly cheered them.

The UN Environment Programme has spent more than $100 million to train developing countries in risk assessment of GMO crops. No UN money has been spent in assessing GMO benefits.

Last November incoming EU president Jean-Claude Juncker scrapped the important position of EU science adviser, not caring to renew the contract for Anne Glover, professor of cell biology, who had been doing excellent work. The vacancy was not filled.

These are all inhibiting factors that would condemn billions to poverty, hunger and underdevelopment, while the important role that biotech can play in alleviating human suffering and in spurring development are not recognised by individuals and even governments.

One of the ironic consequences is that the EU—at the spearhead of anti-GMO funding and with the well-meaning but misguided generosity of the privileged in Europe and elsewhere—cannot feed itself and has been relegated to a net food importer. The EU has therefore become a drag on the noble imperative of growing enough food to feed everyone and feed them well.

Nearly 805 million people—about one in every nine and the majority of them children—do not have enough to eat. Many of these poor people live in Africa—the continent with vast but underutilised resources of land, fertile soil andsun.

Fortunately the tentacles of the Green Blob—anti-GMO activists—can't reach every positive effort to break the shackles of poverty: in Burkina Faso farmers planting Bt cotton have increased their yields by an average 20% over non-GMO cotton. Pesticide applications were also reduced drastically. Profits increased by at least $87 per hectare.

Africa is in fact showing Europe the way: in 2014 Uganda, Kenya and Nigeria recorded 13 field trials of GM crops, compared to a

mere 12 field trials in the 28 member states of the EU.

Another positive development is the fact that influential people are beginning to realise that the anti-GMO Green Blob is the real danger to human health and prosperity.

Patrick Moore, one of the founders of Greenpeace in the 1970s—when it took account of science and respected human life—has broken ties with his old organisation and now works to expose Greenpeace's actions in especially the developing world

Kenyan-born Calestous Juma, who holds a chair in international development at Harvard in the US, has repeatedly slammed the EU for strong-arming African nations not to grow GM crops and threatening to cut off imports.

The Keystone Alliance, a collaborative effort of industry and conservation groups in the US, has demonstrated that modern agriculture resulted in less water, fertiliser and energy used in major crops, while dramatically lowering the environmental impact. Yields have skyrocketed.

Anti-GMO myths are slammed by a growing awareness of the health, sustainability and financial benefits of modern biotechnology. The facts are:

Every independent scientific institution in the world has found GMOs to be at least as safe as any other food. A simple example: naturally occurring toxins like aflatoxin are most effectively controlled by planting GMO crops engineered with Bt insect resistance. More than 4,5 billion people in the developing world are exposed to these toxins, which can suppress the immune system, retard growth and cause cancer and liver disease.

Farmers are not fooled by biotech companies into paying more for GMO seeds – nearly 100% of all farmers who plant biotech crops choose to continue planting biotech crops.

Going organic would be a disaster. Sustainable intensive agriculture produces more food on less land and therefore protects land for wildlife, recreation and urban development. Nobel Peace Prize Laureate Norman Borlaug (father of the Green Revolution) summarised it as follows: "There are 6,6 billion people on the planet today. With organic farming we could only feed 4 billion of them. Which 2 billion would volunteer to die?"

Biotech has benefits for both farmers and consumers. Healthier soybeans, tomatoes that mimic good cholesterol, non-browning apples, healthier GMO potatoes and peanuts that lack two of the most intense allergens are some examples. Golden Rice, biofortified technology developed 15 years ago by German professors Ingo Potrykus and Pete Beyer, is a miracle grain enhanced with vitamin A producing beta-carotene.

Few people know that the first biotechnology product approved for food was rennet, a safer and more effective enzyme used to make cheese. All the insulin routinely used to keep diabetics alive comes from GMO bacteria. Previously one major industrial insulin processor had to process 11 tons of pig pancreases every day.

The challenge is to expose the anti-GMO activists' organised, fanatical antagonism to progress and science, Paterson said.

For more information contact Dr Wynand van der Walt, telephone 012 347 6334 or 083 468 3471.

Syngenta – your committed partner in a time of agricultural distress

Currently South Africa is experiencing the worst generalised drought since 1992, one that could wipe out many farming livelihoods, damage SA's rural economy and reverse nearly all the inflation benefits bestowed by the low oil price. "It's expected that the failure of SA's summer crop to be even more severe than in 2007. " says Antonie Delport, Managing Director, Syngenta South Africa.

The reality of this situation is that major crop losses are going to have a dramatic impact on commodity prices. Commercial growers therefore need to be prepared, and not just for the next harvest, but until 2016, and even beyond.

Delport says at the end of the day it's all about productivity and optimal yield management. "Now more than ever before the agriculture sector must stand together as an industry. We must be open minded in finding solutions and what the best practises are. We've been through this before, and by standing together we can get through it again. "

A multinational company such as Syngenta is aware that the future of agriculture should be shaped rather than left to chance and that's why it launched its Grain Academy leadership programme in 2013. Delport says, "This is the way forward, equipping our young growers with skills to manage diversity and lead the industry is vital in optimising our agricultural productivity, especially in challenging times as we're experiencing now. The future of sustainable production lies in our competitiveness and it can only be improved with ongoing leadership and entrepreneurial capacity development."

In times of uncertainty there will always be opportunities to alleviate the situation – there will always be a way out, or someone well-resourced to partner with. Now is the time for growers to align themselves with an agricultural expert with international strength, but with local relevance, that offer full support, have the necessary resources, expert knowledge, technology, and the right products to ensure optimal yield management and crop protection.

To further support local commercial growers, Syngenta has the expertise and resources to deploy technical field experts to do trials on farmers' lands to evaluate and analyse what their specific requirements are for optimal yield management. With these trials, Syngenta is able to know exactly what farmers do, what their results are and what they need. With their vast global reach, Syngenta also has the right partnerships and employed experts to address our local farmers - for example, the recently held application technology workshops on how to apply crop protection, aligned with best global practices to ensure profitability.

Syngenta's Good Growth Plan holds a vital key in this time of distress. It has specific, ambitious and measurable targets which focus on boosting resource efficiency, rejuvenating ecosystems and strengthening rural communities.

"We have always been acutely aware that our business can only grow if we ensure that farming is carried out in a sustainable way. We continuously seek to bring this awareness to life through our focus on land, technology and people. We now need to take our contribution to a new level and this is the driving force behind the commitments of the Good Growth Plan," says Delport.

"We live in a country that strives to be united and prosper in unity. Yet, without food no nation can be at peace or prosper. The fundamental importance of agriculture is often overlooked. The independent nature of human society today requires a re-thinking of our attitudes and approaches to food production. Our agricultural crisis is a nation's crisis. Food and water is our only means of survival. Let's be grateful and treasure what we have, but most of all let's be progressive and united in our efforts to protect and make the best of what nature provides us. This can only happen if we keep on building the right long-term partnerships with a common goal to the benefit of our growers and our country," concludes Delport.

About Syngenta

Syngenta is one of the world's leading companies with more than 28,000 employees in over 90 countries dedicated to our purpose: Bringing plant potential to life. Through world-class science, global reach and commitment to our customers we help to increase crop productivity, protect the environment and improve health and quality of life. For more information about us please go to www.syngenta.co.za.

syngenta®

the good growth plan

Beth Wangari is one of 450 million smallholders worldwide, who produce over 25% of the world's food. As one of the world's leading agricultural companies, we're committed to empowering smallholders like Beth, so they can increase their yields sustainably and become more profitable. But it doesn't stop there. In The Good Growth Plan, we have set out six measurable ways in which we'll help farmers to overcome major farming challenges by 2020. To learn more about The Good Growth Plan, our six commitments and the progress we are making, visit www.goodgrowthplan.com

The complex soil mantle of South Africa

It pays to know the composition of your local soil

According to Dr Garry Paterson, Senior Researcher at the Agricultural Research Council - Institute for Soil, Climate and Water (ARC-ISCW), it is in the interest of all farmers, whether commercial or emerging, to know what soils occur on their land and where they are found.

The soils of South Africa have a wide range in properties. Texture ranges from light sands to heavy, swelling clays; leaching status ranges from humus-rich, highly leached soils to bleached, virtually unweathered semi-desert soils; while natural drainage varies not only by climatic environment and terrain position, but also seasonally. However, the majority of the soils that comprise the South African soil mantle occur where they do and appear as they do as a result of one or more soil-forming factors, the most important of which are parent material, climate and topography. It is the investigation and understanding of these factors and their spatial variation which leads to our better understanding of the "finished product"—the soil.

There are four steps involved in the characterising of soil, which occur in the following order:

1) soil description, whereby all the relevant soil features are recorded;

2) soil classification, which uses these features and places each soil in a predetermined unit with a name and inferred characteristics;

3) soil mapping, where the soils which are classified are mapped (and often sampled) in order to establish their geographic distribution; and

4) soil interpretation, where basic soil maps are interpreted to determine for what purpose a particular soil can best be used, or, just as important, what it should not be used for.

Soil Description

This is the first stage of information gathering and is concerned with all soil factors which will have an influence on the characteristics of a particular soil. Important factors include soil texture (the ratio of fine, medium and coarse-grained sand, silt and clay present), soil structure (the arrangement and size of the soil particles), soil depth (to any layer which is limiting in terms of root and/or water penetration) and natural drainage (the ease by which water moves through the soil or is retained by it). Other properties that are recorded include soil colour, mottling, consistence, occurrence of lime, gravel or other concretions and the abruptness of the boundary between the various soil horizons (layers).

Soil Classification

Once all the relevant features have been collected, the soil is placed in a particular class within a soil classification system. The main aims of a soil classification system should be to convey an appreciation and understanding of the soils of a country and to enable the soils to be identified, differentiated and named in a consistent manner that will accommodate the widest possible group of users. The South African soil classification system meets these criteria. In addition, knowledge on soils can be effectively communicated using a well-founded classification system, which can be expanded and adapted over time as the need arises.

The first soil classification system in South Africa consisted of broad groupings and

provided a broad perspective at atlas scale. However, the need soon arose to find a system that would allow the soils to be classified easily, in more detail and relevant to South African conditions. Available systems were studied, notably from America, but were rejected as not being the complete answer to this specifically South African problem. Consequently, throughout the 1960s and 1970s, a series of investigations were carried out, such as in the Tugela Basin and sugar belt in Natal, culminating in the publication in 1977 of the Binomial System—the well-known "red book"—under the auspices of the then Soil and Irrigation Research Institute (SIRI). This system was relevant to South African conditions, comparatively easy to use and divided the soils into two levels, namely 41 soil forms (the higher level) and 504 soil series (the lower level).

Then in 1991 SIRI published the Taxonomic System—or "blue book"—as one of the memoirs on the natural resources of South Africa. While following the same basic format as the 1977 edition, it expanded the number of soil forms to 73, changed the soil series to soil families and removed the soil texture sub-divisions, which were seen as often artificially separating soils of the same soil body. In the 1991 edition the concept of soil series, based on topsoil texture, is left to the individual soil classifier to identify and define in particular localities.

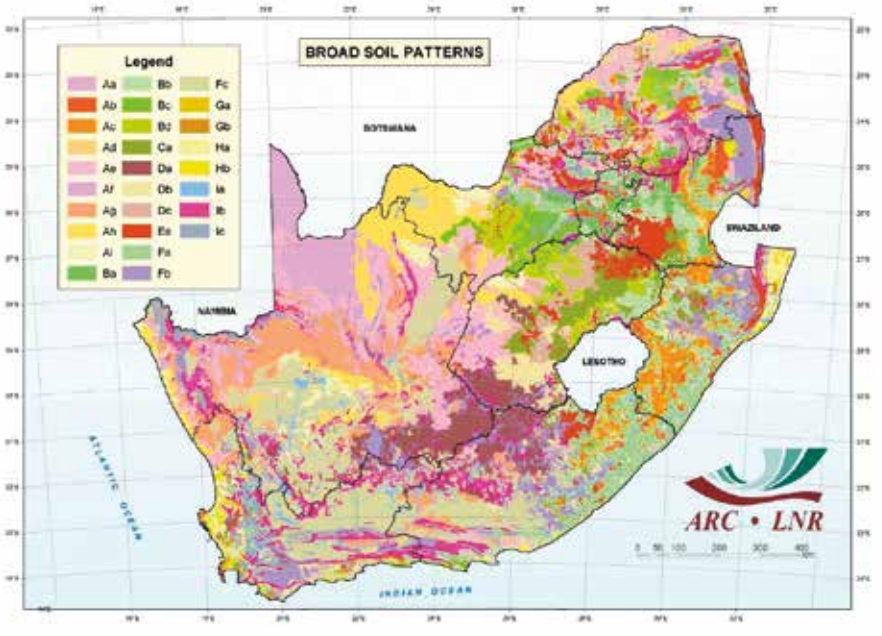

Figure 1: Broad soil patterns map of South Africa.

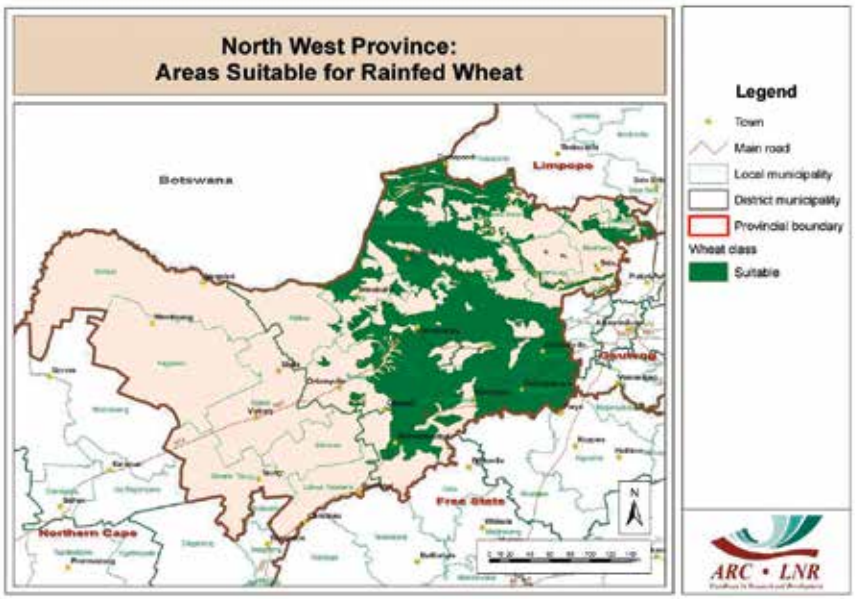

Figure 2: Map of the North West Province indicating areas suitable for rainfed wheat.

Soil Mapping

Just as it is important to know the properties of a soil and be able to accommodate it in a classification system, so it is vital to identify the geographical range of a particular soil or to determine where different soils occur within a specific area. This could vary from a province or municipality down to the most important agricultural production unit, namely the farm. All farmers should be aware of the types of soils that occur on their land and where they are found. This information is provided by means of a soil map. Soil maps vary in scale from detailed (approximately 1:10 000) for irrigable soils along a river, for example, to reconnaissance (1:1 000 000 or more), showing the soils at national or provincial level. Soil mapping in South Africa has a long history and the ARC-ISCW has a stock of over 12 000 maps which can be consulted or interpreted.

At national scale, a soil map for South Africa was produced in the early 1970s, but there was a growing awareness of the need for a countrywide inventory of the most important factors governing agricultural production, namely climate, soil and terrain. Thus the land type survey of South Africa was undertaken by SIRI (now ARC-ISCW), comprising a series of maps and memoirs, published at 1:250 000 scale. For many years these maps were only available as paper copies, but with the recent incorporation of the data into a geographical information system (GIS) it has become much easier to observe the soil patterns of South Africa at a national level.

The map in Figure 1 shows the distribution of the various broad soil patterns in South Africa. The wide range of soil types, as well

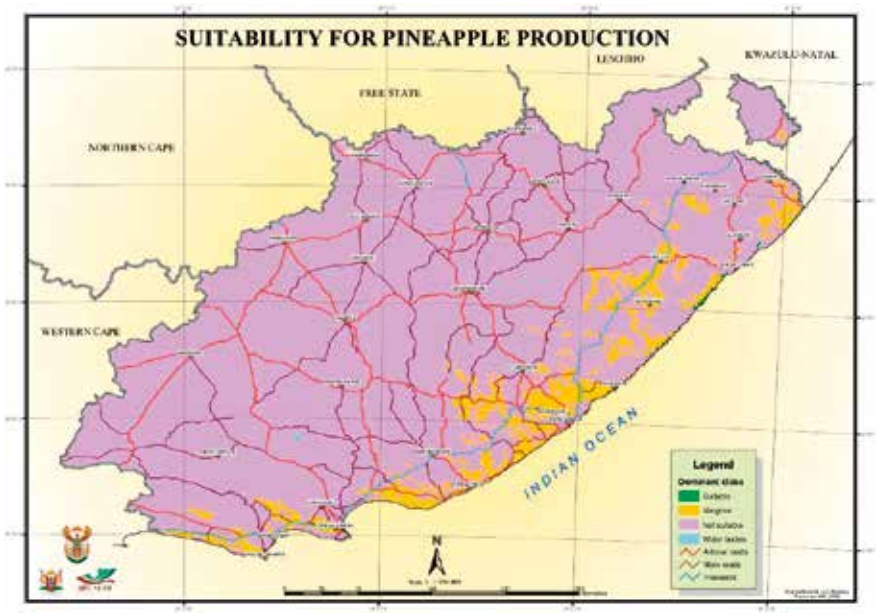

Figure 3: Map of the Eastern Cape Province indicating areas suitable for pineapple production.

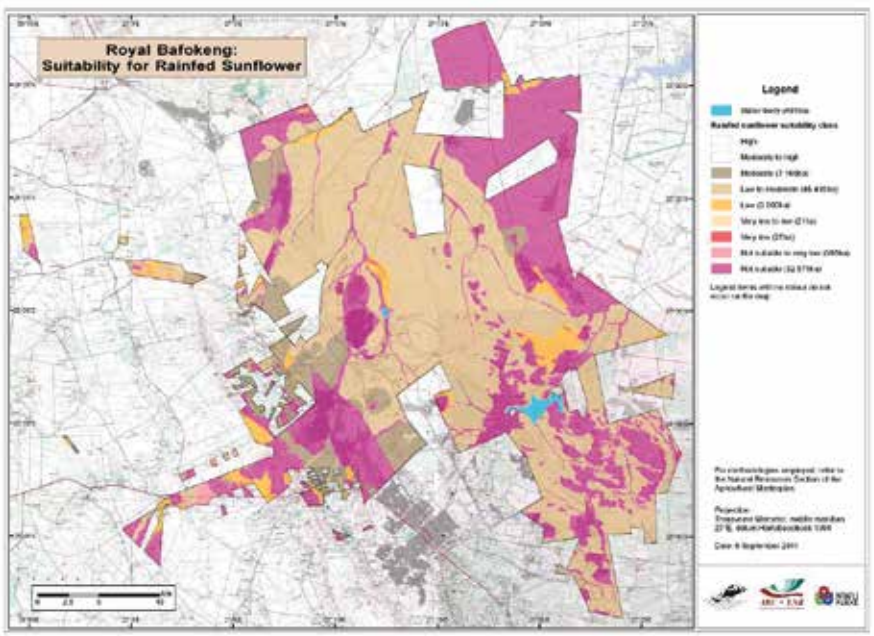

Figure 4: Map of the Royal Bafokeng Nation indicating areas suitable for rainfed sunflower.

as climatic regimes, means that the country is blessed with different conditions that lend themselves to the production of a variety of crops. On the map the strong correlation between soil and geology stands out, such as the Kalahari sands of the north-west, the rocky soils of the Cape fold mountain belt and the granitic soils of the Mpumalanga lowveld. However, when one attempts to extrapolate geological factors over a wide climatic range, such as the Beaufort sediments, then climate begins to play the dominant role. The range of annual rainfall across South Africa, from 100-200 mm in the west to over 2 000 mm in the eastern mountains, means that the weathering environment varies widely. The more leached soils (meso- or dystrophic) are confined to the wetter areas, producing soils which are acidic, the bases having been leached out. Similarly, the topsoils which are rich in organic matter correlate very well with climatic conditions.

Soil Interpretation

Many interpretations can be made from a soil map and a wide variety have already been carried out by the ARC-ISCW, using either existing soil maps or pedological expertise to produce new ones. For example, sensitivity to wind erosion can be seen to tie in closely with topsoil clay content and sand grade, while crop production potential combines soil and climate to show how small the area of high potential soils in South Africa actually is. The interpretations can be made on any scale of soil map, from detailed irrigation maps and soil maps for developing agriculture to larger areas, such as municipalities or river basins.

Several projects have produced suitability maps for specific crops (see examples in Figures 2- 4). Required soil parameters such as depth, texture, pH and drainage were studied and combined with climate to produce the final suitability map. These products are constantly in demand by provinces and municipalities as part of their planning and decision-making process concerning the natural resources. Examples include the North West, Free State and Eastern Cape provinces as well as the Royal Bafokeng Nation in North West and the Molemole municipality in Limpopo.

Mining activity is another field where soil maps are interpreted to supply baseline data for later rehabilitation. With the ever-increasing demand for coal, which occurs largely beneath highly productive agricultural soils in Mpumalanga, this is a vital step in the process of minimising damage to the environment.

Good quality soils data and subsequent base maps allow for a wide range of interpretations at different scales. Given the complex nature of the soils of South Africa, accurate soil maps and proper interpretations are vital if this precious resource is to be maintained. The ARC-ISCW is committed to playing its full part in this process.

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From employee to major employer

KZN cane-cutting business set to grow turnover by R10 million per annum

Khumbulani Mthethwa, owner of Sans Souci Harvesters in KwaZulu-Natal, spent 11 years in the industry as an employee before starting his own business in 2007. Within eight years, he became one of the sector's most significant employers, managing 450 seasonal workers.

He now transfers skills to emerging farmers via the Tongaat Hulett & Simamisa project that encourages people to farm sugarcane on communal land, with Tongaat Hulett as the contracted off-taker. He has also bought his own sugar farm, at a cost of R6.3 million.

Although he was involved in farm management under his employer and mentor at the time, Mr Mthethwa says that his first few years running his own business were tough: "When you are running someone else's operation, you can always refer a decision to your boss. When the buck stops with you, it is a lot more challenging."

However, Mr Mthethwa has been able to call on the advice of industry players, including the Sugar Association of South Africa (SASA), whose courses have enabled him to get to grips with regulatory issues, such as VAT and other forms of tax as well cash flow management.

"A lot of start-up businesses like mine go under in less than a year because the owners simply do not know that, for instance, the interest burden on unpaid taxes can cripple you," he says. "New entrepreneurs also do not know that a lack of cash in the hand makes it impossible to pay the casual workers who make up a seasonal workforce, as in my case. You have to plan very carefully around the way your industry works to make sure that you have cash to cover the periods when there is no revenue."

Sugarcane can be harvested only in the dry season, which starts mid-April and finishes end of November. As Mr Mthethwa points out, he only has seven months in which to earn enough income to cover his annual expenses.

These include his permanent staff of managers and administrators, and the costs of running two trucks and four bakkies.

"I have been fortunate to grow my customer base fairly quickly, more than doubling the amount of cane I cut from the 80 000 tons at which I started. At the same time, my growth has meant being able to employ more contract and permanent staff. Harvesting sugarcane is labour intensive, because of the hilly terrain. Large harvesters simply cannot get into the lands."

Considerable business skill is needed not just to run a cane harvesting business, but to grow it. It is not simply a matter of sending people into the fields with cutting equipment.

"Maintaining the balance between the right number of cutters and the amount of sugar we cut is critical to stay afloat as a business," says Mr Mthethwa. "The unpredictability of the weather makes maintaining that balance even more difficult. We might plan for 200 000 tons only to be confronted by drought a few months down the line and end up with a much smaller volume of cane.

"That is when you need the support of your bankers and when your bankers need to understand the ups and downs of agriculture in general and the cane industry in particular."

"Standard Bank has been my banker from the outset, financing my vehicles and assisting me with the purchase of my first farm. My years of experience in the industry before starting Sans Souci Harvesters (which currently cuts on contract some 200 000 tons of sugarcane per year) and the five year contract with which I started the business gave them confidence in my potential for success. My consistent growth since then has consolidated their view of me as a good financial risk."

Khumbulani Mthethwa

Mr Mthethwa plans to extend his company's turnover by R10 million a year by acquiring the vehicles and tractors needed to transport the cane he cuts to the processing plants.

Diale Mokgojwa, Senior Manager, Enterprise Development at Standard Bank says that Mr Mthethwa's expansion plan exemplifies a diversification approach that the bank recommends to all primary producers and agribusinesses. "You make your operation much more sustainable by participating up and downstream in the value chain. And, as with Mr Mthethwa's plans, if your diversification is an organic, natural extension of your existing activities, you can spread your current costs over a larger revenue stream, making yourself more profitable with less effort."

"We have been delighted to see Mr Mthethwa move fairly quickly from an exclusively harvesting focus to also growing his own cane and, now, becoming involved in the logistics of the industry. He is a great role model for the industry and for agriculture as a whole," concludes Mr Mokgojwa.

Another love story... in Cape Town

Sol d'Oro Emisfero Sud 2015 to be held in South Africa

Sol d'Oro is regarded as the most prestigious olive oil competition, held anually in February in Verona, Italy, under the patronage of the Italian Department of Agriculture and the European Commission.

The competition aims to promote the world's best extra virgin olive oils and encourage improvements in production quality.The tasting is performed blind by an international panel of experts; the categories are Extra Virgin, Single Variety, and Organic. Extra Virgin is further divided into categories: delicate, medium fruity and intense fruity.

Because of the advantage Northern Hemisphere olive producers have owing to the closeness of the harvesting, picking and pressing to the time of year when the show is held, it was decided that a second competition with identical rules for entry will be held, more fairly timed to accommodate the harvesting pattern and picking cycles of the Southern Hemisphere. "In recent years, olive oils from the Southern Hemisphere have begun to emerge thanks to their excellent quality, " said Ettore Riello, President of Veronafiere, "but their potential could really only be expressed to the full by being assessed at a time more appropriate to their production cycle, which is six months ahead of the Northern Hemisphere."

The first instalment of the Sol d'Oro Southern Hemisphere was held in Chile in 2014 and the South African producers came away with flying colors—Willow Creek (Worcester) won the medium category, with Morgenster, Prince Albert

olives and Tokjara receiving highly recommended diplomas in the same category. So impressed were the judges that it was decided to hold the 2015 Southern Hemisphere competition in Cape Town.

At a glittering gala reception held at the Palazzo della Guardia in Verona, in the presence of South Africa's Consul General in Milan, Sol Molobi, the Chairman of the Chilean Olive Oil Association related how the event had been received in Chile and handed the baton to South Africa while waving the South African flag. Mr Molobi expressed the hope that the olive oil conoscenti of the world would take note of South Africa's expertise and take home the tale of South Africa's success. The Fair of Verona, the organiser of Sol d'Oro, published a full-page announcement of the competition in South Africa on the cover of the SOL catalogue.

The 2015 competition will take place in Cape Town in the first half of September. Entries in the extra virgin and organic categories will be judged by a panel of eight international experts; the tasting will be done blind, under the watchful eye of a South African referee. South African olive oils can expect to compete against products from Chile, Argentina, Uruguay, Brazil, Australia and New Zealand. This initiative will no doubt promote consumption of quality olive oil and increase cultural exchanges with the worldwide olive sector.

The business opportunities that these events can bestow on local producers extend not only to olives and olive oil—alignment with the agro-industrial sector in Italy provides a huge potential for artisanal and general agriculture, and the wine and meat production industries. The first step in this direction was already taken when Gerrit van Rensburg, Provincial Minister of Agriculture for the Western Cape Provence, signed a Memorandum of Understanding with the fair or Verona for future collaboration in the promotion of South African agricultural products in Italy and the EU. This, together with the Sol d'Oro Emisfero Sud 2015, will undoubtedly enhance South Africa's reputation as a quality import grade producer.

"Sol d'Oro Southern Hemisphere allows the olive oils made in these latitudes to achieve international recognition with the quality stamp that only Sol d'Oro can offer," saids José Mingo, Chairman of Panel Cata Chile, orgranizer of Sol d'Oro Southern Hemisphere 2014.

Carmen Petre

Sponsorship bears 'fruit'

Air Products/Inmed Aquaponics project awards to first group of students at Carel de Wet High School

Air Products South Africa has once again demonstrated its ongoing support of young agriculture students with the sponsorship of Inmed's aquaponics unit at Carel de Wet High School in Vanderbijlpark, close to the company's flagship production facility.

Grade 10 pupil, Matshepo Maduna from Carel De Wet High, who received top honours, is presented with her award by Barry Little, Project Director at Air Products South Africa.

Inmed, a global children's organisation, launched the unit in August 2013 in partnership with Air Products South Africa, in order to introduce students to aquaponics, an agricultural technique which combines aquaculture and soilless crop growing. The aquaponics project has generated much interest overall among students taking agriculture as a school subject.

The first group of students, Grade 10 and 11 learners at the school, who are studying agriculture as a subject, were recently honoured at an awards ceremony. Of the sixteen students who took part, twelve received graduation certificates while the remainder received participation certificates. Grade 10 pupil, Matshepo Maduna, got top honours with her impressive 95% mark.

"It has been an honour to be involved in this exciting initiative, which teaches young people an innovative and environmentally-friendly method of farming to help combat hunger among communities in our country," says Josua le Roux, General Manager: Central Support at Air Products South Africa.

The aquaponics training programme includes a combination of 'hands-on', practical experience at the school's farming facility, plus a theoretical component. Air Products South Africa's sponsorship has paid for the training and the development of course material. In addition, Air Products donated a gift voucher for each student who achieved a pass mark of 80% and above; and a prize for the top student.

"As a company, we feel strongly that the key to a healthy and sustainable future lies in developing our youth, thereby allowing them to become resourceful and self-reliant," le Roux concludes.

Air Products South Africa (Pty) Limited manufactures, supplies and distributes a diverse portfolio of atmospheric gases, specialty gases, performance materials, equipment and services to the Southern African region.

Air Products touches the lives of consumers in positive ways every day, and serves customers across a wide range of industries from food and beverage, mining and petrochemicals, primary metal and steel manufacturers, chemical applications, welding and cutting applications to laboratory applications.

Founded in 1969, Air Products South Africa has built a reputation for its innovative culture, operational excellence and commitment to safety, quality and the environment. In addition the company aims to continue its growth and market leadership position in the Southern African region.

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www.airproducts.co.za

Fish farming teems with opportunity

Aquaculture presents South Africa with a more sustainable way of harvesting fish

It was a cool and windy spring afternoon in East London when the executive director of the Oceanwise fish farm, Liam Ryan, met Industrial Development Corporation (IDC) officials outside his office. As he led them to a nearby tank facility, his white overcoat flapped relentlessly in the gust coming in from the shores of Leaches Bay.

"We are farming kabeljou on land," he yelled into the wind. "It's been green-listed by WWF-SASSI [Worldwide Fund for Nature-Southern African Sustainable Seafood Initiative] because our impact on the ocean and the species is minimal. We only used a handful of parent kob from the sea. Also, the sea water is used sparingly; 90% of it is recycled."

October is National Marine Month and one of the main focuses during the month is on finding more sustainable ways of harvesting seafood. Ryan said aquaculture was that solution. It is, perhaps, South Africa's cure to over-exploitation of its waters.

Oceanwise is located in the East London Industrial Development Zone and is a pioneer in South African aquaculture. It specialises in harvesting kabeljou, otherwise known as kob, and supplies major retailers such as Pick n Pay, Woolworths and Food Lovers Market. Oceanwise's kabeljou is green-listed on the SASSI list, which means it is legal to buy. Wild caught kabeljou are protected and the WWF-SA discourages consumers from buying them. All of the 900 000 fish at the farm are descendants of 20 parent kob that came from the Sunday's River area in Eastern Cape, just 40 kilometres east of Port Elizabeth.

For each year of its pilot research, between 2004 and 2008, Oceanwise produced 400 000 fingerlings from those parents. Not only did it prove the venture would be profitable, but it also proved that aquaculture would significantly reduce the impact on marine life along South Africa's shores.

Oceanwise started farming in 2009. It was a slow process at first, with its first fish only reaching the market in 2011. "It had to be built up because it takes about five months to get to about 150 grams and about a year for full growth," Ryan explained. Five years later, the farm produces as much as 25 tonnes of kabeljou for consumption every month.

Innovative fish farming for less privileged

A Cape Town company is using fish farming to feed and empower the less privileged by providing them with fully functional fish farms made out of shipping containers.

Alan Fleming, director of The Business Place, an entrepreneur development and assistance organisation in Philippi, Cape Town, designed the farm last year and describes it as "profitable, affordable, repeatable, transportable, lockable and stackable". He said it was designed to provide a cash-poor collective or poorer urban families with an income and high quality protein right where they lived at an affordable price. The space required for the container was minimal, and it could operate on energy obtained from solar power.

"I'm working with taking the operational expense of electricity out of the equation, and dumping into it a capital expenditure item of renewable energy. This adds R200 000 to the price. If it gives four people a permanent livelihood, then that means about R80 000 per livelihood."

Fleming said the farm could be stocked with tilapia, a hardy fish that feeds on phytoplankton, a microscopic plant.

Aquaculture new to South Africa

Aquaculture was still in its infancy in South Africa, said Ryan. Historically, the country's

long coastline meant it had access to large quantities of fish so there was no need for fish farming. However, with the coastline becoming increasingly exposed, the storms that repel fishermen and the demand for seafood rising, aquaculture has become more attractive.

It is a relatively small industry in South Africa and in the past the government did not give it much attention. But in 2007, it began to take notice of the potential of the industry. Because of a growing shortage of traditionally harvested fish such as hake, the government invested R100-million in aquaculture projects in all four of the country's coastal provinces.

Government again showed its dedication to aquaculture when President Jacob Zuma launched Operation Phakisa in July this year. It will look to unlock the growth potential of the country's coastline, which is in line with the National Development Plan.

The operation will implement policies and programmes faster and more effectively. As a result, Zuma said it can unlock the ocean's potential to contribute up to R177-billion to the country's GDP and create as many as one-million direct jobs.

Aquaculture is a big part of that plan. According to Zuma, government recognises the industry as a way of contributing to food security since it has shown strong growth of 6.5% per year. Operation Phakisa will look to grow all segments of the aquaculture industry, especially by creating jobs within processing and marketing.

Even with this investment, however, South Africa lags way behind the rest of the world. According to experts Cécile Brugère and Neil Ridler, the world's aquaculture sector has grown at an annual rate of 9.2% since 1973, and is projected to grow at 4.5% until 2030. Global returns for commercial fish farming recorded by the United Nation's Food and Agriculture Organisation in 2008 totalled 33.8-million tons, worth about US$60-billion (approximately R667-billion).

Despite aquaculture's advantages, the wild capture sector remains fishery's biggest contributor. According to the WWF-SA, wild capture fisheries include commercial, recreational and subsistence fisheries. It estimated about 500 000 people fished recreationally in South Africa, with the value of that industry placed around R3-billion in 2011. Also, commercially caught line fish was about 16 000 tons, which placed huge pressure on those species. The conservation group said 23% of South Africa's key commercial fish resources were over-exploited.

A regulated industry

Since the fish at Oceanwise were harvested in tanks there was no risk of escapees, said Ryan. And because they are in a protected environment, they have an advantage over those in the wild that are vulnerable to predators. Oxygen is supplemented, which means only the purest oxygen is generated. They feed on a formulated pellet that is based on natural proteins and minerals that the kabeljou need.

Since the aquaculture industry is regulated, the fish at Oceanwise have to be tagged. This serves various purposes, one of them being that a fish can be traced back to the tank from where it came. Tags can also help identify males from females.

Under government regulations, fish have to be protected from intermingling with similar breeds from other regions. Therefore, eggs and fingerlings from East London have to be harvested in the city. "When we supply fish to the market there is a code on every box and delivery note that says it comes from this facility," said Ryan. "So the industry is quite protected and regulated."

The University of Stellenbosch is also helping Oceanwise by banking fish DNA. This can help to determine from which parent a fish comes.

New careers and jobs

Though aquaculture is punted as the future of fishery, Ryan claims that it is still considered high risk in terms of the cost that goes into setting up a farm. The IDC's funding of Oceanwise amounted to R22-million. But the social benefits of setting up Oceanwise in East London outweigh the costs of running the facility. Not only has the farm reduced human impact on the seas, but it has also created jobs for those desperate for an income.

Most of Oceanwise's 115 workers came from impoverished backgrounds and entered the company unskilled. Some of them were school leavers whose hope for the future was quickly diminishing. "Most of these young people joined Oceanwise as unskilled casual labour," said Ryan. "They were brought in to support the construction and early development of Oceanwise's facilities."

But their interest in learning about aquaculture, water sciences and kabeljou over the past five years has allowed the workers to carve aquaculture careers for themselves. "This is development at its best, with a life-changing impact on these young people and their families' lives. . . This type of personal growth opportunity for young individuals is rare. Since it is a new industry with a need for new specialist skills, there is a greater than normal opportunity for internal promotion and career development."

Shamin Chibba
mediaclubsouthafrica.com

KÄRCHER

makes a difference

Competition

Kärcher high pressure cleaner giveaway

Farmers come under pressure in so many ways, so to ease the load Kärcher is giving away one of its world-leading high pressure cleaners. To enter the competition, simply email the answers to the following questions to greg@capemedia.co.za:

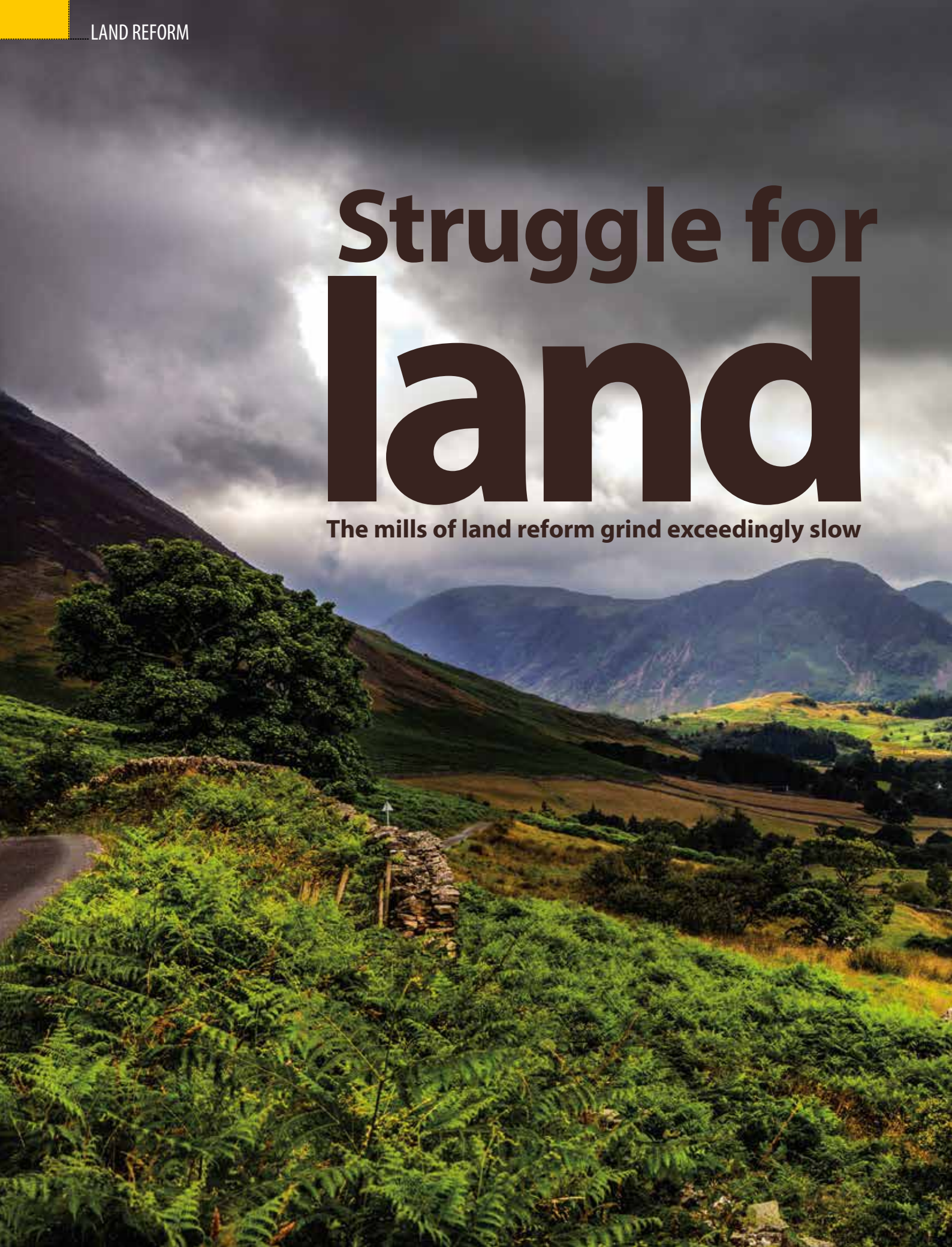
- **What is the SI unit for pressure?**
- **What is another word for "high blood pressure"?**
- **Who sang the hit song Under Pressure?**

"Kärcher high-pressure cleaners fulfill every demand and are used in the widest variety of fields. In agriculture, crafts and trades, industry, or municipalities – we are in our element wherever large areas must be cleaned daily"

www.karcher.co.za

Struggle for land

The mills of land reform grind exceedingly slow



A Land Claims Court judge could opt to jail the Director-General of the Department of Rural Development and Land Reform, Mdu Shabane, for contempt of court. Such a decision, however, may still be too late for Zabalaza Mshengu, who turned 101 in January, and has waited 14 years for his claim to land as a labour tenant to be processed. The case also raises uncomfortable questions about how far government will go to push judicial tolerance in order to avoid implementing constitutional rights.

Mshengu, whose first name Zabalaza means Struggle, had reason to hope in 1996 that his struggle to live out the remainder of his life on the land where he was born and had worked all his life had come to an end. A new law, the Land Reform (Labour Tenants) Act, had just been passed. The law derived directly from the Constitution's Bill of Rights, which guarantees secure tenure to people deprived of it in terms of racially discriminatory laws. The act addressed the plight of labour tenants who, like Mshengu, had clung to land and the remnants of independent farming by working for land owners without receiving wages despite attempts by successive apartheid laws to destroy this way of life. It provided for labour tenants to claim ownership of the land they and their fathers had lived on and used. By the closing date for the lodging of claims in March 2001, about 19,000 labour tenants, including Mshengu, had applied for land ownership.

But, 14 years later, on 31 March 2015, the Department had not only failed to process many of these claims, it had, true to form, ignored yet another order of the Land Claims Court. The story began in 2011 when four labour tenant claimants who live on the KwaZulu-Natal private boys' school, Hilton College Estate approached the Association for Rural Advancement (AFRA), a land rights NGO in Pietermaritzburg, for help to compel the Department to process their claim. It constitutes a case of the most blatant disregard for the courts and the law. A report on the case by AFRA's director, Mike Cowling, a former professor of law, states: "The bottom line is that the Department has comprehensively and systematically failed to carry out its basic mandate in respect of labour tenant applications."

When the Hilton College claimants approached AFRA, AFRA realized that their situation was no different from that of thousands of other labour tenant claimants across the country, and decided to bring a class action against the Department on behalf of all labour tenants in the form of a structural interdict. To this end, it approached the Land Claims Court in 2013 to compel the Department to explain how it intended to process the claims. The Department failed to respond within the time set by the court rules, and applied for an extension, which it subsequently failed to comply with. AFRA and the Hilton College claimants, represented by the Legal Resources Centre (LRC), then advised the Department to explain this failure to adhere to the time frames. Again the Department failed to comply and the matter was set down for the unopposed roll in November 2013.

A week before the court date, the Department filed an affidavit explaining why it had been late and applied at the same time for condonation. AFRA and the claimants opposed the condonation and the Court ordered the Department to respond to the objection by a certain date, failing which the Director-General would have to explain why he should not be held in contempt of Court. Once again, the Department failed to comply, and instead wrote a letter to say it would file its response a month later. Again AFRA and the claimants objected, and asked that the Department comply with the Court order. Again it failed, and the matter was again set down for hearing. A week before the hearing, the Department filed its response for why the Court should condone its failure to adhere to time frames.

In an attempt to bring the focus back to the central concern of the Department's failure to implement labour tenant land claims, AFRA and the claimants agreed to drop the legal issues relating to adherence to court rules. A court date was thus secured for September 2014 to hear the case relating to the labour tenant land claims. Prior to the hearing, a number of high-ranking Departmental officials contacted AFRA to settle the Hilton College claims out of court. At various meetings, the officials agreed to provide AFRA with a list of all claimants, the status of the claims and an action plan on how it intended to process all labour tenant claims. The information was never provided, and AFRA and the Hilton College applicants decided the only possible remedy would be once again to secure the help of the Court.

On 19 September, 2014, the application was heard in the Land Claims Court in Randburg, and the Department agreed that AFRA and the claimants' request for information on how labour tenant claims would be processed should be made an order of the court. The Department agreed to provide the information by 31 March, 2015, exactly 14 years after the closing date for the lodging of land claims in terms of the Act.

But, once again, the Department failed to provide the information. Again, the LRC, on behalf of AFRA and the claimants, has issued a notice requesting the information or an explanation why the Director General should not again be held in contempt of court. In terms of the Court rules, the Department had until 10 April (Friday) to respond, or be at risk of contempt with the option that the Judge could order the Director General to face a jail sentence. But yet again on Friday the department failed to respond. Technically the Director General is now in contempt of court. For AFRA, and the 19,000 labour tenants whose land claims have not been dealt with, the wait continues. Mshengu, understating his exhausted patience, says simply: "Land affairs is taking far too long to settle my claim."

But there are other costs, perhaps more important than the land claims of Mshengu and other labour tenants: if the Department, as an arm of Government, can consistently and systematically disregard the rules and orders of a court that has the same status as a High Court, how can ordinary South Africans be certain that their constitutional rights will be protected if government chooses to disregard them?

Donna Hornby
Researcher: PLAAS
This article first appeared on the GroundUp website.

Horns of africa

Farming could save the Big Five from dropping to Four

Twenty one years ago John Hume bought a farm in Mpumalanga with the idea of retiring. He bought some animals, which included, among other things, five Rhino.

Today he has over 900. He'd have more if he hadn't lost 12 to poaching over the past couple of years. Hume isn't as affected by this scourge as the government parks and other private game farms, however. And he says it's the result of a self-fulfilling prophecy.

To combat the fact that Rhino populations were being steadily wiped out (and demand for Rhino horn being created) during the 60s, 70s and 80s, an internal moratorium was put in place in 2009, banning the sale of Rhino horn in South Africa. Before that, farmers were able the satisfy at least some of the demand from the East for the rare product by de-horning their animals or selling the horns of deceased Rhino.

Today the only way the demand can be met is for poaching to commence. Or as he suggests, to legalise the trade in Rhino horn.

"The demand is still there," he says, "and by stopping the supply, we've failed to satisfy it.

"If it was legalised and ethically sourced from those that don't kill Rhinos, that demand could be met."

Hume says the solution lies in de horning the animals, a painless process (as the horn is cut off above the quick, like a toenail) that takes under 20 minutes per animal. The horns furthermore re-grow, at a rate of 10cm per year. Extrapolate that over the life-time of the animal and you're talking about a yield of 40kg of horn per female Rhino and

between 60kg and 80kg per male over a 45 year period.

"I furthermore believe that private sector farmers have the resources to protect the animals far better than the public sector. We just need to make it viable for them to do so," he says.

"My passion is to save Rhinos," he continues, "and in order to do that, we must increase the rate of breeding and decrease the rate of killing. We must furthermore make it attractive to communities to breed and protect Rhino. And what better way to do that than create a financial incentive for them to do so?"

Currently, Hume says that rural communities currently only supply a fertile ground for the recruitment of poachers. "Those communities could be a fertile ground for farming. They have done extremely well with livestock in the past. And they could generate a massive income from this.

He points to a great case study for this, the South American vicuña (Vicugna vicugna)—a small llama-like anima—whose pelt was hugely sought after for Italian garments. The animal was nearly hunted to extinction (the population was as low as 6000 worldwide at one stage), but the moment communities learned to shear the wool from the animal and could derive an income from that, the population started bouncing back.

Today, 35 years after animal was close to extinction, the population of vicuña has bounced back to well in excess of 300 000.

Hume says he believes the same could be true of Rhino populations.

Today, there's an estimated 20 000 rhino left in Africa.

Brett Haggard
htxt.co.za

SUGARY SOLUTIONS

Case IH's latest generation of powerful agricultural equipment solutions for the sugar cane industry took centre stage at SIMA, the International Agri-Business Show held from 22 to 26 February 2015 in Paris Nord Villepinte, France.

"Exceeding our customers' expectations in terms of productivity and profitability and supporting them with innovative products and excellent services is our mission," said Mathew Foster, Case IH Vice President and responsible for Europe, Africa and the Middle East, during a special event organized by Case IH on the opening day of the show. The event was attended by more than 40 dealers and representatives of corporate customers and large agro-industrial farms operating in the sugar cane and bio-ethanol sectors from African and Middle Eastern countries, including Sudan, Mozambique, Tanzania, Kenya, Zimbabwe, Nigeria and Sierra Leone.

Participants were provided with insights on the latest Case IH innovations, which include the Austoft® 8000 Series of industry-leading sugar cane harvesters and the high-horsepower tractors, well represented by the MagnumTM and PumaTM units on display. Two walk-around presentations were given by Yoann Clarisse and Patrice Loiseleur, respectively Case IH Harvesters Product Specialist EMEA and Case IH International Agriculture Projects and Corporate Farming Manager. "Sugarcane is one of the fastest-growing crops in terms of land area worldwide," concluded Foster.

An unparalleled history

Austoft has been a renowned brand in sugar cane harvesting since 1941 and market leader in alcohol and sugar industries for more than 30 years. The Case IH Austoft A8000 wheeled version and the A8800 series on tracks are high performance sugar cane harvesters designed for high productivity levels and the lowest total cost of ownership; they are auto guidance and telematics ready, offer Can Bus systems, intelligent engine rpm adjustment, and low centre of gravity which is perfect for hilly conditions. These machines are easy and comfortable to operate and maintain with the longest 600hrs engine oil change intervals and show the lowest levels of soil compaction.

Fuel efficient and powerful

The 9 litre FPT Cursor 9 engine, a water cooled 6 cylinder power pack with turbo charger and after cooler, delivers up to 394 hp. "1,800erpm during regular operation leaves power for demanding harvesting conditions whilst Smart Cruise technology reduces fuel consumption to 0.7 litre of fuel per tonne of cane billet. These engines are available with a choice of emission standards on demand. The engine compartment is pressurised, leaving the engine clean at all times to prevent the risk of fire in hot and dry harvesting conditions. With a logically directed and electronically reversible air flow, the highly efficient cooling package is designed for working temperatures up to 55°C. The cooling system includes an efficient self-cleaning device, and the air flow is adapted to the prevailing cooling demand", said Clarisse who presented the product.

New high-throughput chopper

"The new chopper is at the core of the A8000 and A8800 series", emphasised Clarisse. "With a 40 US gallons/min oil flow increase and a chopper speed up to 205 rpm, the new A8000 series delivers more chopping power and a 20% increase in throughput. Using equally simple and reliable hydraulic components and improved throwers in the choppers helps to reduce downtime and maintenance requirements, thus further adding to the already excellent return on investment of this machine", said Clarisse.

With a 45º angle and a new rotating and removable toe, the crop divider is yet another exclusive Case IH feature.

Efficient innovation

The exclusive Anti-vortex system designed by Case IH has proven to be the most modern and efficient cleaning system. In addition to reducing the amount of extraneous matter and cane loss, this system improves the load density for transport, thus achieving lower operating costs. Designed to increase airflow in the primary extractor chamber, the system was tested in countries like Reunion and Mauritius with most productive cane varieties.

Comfortable cab, high precision

"Case IH A8000 and A8800 sugar cane harvesters offer operational comfort that is best in class", says Yoann Clarisse. "In these cabs, operators enjoy optimum ergonomics, excellent visibility with a 180° angle vision from the seat, the AFS 700 touch screen display and the intelligent Eco Power cruise system as standard. In addition, these machines comes auto guidance and telematics ready and offer either joystick control for higher manoeuvrability or the optional steering wheel. For high comfort during long working hours, the cabs also feature four point cab suspension", explains Clarisse.

AutoTracker – the tool to effectively reduce cane losses

The exclusive, factory-fitted AutoTracker helps to minimise cane losses. Cane stalks are cut at ground level, and the base cutter height is either controlled by the operator or automatically by the AutoTracker which consists of two rotating discs with 5 blades each. The cutter angle can be adjusted from 12,5º to 17,5º. On average, the AutoTracker reduces stool damage by 27.2%, root ripping at the end of rows by 28.3%, and the overall cane losses by an impressive 62.9%.

LOOKING TO REVITALISE INTEREST IN THE CACTUS PEAR

The cactus pear, commonly known as prickly pear, is well-known in South Africa, but misconceptions persist about its potential. Initiatives are therefore underway to revitalise interest in the spineless cactus pear, promoting a renewed awareness of its versatility and many applications.

In January the Department of Science and Technology, in collaboration with the Mexican Ministry of Foreign Affairs, through the Mexican Agency for International Development Cooperation (AMEXCID) and the University of the Free State (UFS), held a workshop at the UFS to discuss this issue.

Mexico and South Africa are both primarily semi-arid or dry land regions, and therefore have much in common regarding socio-economic challenges and environmental constraints in agricultural activities and the manner in which they are conducted. Crops that are cultivated are very similar (maize, wheat, sunflower, sorghum, etc.), as are the biotic and abiotic environmental challenges that face crop production.

Many plants that are indigenous to Mexico have been introduced into South Africa, inadvertently or for some specific purpose. They have become well established here, but many have been declared weeds (e.g. species of Opuntia, Amaranthus., Tithonia and Argemone). This should not be viewed in an entirely negative way, since there are many Mexican crops that have excellent potential for large-scale commercial cultivation in South Africa.

The UFS is recognised as a leader in sub-Saharan Africa for the research it conducts on crops and sustainable agricultural practices that are suitable for semi-arid or arid regions. Although the focus is on conventional crops such as maize and wheat, the UFS is regarded as the centre of research in South Africa on underutilised or "new crops". The UFS has therefore served as the main institution in South Africa where the most research on the cactus pear and amaranth (Amaranthus hybridus and A. cruentus) has been conducted over the past 15 years.

Both cactus pear and amaranth are native to Mexico and are very drought resistant. For many centuries they have been used there as human food and animal feed. These alternative, multi-purpose crops can therefore form an integral part of climate-smart agriculture in Southern Africa. They can also make a valuable contribution to the alleviation of poverty in rural communities through the development of new value-added products and food supply chains.

The UFS, in partnership with the Agricultural Research Council-Animal Production Institute (ARC-API) in Bloemfontein, initiated a research and development programme on the spineless cactus pear – the so-called Cactus Pear Team. The Cactus Pear

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Team made major progress over the past decade to support the growing cactus pear industry in South Africa.

The Free State Department of Economic Development, Tourism and Environmental Affairs joined the group when the initiative was broadened to implement the Spineless Cactus Pear Development Programme at Oppermansgronde, a farming community west of Koffiefontein in the south-western Free State. The objective is to promote the production and use of the spineless cactus pear as a multi-use crop, which can form the basis of a vibrant agro-industry.

Farmers wishing to engage in spineless cactus pear production are advised to erect protective fences around plots before establishing the new orchards; without such protection these plants are badly damaged by livestock and wildlife, which is proof of their acceptance by herbivorous animals.

New orchards at Oppermansgronde are now starting to yield cladodes (flattened stem segments) and fruit in sufficient quantities to justify the acceleration of processing. Unlike most fruit-bearing crops, all the biomass produced by the spineless cactus pear (cladodes and fruit) can be used as livestock feed. During the first few years the fruit is removed during budding, allowing the plants to root properly and establish themselves faster.

From the second year after planting, annual pruning starts yielding small quantities of cladodes that can be used for planting new orchards or animal feed. From the fourth year after planting, a large number of cladodes per plant can be harvested and processed for human and animal consumption.

After an initial spate of scepticism in South Africa, there is growing interest among public and private entities to invest in different options available for processing cactus pears. Based on current knowledge, O. ficus-indica has the potential to provide some 25% of the basic feed resources required by South Africa's commercial ruminant feed manufacturing sector.

Current initiatives promote O. ficus-indica as a crop that can be used for livestock feed, food for human consumption, seed oil and medicinal and pharmaceutical applications. The outdated perception of the cactus pear being a thorny, alien invader is rapidly disappearing. Farmers recognise that it can play a vital role as a high-yielding, water-efficient, multi-use crop, especially in arid regions.

The full range of applications of this versatile crop has not yet been exhausted.

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What is success?

Tongaat Hulett believes that real, sustainable success can be achieved through partnership.

Our holistic view of success extends beyond wealth created for shareholders, to improvements made in the lives of the communities in which we operate through small scale grower initiatives, the upskilling of employees in a zero-harm work environment, creating successful and sustainable neighbourhoods for communities in the lower socio-economic spectrum and partnerships with government to contribute towards achieving The National Development Plan in the communities surrounding company operations.

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