



Scan for Capital Harvest

August 2018

This is a monthly environmental scanning document with extracts from a range of press articles deemed to be of possible strategic importance to Capital Harvest. The articles are arranged according to a framework of topics. For each article its title, author (where available) and source are stated.

Editorial

Agriculture

The Hundredth Monkey Farm in Toulouse, France, is training aspiring farmers – mostly unhappy office-working professionals interested in learning how to farm. It promotes sustainable farming as an alternative to industrial farming, and charges learners €300 per month. Each learner receives half a hectare with access to water, electricity, coaching, administrative support and legal assistance. Machinery is shared by all the aspiring farmers, as the concept is based on office co-working which has long been used to help entrepreneurs with start-up businesses. Farm projects started by learners run for a one-year period, after which they can be renewed for up to two years. Prospective farmers are given the opportunity to learn how to farm and to start establishing a farming business before setting out on their own.

Meat grown in laboratories continues to dominate the news as a viable way to feed the world population in the long term. Large farms producing meat increasingly consume land and resources, produce waste and raise ethical concerns. Now animal cells can be cultivated in a bioreactor, resulting in a food product that has popularly been referred to as “lab-grown meat”. However, early research has shown that finding an appropriate name for the new product will be crucial in ensuring its acceptance by consumers. While most consumers seem to dislike the terms “lab-grown”, “in vitro” and “cultured meat”, they seem to respond well to the term “clean meat” (meat that is free of contamination and antibiotics). Some early research indicates that consumers may still be reluctant to eat the meat, regardless of what it is called. One US survey found 68% of respondents to be “not interested” in the new type of meat. But a vast number of start-ups continue to emerge that seek ways to produce meat and fish without killing animals. While the meat industry has made it clear that it does not want something grown in a lab to be referred to as “meat”, powerful meat companies such as Tyson and Cargill are themselves investing millions of dollars in these start-ups. Grain producers have expressed concern about the new industry, saying grain growers will suffer severely if the animal feeds market declines. The general consensus is that the product category’s

success will depend on how closely it resembles real meat. As fish is easier to imitate than red meat, there is a chance that “clean fish” will be widely accepted sooner.

Research by the clean meat industry has shown that it needs to market the food by appealing to consumers’ health concerns, as far fewer consumers were concerned about animal welfare. A recent survey by the Food Standards Agency in the UK seems to echo this: it found hygiene to be the top food safety concern among UK consumers when eating out, followed by chemical contamination, food additives, food poisoning, sugar, wastage, price and (lastly) animal welfare.

Small organic dairy farms in the US say that large-scale farms are pushing the boundaries of what is considered ‘organic’. While mega-farms comply with the minimum official criteria for organic milk, these standards have continuously been relaxed and cows are increasingly confined to factory-style conditions. Milk from mega-farms is cheaper than milk from small family farms where cows roam free, leaving many smaller organic producers in financial trouble. These farmers have now launched the “Real Organics” label in an effort to show consumers that their milk is superior and still complies with traditional organic standards.

The world’s largest vertical farm is being built near Dubai airport at a cost of \$40 million. It will produce the equivalent of 365 hectares of traditional farmland, but with no pesticides and 99% less water. The farm will supply Emirates airlines with very fresh vegetables, as it is located very close by.

The UN Food and Agriculture Organisation has held a competition in Rwanda to encourage African coders and engineers to develop mobile apps and high-tech devices for agriculture. The inventions include an app that matches farmers with land, and a solar-powered device for input optimisation. A Nigerian team built an app that uses blockchain to help farmers prove their creditworthiness to lenders. The winner was a Zambian app that identifies diseases and pests, including fall armyworm.

The fruit of the African baobab tree continues its rise in popularity as a superfood in the US and Europe. The fruit is ground into a powder and then mixed into smoothies and yoghurt or sprinkled on food. Exports increased from 50 tonnes in 2013 to 450 tonnes in 2017, and projections show a \$400 million industry by 2025. The main problem with baobab production, is that the trees take very long to mature and mostly existing trees are harvested. There is concern that the trees – which can live for thousands of years – will be threatened. A number of tree deaths have been reported where the trees in question were over 2 000 years old. Efforts are under way to teach those who gather the fruits to do so without harming the tree, but climate change may also play a role.

In the US a former school groundskeeper has been awarded \$289 million in a lawsuit. The man argued that his cancer was caused by Monsanto's Roundup weed killer, which contains the controversial ingredient glyphosate. The case was the first in which a cancer patient successfully sued Monsanto over Roundup, and sets the precedent for thousands of others. Monsanto has confirmed that it will appeal the verdict. The US Environmental Protection Agency says Roundup's active ingredient is safe when used in accordance with directions, while the World Health Organisation classified it as a “probable human carcinogen” in 2015. California has added glyphosate to its list of chemicals known to cause cancer. Glyphosate is not removed by washing, cooking or processing.

In the wake of the US ruling, a Brazilian court ruled in August that the sale of products containing glyphosate had to be suspended. In SA, as in the rest of the world, traces of glyphosate is present in most foods. The African Centre for Biosafety and Cansa have both called on government to look into regulating the pesticide.

A US court has ruled that another chemical, chlorpyrifos, should be banned. Chlorpyrifos, produced by Dow Chemical and commonly known by its trade name Lorsban, is used in nearly 100 countries on more than 50 different crops. Research has shown that the pesticide causes learning disabilities.

Recent research has shown that bees tend to get addicted to neonicotinoids, the most widely-used class of insecticide. Neonicotinoids harm bees by limiting their reproduction and lowering their resistance to disease. In the EU, three neonicotinoid-based products will be banned from December this year. France banned five chemical variants in August, while Canada is phasing out two neonicotinoids.

So far this year, US agricultural land values have increased 1.9% to \$3 140 an acre, a new record. Missouri saw the largest gain in values (10%), which includes farmland, cropland and farm buildings. The Corn Belt region, which includes Missouri, remains the nation's most expensive state at \$6 430 an acre. States that are major growers of wheat tended to see declines, while states dominated by pasture saw gains. Nationwide, cropland values increased by 1%, while pasture increased by 3%. The land value gains come at a time when farm revenues are under pressure due to the trade war between China and the US.

The EU expects an apple harvest of 12 611 000 tons this year. This is 36% more than the last year's harvest and the largest of the past ten years. Golden Delicious remains by far the largest variety with an estimated production of 2 347 000 tons. Due to the drought, a higher percentage of apples will end up in the processing industry. China – the largest apple producer in the world – expects a 30% lower harvest than last year. The European pear harvest is estimated to be 4% higher, with Italy being the EU's largest producer.

After a disastrous cold snap caused a poor French wine harvest in 2017, 2018 is expected to see a 25% larger harvest – a normal production year. Mildew affected vineyards in May and June, but the summer heatwave eliminated the fungus. The Champagne region is expecting a 39% larger harvest. Champagne farmers are, however, worried about their future due to climate change. Warmer weather causes buds to appear earlier, so spring frosts are more destructive. Warmer nights push maturity but also encourage new pests and diseases. The harvest is now two years earlier than 20 years ago, making wines less acidic with less freshness. Researchers are working on hybrid grape varieties that will ripen more slowly in warmer conditions and be more resistant to pests. Taking experiments with the ageing process into consideration, improvements will take some decades to filter through. The French wine industry has taken significant steps to reduce its own carbon footprint in order to minimise the progression of climate change.

2018 has been a particularly hot year in most of the world, and research suggests the next few years until 2022 may be similar. This is to a large extent due to a low probability of intense cold events. Drought is a problem in many countries across the world. Israel, which has invested heavily in desalination, is experiencing a five-year drought. The country is located in one of the world's driest regions, and plans to obtain 70% of its water from desalination by 2050. Unfortunately there is presently no infrastructure to deliver desalinated water to drought-hit farmers in northern Israel.

Farmers in northern Europe have experienced a "catastrophic" summer due to heat and drought, according to the grain industry. Germany's wheat harvest is estimated at 19% lower than last year. In total the country is likely to lose €2 billion due to the drought. Sweden has a 40% smaller wheat crop in 2018, while France (the EU's leading producer) will also deliver less wheat than in 2017. Overall the European wheat harvest is likely to be the smallest in five years. Russia, the world's largest wheat producer, has a fairly large crop but there are quality problems. The most drought-affected grain in the EU will be maize, which may see up to a 49% smaller harvest.

Like crop farmers, dairy farmers have been suffering in the wake of the heat and drought. In August the Swiss army used helicopters to airlift water to dairy cows in the mountain regions. The helicopters dumped the water in two large basins where farmers collected it using tank trucks. In

many cases farmers who could not access such water brought their cows down from the mountains. The drought is said to be Switzerland's worst since 1921, and the government has implemented a number of financial assistance measures to help farmers. One of the measures is to cut import tariffs on livestock feed. Expensive feed is a problem throughout drought-hit Europe, where in many places pastures have not been able to grow this year. In the UK the price of wheat straw increased from the usual £35 a ton to nearly £100 a ton. In parts of Germany the price of straw overtook the price of grain, and Germany has seen 50% more cows being slaughtered so far in 2018 compared with 2017. While input costs are higher, animals are also thinner, leaving farmers with less meat to sell.

A Swiss farmer group called New Swiss Cow is working to convince farmers to opt for smaller breeds of cows in order to increase overall efficiency. Smaller cows consume less feed and space, require less veterinary care than genetically-enhanced large cows, and climb more easily to mountain pastures. Large Swiss cows can weigh 800 kg and their average annual milk output is 7 400 litres per cow. Smaller cows can each produce 6 000 to 7 000 litres per year, but other savings may compensate for the lower output. The drought has given Swiss farmers more reason to consider smaller cows, due to expensive feed costs.

In Ireland dairy farmers will likely earn 50% of what they earned in 2017. Expensive feed is the biggest problem. Furthermore cows can produce as little as half their usual output in extreme heat, which can be rectified if even more expensive nutrition is purchased. One Irish dairy co-op has paid its entire profit out to farmers in an attempt to help them through the drought. The EU has helped farmers by accelerating payments and easing land rules. As in many agricultural sectors, drought and heat do not necessarily impact only one year's production. Dairy cows' fertility rates can be reduced by heat – the impact of which will only be known next year.

Australia has had a disastrously dry winter – in some parts the worst in 50 years. In a viral video, a large herd of cows in New South Wales could be seen storming a water truck – the farmer had driven to a location over an hour away to fetch water. In early winter cattle farmers were able to slaughter more and supply an eager US market, but the US soon accumulated excess meat stocks. There was also a window when parts of Australia could provide drought-stricken areas with feed, but the drought soon spread throughout the country. Some farmers took cattle out to graze around highways where green sprouts were available. Australia is usually the world's fourth-largest wheat exporter, but wheat production has been the lowest in a decade and quality is poor. Wool farmers in Australia, who provide 90% of the world's exported fine-wool, are struggling to feed flocks and to meet the current record demand for wool. Government aid packages have been designed to help farmers pay for feed, transport and mental health services.

The SADC has advised farmers in Southern Africa not to sell excess food stocks harvested last season, as the region expects an extended dry spell in the approaching rainy season. The sparse rainfall last summer in much of the region has negatively affected crops, and the drought is expected to worsen. Major maize-producing countries such as SA and Zambia recorded lower harvests last season, with yields decreasing by 23% and 34% respectively.

SA retailers supplying products to Namibia have to abide by that country's retail charter. The charter is aimed at developing Namibian suppliers, and will ultimately require 20% of products to be sourced locally. Traditionally, SA retailers used to supply mainly products from SA. While all the large SA retailers are committed to the charter and have compliance systems in place, Spar says compliance can be difficult as local supplies are not always available. Pick'nPay focusses on buying local meat, fruit and vegetables.

The Bureau for Food and Agricultural Policy (BFAP) says SA's agricultural sector is extremely volatile. Rising fuel prices coupled with a weakening currency pose a significant threat. Farmers will be forced

to maximise efficiency in the coming years in order to remain profitable. Uncertainty regarding government policy remains the biggest problem, as it limits investment in the industry.

In August the Department of Agriculture published its draft 'Climate Smart' strategic framework. It proposes that fishing boats adhere to speed limits and upgrade to better engines, and that abalone farms under threat from rising sea levels should be relocated. Indigenous knowledge systems from traditional communities should be studied to help with disaster management, while online platforms such as Wikipedia and Facebook should be used to collect and store knowledge. The draft document calls for new livestock and fish breeds to be developed. Lastly, it outlines finance interventions to encourage climate-smart agriculture: a 10-year tax holiday for products that come from climate-smart agriculture, and subsidised loans for such efforts; incentives for landowners to restore degraded land and use resources sustainably; index-based agricultural insurance packages; government re-insurance to provide crop insurance to smallholder farmers; and guarantees or insurance against loss of harvest where climate-smart changes have been implemented.

The oriental fruit fly was detected several times in 2018 in the Orange River area. Citrus and grape crops are threatened by the pest. Measures have been implemented to stop its spread. A second pest has also been detected in the Northern Cape – the polyphagous shot hole borer. It drills holes in trees and leaves a deadly fungus. It can affect avo trees, nut trees, fruit trees and grapevines. Internationally it is not considered a significant threat to citrus production.

Good winter rains, new plantings and new cultivars are bringing SA's table grape industry back to its positive growth curve. Newly planted, higher yielding varieties together with 5 400 hectares younger than 3 years old, will contribute to a potential crop of 70 million cartons in the 2018/2019 season. Predictions for all growing regions are positive.

In 2017 10.2% of the world's fresh grapes (measured in dollar value) came from African countries. Chile was the world's leading grape exporter (14.4%) in 2017, with SA in 7th position (6.5%).

As previously reported, Tru-Cape has developed a mobile game for Apple and Android called Fruit-Full, to market its brand. The game has exceeded 4 500 downloads and has a star rating of 4.2. Gamers work their way through the full Tru-Cape cycle from planting seeds to selling fruit. The company is committed to keep backing and updating the game – version 2 was recently launched.

Absa says blueberry production in SA is increasing at a faster rate than previously anticipated. About 1 640 hectares were planted during the 2017/2018 season. It is expected that an additional 500 hectares of blueberries will be added every year over the next few years. SA farmers prune in such a way that exports can take place at a time when there is low supply in the EU. Blueberry markets across the world are growing. Ozblu, which produces branded blueberries in SA among other countries, says it has discovered that spending transport time at sea actually improves their berry varieties. This is in contrast with older varieties that are produced in Chile. While Chile remains the second largest producer in the world, its berries are too soft and don't handle transport well – a very large portion of the country's varieties will have to be replaced soon.

Over the winter eight EU members (including France and Spain) proposed to introduce a category of high risk plants and products (which included citrus) under the EU's plant health regime. The regime will come into effect at the end of 2019. The proposal was rejected. If it had been accepted, citrus products from SA would not have had market access unless they were proven to pose no risk. As it now stands, SA citrus is acceptable for import into the EU until proven to pose an unacceptable risk, making it much easier for SA exporters to deal with problems such as citrus black spot. During the vote, northern European countries came to the rescue of SA. Southern European countries regard this as a lack of solidarity within the EU, while SA maintains that southern European countries are

trying to drown out competition in order to protect their own industries. There were zero interceptions of SA citrus for black spot in 2017/2018, and the US recently allowed citrus from SA's black spot areas to be imported. The SA citrus industry says it provided ample scientific evidence to the EU in order to influence the vote, and that the issue is entirely a political one which should dissolve within the next two years.

SA is the world's second largest citrus exporter after Spain, and if the Western Cape were a country, it would be the world's fifth largest exporter (supplying 6% of global exports in 2017). Europe remains the most important export market, but it is declining as more citrus is being sent to Asia and Oceania. Given ongoing uncertainty surrounding Brexit, the increased reliance on Asian markets is seen as positive.

In August citrus farmworkers in Addo and Kirkwood in the Eastern Cape went on strike once again. Four hundred workers marched to the Sundays River Citrus Company's offices in Addo. They alleged that some farmers did not pay the regional minimum wage of R20 per hour, which had been agreed earlier in 2018 after violent protests. The workers also demanded the reinstatement of colleagues fired during the previous protests, the withdrawal of charges against organisers, and that workers should be transported in safe covered vehicles to and from work.

Large volumes of avos on the European market, notably from SA and Peru, made for a difficult 2018 season. SA fortunately did have a window to sell before the Peruvian volumes arrived. Prices came under pressure due to oversupply, and on the local market inside SA prices are the lowest in five years.

In 2017 Kenya overtook SA to become the number one exporter of avos from Africa. Kenya exports most of its avos to the UAE, followed by the Netherlands, France, Saudi Arabia and Russia.

Since 2014, government has been actively supporting the SA cotton industry through grant funding. The cotton industry says 11 value chains have been created with a total value of over R2 billion. SA's cotton production has increased from 25 000 bales in 2013 to roughly 180 000 bales this season. During the 2017/2018 season, five cotton projects in three provinces were funded. A total of 4 500 hectares was planted to cotton and 1 000 farmers were supported. Cotton is mostly grown in Limpopo, the Northern Cape, the North West, KZN and Mpumalanga. One of the biggest obstacles for farmers is that a top-of-the-range cotton picking machine can cost up to R11 million.

In August a new tax levy on table eggs sold in SA came into effect – an amount of 1.5 cents per dozen that is earmarked to be spent on consumer communication, consumer education, and transformation. But for many producers the 1.5 cent levy replaces a voluntary contribution of 1c per dozen. The price paid by consumers therefore did not notably increase. The levy applies to both locally produced and imported eggs.

Cheap milk imports are placing pressure on the SA dairy industry, in a time of fluctuating prices and demand. Most producers presently tend to be profitable from a price of R4.50 per litre. Smaller producers are the most vulnerable, and the industry advises them to form co-ops. Forty small milk producers in the Free State received notice that their milk would no longer be needed from 5 August, possibly due to the collection route becoming unprofitable.

In August 30 farm workers of the table grape, nectarine and citrus farm Nieuwe Sion in Simondium moved into their new purpose-built R30 million housing development. The workers were given titles to the houses by the farm's owners, who live in England. The complex has 22 houses, buildings with single quarters for retired workers, a crèche, a community centre and a sports field.

Banking & Capital Markets

The Land Bank has R9 billion in debt that includes a standard clause on expropriation as an event of default – if expropriation of farms without compensation materialises without protection of the Bank's rights as a creditor, it would be required to repay the R9 billion immediately. Under other clauses on cross defaults, an inability to pay that R9 billion would immediately render the bank's entire R41 billion funding portfolio due and payable. Furthermore, if expropriation is poorly executed, few institutions will in future be willing to fund the Land Bank, and any remaining funders will require a premium price to compensate for risk. The Land Bank listed what it considers to be poor execution: productive land taken out of production; failure to protect creditors; ineffective institutional processes; corruption; poor or undefined processes for the selection of beneficiaries; and a lack of comprehensive support for beneficiaries.

Much of the Land Bank's funding comes from the SA bond market, with pension funds heavily invested. In the last financial year it also obtained €55 million in funding from German development bank KfW, and \$93 million from the World Bank.

The Banking Association of SA says loans to commercial farmers increased 11.2% from December 2017 to R148 billion by the end of June 2018, despite uncertainty regarding expropriation. The banks are considering the establishment of a special fund to accelerate land transfer. Absa, SA's largest agricultural lender, has proposed two separate funds managed by a professional team — one to focus on rural land and another on urban projects. The rural fund will be aimed at creating more black-owned commercial farms by funding the purchase of land, providing technical assistance and facilitating market access. The urban fund will be targeted at building affordable housing and forming more black-owned property developers by providing guarantees against some losses for high-risk residential projects. All four of the big banks have called for a national audit to identify unproductive land. Absa is also willing to sponsor researchers who can find ways of developing a new land administration system to improve security of tenure.

The IDC has committed R23 billion to funding black industrialists over the five-year period to March 2020, and 67% has already been approved. Over a three-year period to March 2018, R6.5 billion was approved for female entrepreneurs and R4.4 billion for youth-empowered businesses. Total funding approved in 2018 amounted to R16.7 billion, an increase of 9% on 2017, and disbursements came to R15.4 billion. Financial liabilities increased to R33 billion (2017: R30 billion), of which R8.6 billion consists of foreign loans. Cash and cash equivalents are R6 billion (2017: R7.6 billion). Loans worth R9 billion are payable within a year, and R15 billion within five years. *Moneyweb* says an in-depth examination of the 2018 financial statements shows profitability has been slowly decreasing over the years, particularly when capital gains are excluded. The IDC is eroding its capital base. The IDC's auditors listed the following key audit matters: impairment of loans and advances; valuation of unlisted investments; and impairment of cash-generating units at Foskor.

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Agriculture

French farm aims to grow new crop of farmers

They bandy about terms like "co-working" but instead of coding and developing algorithms in open space offices they work out in the open trying to tease tomatoes from the soil.

Welcome to the Hundredth Monkey Farm where aspiring farmers can benefit from the same type of coaching and shared resources that many hi-tech startups get from business incubators or co-working.

The name pays homage to the hundredth monkey effect, the concept that an idea or behaviour will spread rapidly once it is adopted by a critical mass.

This farm in Belberaud outside the southern French city of Toulouse is seeking to promote a "more sober, more durable" alternative to industrial farming, one that is adapted to small holdings.

And its "monkeys" aren't necessarily born into farming.

Sacha Danjou, 25, is a former aeronautical engineer learning to manage a farm.

"Being a farmer, it's a different world that touches on a lot of different areas: biology, management, accounting," he said standing amongst rows of tomatoes, peppers, eggplants and other vegetables.

"When you are not part of it, it's difficult" to get started, he added.

Here, for roughly 300 euros (\$340) per month, Danjou gets to test his hands with a parcel of 5,000 square metres (half a hectare, 1.2 acres) that has access to water and electricity.

Moreover, he has access to farm machinery that all the aspiring farmers share.

The tractors and tillers alone cost around 40,000 euros. Adding that to the cost of land shows how setting up a farm is a costly endeavour.

"The risk is there when you start," said Danjou.

"You buy, you have huge costs, you need to generate a certain amount of sales from the first year, you can't make any mistakes," he said as he worked the soil. "Without experience, it's scary."

Amandine Largeaud, one of the founders of the Hundredth Monkey Farm, calls their model "agricultural co-working".

Co-working emerged a decade ago as an option for freelance employees and internet startups, where renters share not only office space but form a community where they can share experience and expertise.

Largeaud acknowledged some might find it surprising applying the concept to the fields, but "it's like office co-working, actually. We simply share the spaces and tools."

In 2016, after several years in the solidarity economy, she joined up with 11 other people to launch the Hundredth Monkey Farm on a 19th century holding of five hectares.

Largeaud noted that as the French agricultural system is based on handing down land and skills through families, it is difficult for outsiders to break into the sector.

"When you want to get started you don't realise how much paperwork there is and the different agencies that you need to deal with," said Danjou. "You don't learn that overnight."

That is why the Hundredth Monkey Farm is also a business incubator, offering aspiring farmers training and coaching as well as some administrative and legal assistance.

The aspiring farmers all sign a special type of pact that guides associations in France which help entrepreneurs that define what help they receive and as all have been recognised by the authorities as switching professions, they continue to receive unemployment benefits or payments for low-income workers.

So far the Hundredth Monkey Farm has accepted six projects, including raising vegetables, snails, and aquaponics where plants and aquatic animals are raised together.

After the initial one-year period, the projects can be renewed for up to two years.

Largeaud said that before starting the farm she was struck by how many unhappy employees wanted to retrain to work in the farm sector.

That was the case for Danjou.

"I wanted a job that satisfies me, with the power to make decisions, far away from a gargantuan hierarchy," he said. "I want to see the fruit of my labour."

They may not have reached their hundredth monkey, but the idea of a farmer incubator appears to be catching on.

The farm has more than a dozen candidates, and Largeaud said she has been helping people seeking to create similar incubators elsewhere in France.

Charlotte Durand, *AFP*, 19 August 2018

The hamburger of the future is here, but will you eat it?

Despite a long love affair with red meat, more Americans than ever are turning toward plant-based imitators at restaurants and grocery stores. Not the hockey puck veggie burgers in the back of your freezer, mind you—these are plant-based patties engineered to mimic the taste of real meat.

But making vegetation seem like flesh has always been tough. To create something that satisfies carnivores, Silicon Valley decided you have to use the components of real meat—and that means heading to the laboratory. Whether consumers will readily devour burgers made out of cells cultivated in a bioreactor, though, is an open question.

As with most everything Americans buy, branding such cultured meat will be critical. That's the takeaway from a study released last week by Faunalytics, an animal-advocacy group, and the Good Food Institute, a nonprofit alternative animal products industry group. "Lab-grown," "in vitro" or "cultured meat" burgers are unlikely to fly out of the freezer case. But calling them "clean meat," a term pushed by the nascent industry, may encourage new adopters.

There's a growing movement to rein in the global industrial meat complex. Consumers in developing nations with more disposable income are increasingly turning to beef products, matching the perpetual U.S. appetite for a food whose mass production has had negative environmental and health consequences. But first, you have to sell it.

"Appetite appeal is everything," said Nik Contis, a senior partner at PS212, a brand consultancy. He agrees that of all the potential names, "clean meat" is the most favorable of what are generally "dystopian" monikers. "Whatever they label this, ultimately it can become a sort of linchpin in communicating to consumers," he explained. "You want 'yes,' not 'yuck.'"

Two thirds of people in the Faunalytics survey said they'd try meat generated from cell cultures when described as "clean meat" and after hearing positive descriptions of the products. The term, according to the survey, "reduces feelings of disgust." Negative messages about conventional meat also helped with consumer acceptance.

Research by other firms not associated with animal advocacy, however, has been less favorable. According to data from food and agriculture marketing firm Charleston|Orwig, only 3 percent of consumers expressed "no reservations" about eating such products, while 57 percent responded, "No, absolutely not." A third survey, by food trends research firm Datassential, found that 68 percent said they were "not interested" in cultured meats.

There's another hitch: The beef, pork and chicken industries insist that if it doesn't come from an animal, it shouldn't be called meat at all. Ironically, Big Meat companies such as Tyson Foods Inc. and Cargill Inc. are pouring millions of dollars into startups seeking to make meat and fish products without killing animals.

The technology, if it can reach the right price point and be brought to scale, is nothing less than the disruption of agriculture as we know it, said Will Sawyer, lead economist for animal protein at CoBank. Aside from impacting the meat industry, there would also be substantial effects on global

grain production, which exists mainly to feed animals, and on water and air quality, he said. Neither Tyson nor Cargill responded to requests for comment.

One might think that the benefits that flow to the environment and animal welfare would be key selling points for cultured meat—but you would be wrong. While younger consumers are attuned to such issues, they are, overall, the least-selected reasons for cutting meat consumption, said Kyle Chamberlin from Datassential.

The growth of plant-based foods is instead largely driven by health concerns. Almost half of consumers are buying veggie burgers because they think it's better for them, according to a March Datassential report. GFI said there are health benefits to cellular agriculture. Unlike conventional meat, these products will be free of fecal contamination and won't require antibiotics, thereby not contributing to human antibiotic resistance. But neither of these are the typical health-related drivers, like avoiding saturating fat and cholesterol and losing weight.

Companies could also theoretically combine animal muscle and fat cells to create a healthier nutritional profile, but that's "an open question at the moment," according to Matt Ball of GFI. For example, there's been discussion of making beef without heme iron, a component of meat which some studies found may be linked to cancer.

Andrew Noyes, a spokesman for JUST, a startup that makes both plant-based meat substitutes and cellular agriculture, said his company's prototypes have nutritional profiles "very similar" to conventionally produced meat. (His company recently raised \$220 million.)

The future of "clean meat" will depend on whether it tastes and feels like the real thing.

While cultured meat faces several obstacles, cultured fish may be easier to introduce. Finless Foods co-founder Mike Selden said "clean" fish will have an advantage over the real thing in that it doesn't contain mercury and plastic. On the other hand, the fatty acid chains that make real fish good for you come from algae consumption. So companies are working on putting that nutrition back into the product.

The future of cultured meat will depend on whether it tastes as good as the real thing, is convenient and has the right price, said Justin Kolbeck and Arye Elfenbein, cofounders of Wild Type, a San Francisco-based cellular agriculture company. Their startup pledges to make "delicious, accessible, and affordable meat and fish," starting with cultured salmon and trout. The company said it's also designing a production process that could reduce the risk of food-borne illnesses.

The Datassential report points to one way of increasing consumer interest in these products. Many respondents said they'd be more interested if they knew more about production methods and a lack of health risks. Selden of Finless Foods agreed, saying that the more consumers learn about cellular agriculture, the more accepting they become.

Others aren't so sure.

"This is a vast unknown," said Mark Gale, Charleston Orwig's chief executive. Companies "shouldn't assume that just because they might be able to make it, that necessarily, there will be broad adoption."

Deena Shanker & Lydia Mulvany, *Bloomberg*, 9 August 2018

Hygiene is the top food concern among UK consumers

A Food Standards Agency survey among consumers in England, Wales and Northern Ireland found that food hygiene was the top food safety concern for UK consumers when eating out.

This was followed by chemical contamination (30%), food additives (29%), and food poisoning (28%). Other issues of concern were the amount of sugar in food (55%), food wastage (51%), food prices (43%), and animal welfare (42%).

In addition, only 41% of respondents said they trusted that food producers and retailers had their best interests at heart.

However, 60% said they believed the food industry was regulated fairly well, with this belief the strongest in Northern Ireland at 77%, compared with 59% in England and 57% in Wales.

The majority of respondents reported that they cooked or prepared food for themselves (90%), with 17% also cooking or preparing food for children under five years of age, and 23% catering for children aged five to 15.

Cooking food thoroughly was the most commonly reported way of avoiding food poisoning (76%), followed by washing fruit and vegetables thoroughly (60%), and preparing different food types on different surfaces (58%).

Alan Harman, *Farmer's Weekly*, 22 August 2018

Organic dairy farmers vow to compete in changing industry

Small family operated dairy farms with cows freely grazing on verdant pastures are going out business as large confined animal operations with thousands of animals lined up in assembly-line fashion are expanding into the organic market.

Many traditional small-scale organic farmers are determined to fight back against the industry transformation by appealing to consumers to look closely at the organic milk they buy to make sure it comes from a farm that meets the idyllic expectations portrayed on the cartons. While the large operations say they're meeting U.S. Department of Agriculture standards for organic milk, the smaller farms say federal regulators under Republican and Democratic administrations have relaxed enforcement of strict organic standards for dairy farms, allowing confinement dairies to grow and put intense competition on small family operated dairies.

"There's a higher authority than the USDA. There's a higher authority than the federal courts where we've litigated some of these issues. And that's the consumer. Their dollar has power," said Mark Kastel at the Wisconsin-based Cornucopia Institute, a nonprofit farm policy public interest group.

The dairy industry, like much of U.S. farming, has trended toward fewer but larger farms since the 1980s, when organic milk was available only at farmers markets or specialty grocers and the milk came from small-scale dairy farms selling to a local cooperative. Now organic dairy products are widely distributed by mainstream grocers and mass retailers including Costco, Target and Walmart. But much of those companies' store-brand milk comes from dairies with thousands of cows maintained in immense confinement operations.

Kastel says that style of farming is contrary to what the founders of the organic movement envisioned and what consumers believe they're buying. His group on Thursday is releasing an updated Organic Dairy Scorecard, which will rank 160 brands evaluated for their organic practices including quality of pasture, how frequently cows graze and how often they're milked.

A spokeswoman for Aurora Organic Dairy, the industry's largest supplier to grocery chains such as Costco, Safeway, and Walmart, said activists who believe organic food should come from only small producers are the primary critics inaccurately portraying large-scale organic production.

Sonja Tuitele said the company's farms have more than 10,000 acres (4,046 hectares) of organic pasture for grazing and the farms exceed minimum requirements for grazing days and percent of diet from grazing.

The company has nine barns in Colorado and Texas with about 26,000 cows. The largest has 4,400 cows and the smallest, 900 cows. Aurora CEO Scott McGinty said in a statement released in April that the company maintains two USDA accredited certifiers for each farm.

"A second organic certification is a voluntary quality assurance step to ensure our farms receive more frequent inspections and measurement of compliance," he said.

Competition from large operations combined with plummeting dairy prices in the past four years have left organic dairy farmers either barely squeezing out a profit or in most cases losing money. It has accelerated the loss of smaller farms.

The U.S. Department of Agriculture reported in February that the number of U.S. dairy farms, including organic and conventional fell nearly 4 percent last year from the previous year to 40,219. The number of dairy farms declined 32 percent in the last decade.

For Patti and Brian Wilson, the changing industry has soured the profitability at their 600-acre dream dairy farm in Orwell, Vermont, they converted to organic 16 years ago. Milking their 50 cows has become unprofitable, said Patty, who was an agronomist with the USDA before she began farming full time.

"We just put an ad out listing our herd for sale," she said. "It's been a slow decline, kind of a slow death."

Southern Iowa organic dairy farmer Francis Thicke's strategy is to work with other farmers to create the Organic Farmers Association, a grassroots group focused on organic policy issues. They have launched the Real Organic Project, an effort to create an additional label that will be placed on packaging to tell consumers that the products meet traditional organic standards. A pilot project this year will have 50 farms with products carrying the Real Organics label.

In addition to meeting USDA certification requirements, they must meet the project's standards, including that produce has been grown in soil and not hydroponically and that animals have access to the outdoors.

Thicke, who has been in organic farming since the 1970s, walks among 85 docile Jersey cows on his 730-acre (295-hectare) Radiance Dairy farm near Fairfield as they lounge under a grove of trees on a sunny summer day, casually walking and grabbing mouthfuls of thick green grass. He sells 2,000 gallons (7,570 liters) of organic milk a week in the form of milk, cheese and yogurt to nearby restaurants, grocery stores and a private college.

"Basically, it's just bringing organic back to the roots that the pioneer organic farmers envisioned," Thicke said of the Real Organics label effort.

David Pitt, *Associated Press*, 9 August 2018

The world's largest vertical farm will be in Dubai

The largest vertical farm in the world, with a production equivalent to that obtained from 365 hectares, will start to be built in November 2018 in the vicinity of the Al Maktoum International Airport, in Dubai World Central, as reported by the website of the Emirates airlines.

To carry out the project, Emirates Flight Catering (EKFC) and the US firm Crop One (the world's leading vertical farming operator) have created a joint subsidiary with an investment of 40 million dollars (about 34.6 million Euro).

By December 2019, the airline's catering firm, which supplies 105 airlines and 25 airport halls, hopes to offer its customers the first "green leaves", which will be grown without pesticides and minimum water resources.

When the vertical farm is in full production, the harvest volume will amount to almost three tonnes (about 2,700 kilos). According to the company, "these will have used 99% less water than outdoor crops."

The proximity of this farm to the points of sale and consumption also substantially reduces the carbon emissions associated with transport and will ensure the rapid delivery of fresh products, reaching customers within a few hours after the harvest.

Sheikh Ahmed Bin Saeed Al Maktoum, president and chief executive of Emirates, has said, according to the statement, that this agreement is an important milestone for the Emirates Group, for Dubai and for the United Arab Emirates (UAE)."

This investment "to build the largest vertical farming facility in the world fits in with the UAE's goal to achieve greater agricultural self-sufficiency." Moreover, the introduction of "innovative technology in the facilities also improves Dubai's position as a global hub for innovation."

EKFC executive director Saeed Mohammed stressed that with this project, "we'll have a guaranteed supply of high quality local fresh vegetables, while significantly reducing our environmental footprint."

For her part, the executive director of Crop One, Sonia Lo, has highlighted the proven profitability of their productions, because "we are farmers who resort to the most sophisticated plant science and our being selected after a 10-month search by EKFC validates our commercial model."

FreshPlaza, 28 August 2018

With sensors and apps, young African coders compete to curb hunger

From an app to diagnose disease on Zambian farms to Tinder-style matchmaking for Senegalese land owners and young farmers, young coders have been finding solutions to hunger in the first Africa-wide hack-a-thon on the issue.

Eight teams competed in the hack-a-thon, organised by the UN Food and Agriculture Organisation (FAO) and a Rwandan trade organisation in the country's capital Kigali this week.

Experts say keeping young people in farming is key to alleviating hunger in Africa, which has 65% of the world's uncultivated arable land, but spends \$35 billion a year on importing food for its growing population.

"In our families, agriculture is no longer a good business. They don't get the return," said Rwandan Ndayisaba Wilson, 24, whose team proposed a \$400 solar-powered device that can optimise water and fertiliser use.

"We believe that if the technology is good and farmers can see the benefits, they will adopt it."

Among the proposed solutions were an app that links aspiring farmers with land owners in Senegal and a Nigerian mobile platform that uses blockchain to help farmers demonstrate their creditworthiness to lenders.

The winner was AgriPredict, an app already operating in Zambia that can help farmers identify diseases and pests – including the voracious fall armyworm, which eats crops and has wreaked havoc in much of sub-Saharan Africa.

Farmers can access it directly from their phones or via Facebook. CEO Mwila Kangwa, 31, said the initiative came out of the twin disasters that hit Zambian farmers in 2016 – tuta absoluta, a tomato disease, and the fall armyworm.

"We noticed there were no tools whatsoever that will help farmers mitigate or prevent or even counter these diseases so we came up with this idea of creating a software to help farmers," he told the *Thomson Reuters Foundation*.

As winners, the Zambian team will receive coaching from the FAO to refine their product and an opportunity to meet potential funders and partners.

"What they brought was a technically sound solution ... and the ability to convey the message to young people by using, for example, Facebook," said Henry van Burgsteden, IT officer for digital innovation at the FAO and one of the judges.

The hack-a-thon was held during a conference in Kigali on ways to attract more young people to agriculture through information and communication technology tools.

High unemployment and the challenges of rural life mean many young people desert farming for the city, while ageing farmers struggle with climate change, poverty and poor infrastructure.

Thin Lei Win, *Thomson Reuters Foundation*, 25 August 2018

'Superfood' craze makes big business of Africa's baobab

Taerou Dieuhiou has been shinning barefoot up baobab trees in Senegal's southern Casamance region to collect the oblong fruit since he was 15.

Business has never been better. Inside the hard, green shell that dangles from the spindly branches of Africa's most iconic tree is a citrusy pulp that has become a popular "superfood" in the United States and Europe.

Rich in vitamin C, calcium and magnesium, it can be ground into a powder, mixed into smoothies or sprinkled on porridge. Coca-Cola's Innocent, UK yogurt maker Yeo Valley and US wholesaler Costco are among the major brands to embrace baobab.

The imposing tree dots the dry African savannah from Senegal to Madagascar and can live for over a millennium. It can store thousands of liters of water and grow trunks so thick that one South African tree became a pub with a dart board that could hold 60 people.

Until recently baobabs were only tapped for local use but in a major business shift a small network of producers and suppliers has pushed the fruit's profile abroad. While some experts question the baobab's sustainability, demand has taken off.

"It is a better price now. Now I make more for each sack," said the 31-year-old father of four. He climbs the trunks in ripped jeans and a t-shirt, gripping a long pole to dislodge the fruit from the outer branches. "It's all I have."

Exports of the hard-shelled fruit rose from 50 tonnes in 2013 to 450 tonnes in 2017, according to industry group the African Baobab Alliance. They are expected to reach 5000 tonnes by 2025, about 500 shipping containers a year. This would make it a \$400 million industry.

The transformation has started to bring in much needed revenue to African farmers. Baobab des Saveurs, a small company with buyers in Australia and Canada pays Dieuhiou up to 10 000 CFA francs (\$18) per sack, more than double what he received from local middlemen a few years ago.

Slaves shipped from West Africa in the eighteenth century wore necklaces of baobab seeds for luck and to remind them of home. Today it is used locally to treat liver disease and malaria in rural Senegal. Herders in Niger mix it with grains to make gruel.

Goblets are made from the fruit's empty shell, the bark is pound to make rope or cork, or flattened into roof tiles.

"The trunks are the bus shelter, water tank, lavatory, prison, tomb, hiding place, shade," said Thomas Pakenham, an arborist and historian who wrote a book about the baobab. "It is the great tree of the African village."

It is this history that makes the baobab so vital at home and so marketable abroad. The European Union approved imports of baobab in 2008 but business slowed in the credit crunch.

"People weren't interested in a new fruit from Africa," said Gus Le Breton, the chief executive of B'Ayoba, a Zimbabwe-based baobab producer. "There was a five-year hiatus."

Producers and retailers pushed back. They went to trade shows, gave out free samples, launched a #Makebaobabfamous campaign on Twitter.

In January, Yeo Valley started to sell a vanilla and baobab yogurt in Britain's biggest supermarkets. Costco this year introduced a breakfast bowl with baobab and acai, a berry from the Brazilian Amazon. Coca-Cola-owned Innocent released a baobab smoothie in 2016.

"I've got kids and I was looking for ways to kind of sneak some extra nutrition into their diet," said Dan Nessel, the owner of Limitless Good, a health food company based in Northampton, Massachusetts whose baobab sales tripled last year.

"The baobab...has six times antioxidants of blueberries, six times the vitamin C of oranges, more potassium in bananas, more calcium than milk."

Unlike coffee or cocoa found in abundance in Africa, baobab is not a plantation crop. It takes so long to mature that farmers rely largely on existing trees to harvest.

There is evidence that those trees are under threat.

In June, the journal *Nature Plants* published a paper saying that 9 of the world's 13 oldest baobab trees had died in the last 12 years. Some of the trees were over 2 000 years old and included South Africa's so called "pub tree".

Their decline was an event of "unprecedented magnitude" potentially linked to climate change, it said.

Dieuhiou has noticed a change.

"Normally the rain has started by now, but we have had only one storm," he said in July.

"I have to go to other villages. Before, there was enough right here."

Some producers have planted new baobabs while others have trained farmers to pick fruit without damaging trees.

Andrew Hunt, co-founder of London-based Aduna, which sells about \$500 000 worth of baobab products from fruit in northeast Ghana said villagers should nurture new plants.

"It is only when the trees are providing income that the communities themselves will...plant, nurture and protect baobab seedlings," he said.

In Casamance, baobab picker Ndella Badiane said she can afford to send her kids to school and buy them clothes since overseas interest reached her hamlet in a forest clearing.

"We are aware of the possibility that the baobab is becoming more and more rare," she said. "We pray that there is enough rain for the baobabs to be able to produce more."

Edward McAllister Mangoule, *Reuters*, 5 August 2018

Jury awards \$289M to man who blames Roundup for cancer

A jury's \$289 million award to a former school groundskeeper who said Monsanto's Roundup left him dying of cancer will bolster thousands of pending cases and open the door for countless people who blame their suffering on the weed killer, the man's lawyers said.

"I'm glad to be here to be able to help in a cause that's way bigger than me," Dewayne Johnson said at a news conference Friday after the verdict was announced.

Johnson, 46, alleges that heavy contact with the herbicide caused his non-Hodgkin's lymphoma. The state Superior Court jury agreed that Roundup contributed to Johnson's cancer and Monsanto should have provided a label warning of the potential health hazard.

Johnson thanked jurors "from the bottom of my heart" for their work, along with his lawyers and his family.

His was the first case filed by a cancer patient against the agribusiness giant to reach trial. It was expedited because court filings indicated that Johnson was dying. His victory may set the precedent for many others.

"A unanimous jury in San Francisco has told Monsanto: 'Enough. You did something wrong and now you have to pay,'" said Brent Wisner, Johnson's lead trial lawyer. "There's 4,000 other cases filed around the United States and there are countless thousand other people out there who are suffering from cancer because Monsanto didn't give them a choice ... We now have a way forward."

Monsanto has denied a link between the active ingredient in Roundup — glyphosate — and cancer, saying hundreds of studies have established that glyphosate is safe.

Monsanto spokesman Scott Partridge said the company will appeal. Partridge said scientific studies and two government agencies have concluded that Roundup does not cause cancer.

"We are sympathetic to Mr. Johnson and his family," Partridge said. "We will appeal this decision and continue to vigorously defend this product, which has a 40-year history of safe use and continues to be a vital, effective, and safe tool for farmers and others."

Johnson used Roundup and a similar product, Ranger Pro, as a pest control manager at a San Francisco Bay Area school district, his lawyers said. He sprayed large quantities from a 50-gallon tank

attached to a truck, and during gusty winds, the product would cover his face, said Brent Wisner, one of his attorneys.

Once, when a hose broke, the weed killer soaked his entire body.

Johnson read the label and even contacted the company after developing a rash but was never warned it could cause cancer, Wisner said. He was diagnosed with non-Hodgkin's lymphoma in 2014. "The simple fact is he is going to die. It's just a matter of time," Wisner told the jury in his opening statement last month.

But George Lombardi, an attorney for Monsanto, said non-Hodgkin's lymphoma takes years to develop, so Johnson's cancer must have started well before he began working at the school district. The U.S. Environmental Protection Agency says Roundup's active ingredient is safe for people when used in accordance with label directions.

However, the France-based International Agency for Research on Cancer, which is part of the World Health Organization, classified it as a "probable human carcinogen" in 2015. California added glyphosate to its list of chemicals known to cause cancer.

Johnson's attorneys sought and won \$39 million in compensatory damages and \$250 million of the \$373 million they wanted in punitive damages.

Paul Elias, *Associated Press*, 11 August 2018

It's in your food – can this herbicide commonly used in SA give you cancer?

A herbicide that is believed to cause cancer is widely in use in South Africa.

And, according to organic farmer Angus McIntosh, it can be found "in every loaf of bread sold in every shop in this country" and "in all processed foods, tinned foods and ready-made meals... consumed by most people every day".

Glyphosate, the key ingredient in Roundup, a herbicide used commercially and by private homeowners, is in the spotlight after a jury in the US found that it had caused terminal cancer and that its manufacturer, Monsanto, should pay damages amounting to \$289m (about R4.173bn) to former school groundskeeper Dewayne Johnson, who is dying of non-Hodgkin lymphoma believed to have been caused by his exposure to the herbicide.

Johnson's claim is one of 5 000 similar lawsuits against the company across the US, *Reuters* reported. In March 2015, the International Agency for Research on Cancer (IARC), as the specialised cancer agency of the World Health Organisation (WHO), concluded that "there is limited evidence of possible carcinogenicity (causing cancer) associated with glyphosate, which could result in non-Hodgkin lymphoma in humans".

On Monday, *The Independent* in the UK reported that Roundup could be pulled from British shelves following the US ruling.

A week ago, a court in Brazil suspended the use of products containing glyphosate in that country, *Reuters* reported.

Using a boxing analogy, McIntosh told *News24* "glyphosate is the Floyd Mayweather of herbicides".

McIntosh has been farming using organic methods on Spier wine farm outside Stellenbosch since 2008.

"There is no chemical that has been used more widely than glyphosate. The Johannesburg Zoo uses it to keep its paths clean, [the] Kirstenbosch Botanical Gardens uses glyphosate..."

But, more importantly, "most of the food sold in the world is produced using glyphosate", said McIntosh.

McIntosh wrote on his blog "glyphosate is sprayed on to all the grain crops that you eat or onto the food the animals that you eat, eat. Glyphosate bio-accumulates. Cooking does not kill glyphosate".

McIntosh claims some of the dangers the chemical poses to humans include that it "chelates micronutrients, damages your gut bacteria as it destroys their shikimate pathway and it damages the critical cytochrome enzymes".

Research done by Barend Koortzen for his master's in human molecular biology at the University of the Free State last year, confirmed the presence of glyphosate in a variety of foods bought at South African supermarkets.

"Studies have detected levels of up to 2.2mg/kg in HT [herbicide-tolerant] maize and 26mg/kg in HT soybean.

"Glyphosate is not removed from grain by washing, cooking or processing.

"As a result of this, glyphosate can also be detected in processed food products. It has also been found that glyphosate can be detected in animal tissue and urine after exposure to the herbicide through feed.

"Similarly, glyphosate has also been detected in the urine of humans, either as a result of occupational exposure, through diet and/or water," Koortzen found.

Mariam Mayet, director at The African Centre for Biosafety (ACB), told *News24* that glyphosate was unregulated in terms of how much of it was present in locally produced food and imported food.

The ACB approached the government in 2016 to ask that glyphosate to be banned.

"They said they couldn't because it had been given the thumbs up by the European Food Safety Authority.

"There's been this up and down between us and government on issues such as safety, the link to [cancer], the lack of testing and scientific studies, and the possible impact of ingestion by people who eat maize and soya.

"It's an issue that government doesn't seem to want to engage in in a meaningful way," Mayet said.

"There are many risks associated with glyphosate as it is used from nature reserves to school playgrounds. The issue is risks posed to farm workers, to the soil, to the environment in general, including water sources, and to people who eat genetically modified (GM) maize and soya."

Mayet said about 80% of maize consumed in South Africa was GM, while 100% of soya was GM.

Maize, in particular, is a staple food in South Africa.

"Then it becomes an issue of residues in the food and the accumulation in the body."

There are therefore multiple risks to the environment and ordinary people, said Mayet, who cited research by the ACB.

Speaking to *Deutsche Welle* (DW) last year, former researcher at the ACB, Hailee Swanby, said people who worked with the chemical often didn't wear safety gear and didn't understand the language that the instructions came in. Swanby told DW that she had seen people using their hands to mix it in open drums, storing herbicides in their kitchens and using empty containers to fetch water from the river.

'It becomes highly toxic and causes cancer'

Professor Michael Herbst of the Cancer Association of South Africa (Cansa) told *News24* that glyphosate was not toxic by itself.

"But as soon as you include glyphosate in a mixture [such as Roundup] it becomes highly toxic and it causes cancer – there is no doubt about it."

In a research paper published in December last year, authored by Herbst, Cansa recommended that:

- The department of agriculture, forestry and fisheries re-examine the conditions of approval of glyphosate in South Africa
- The national department of health investigate the health implications of glyphosate exposure in South Africa with a view to instituting control measures over its free availability
- Glyphosate exposure to humans, animals and the environment be limited as far as possible
- The indiscriminate spraying of glyphosate on unwanted plants (eg. cannabis) in rural areas be discontinued because indiscriminate spraying results in the destruction of cultivated fields of rural inhabitants which deprive them of self-sufficiency as far as food production is concerned

- Sufficient and adequate protective clothing and protective devices be provided to workers who may be exposed to glyphosate
- No planting of edible crops take place on soil sprayed with glyphosate until laboratory results indicates that the soil is totally free from any glyphosate residue
- All individuals who work with, or handle, glyphosate be informed of the potential dangers of glyphosate and be instructed on its safe handling
- The public be informed of the classification of glyphosate by the IARC as a probable carcinogen to humans (Group 2A)
- Additional research be conducted on the environmental and health effects of glyphosate in formulation within the South African context.

When approached for comment Monsanto SA issued the following response: "We are sympathetic to Mr Johnson and his family."

"This decision does not change the fact that more than 800 scientific studies and reviews – and conclusions by the US Environmental Protection Agency, the US National Institutes of Health and regulatory authorities around the world – support the fact that glyphosate does not cause cancer, and did not cause Mr Johnson's cancer.

"We will appeal this decision and continue to vigorously defend this product, which has a 40-year history of safe use and continues to be a vital, effective, and safe tool for farmers and others."

The South African Department of Agriculture, Forestry and Fisheries (DAFF) could not be reached for comment on Monday.

However, in a statement dated May 2015, following the IARC's reclassification of glyphosate, the department said: "All glyphosate-based products that are registered for use in South Africa have been through a robust chemical risk assessment process. Based on current risk assessments, glyphosate poses a minimal risk to users and the general public, provided it is used according to label instructions and safety statements.

"The DAFF, however, takes the IARC's findings very seriously and will examine the data and assessment done for the IARC classification and determine whether any regulatory action is necessary."

Riaan Grobler, *News24*, 14 August 2018

Court orders EPA to ban chlorpyrifos, a pesticide linked to brain damage in kids

A federal court on Thursday ordered the Environmental Protection Agency to ban a widely used pesticide that's been linked to learning disabilities in children and that former agency chief Scott Pruitt refused to take off the market.

The U.S. Court of Appeals for the 9th Circuit ruled in a 2-to-1 decision that the EPA offered "no defense" of its decision to delay a ban on chlorpyrifos — a move the court said violated the Federal Food, Drug and Cosmetic Act. The law governs pesticides and requires the EPA to ban chemicals from being used on food if they are proven to cause harm.

The agency has 60 days to finalize a ban.

The decision is a major blow to Pruitt, who signed an order in March of last year to allow chlorpyrifos, an organophosphate insecticide that has been used on crops such as broccoli to cranberries since the 1960s, to remain on the market for agricultural use. His decision defied the recommendation of EPA scientists.

Under the Obama administration in November 2015, the EPA proposed permanently banning the chemical on food crops, citing potential risks to human health.

But in March 2017, Pruitt reversed plans to ban the chemical in one of his first and most widely criticized moves as EPA administrator. The agency offered little explanation for the decision — Pruitt

claimed the Obama administration relied largely on studies “whose application is novel and uncertain, to reach its conclusions” — but said it planned to keep studying the health effects. Critics blasted Pruitt and President Donald Trump for putting corporate profits ahead of public health and safety.

In a joint letter to Pruitt in June, the American Academy of Pediatrics and Environmental Working Group, a nonprofit advocacy group, said they were “deeply alarmed” by his decision.

“EPA has no basis to allow continued use of chlorpyrifos, and its insistence in doing so puts all children at risk,” they wrote.

Chlorpyrifos, produced by Dow Chemical Co. and commonly known by its trade name Lorsban, is used in nearly 100 countries on more than 50 different crops. It was largely banned in 2000 for at-home use in the U.S. but continues to be widely used on thousands of American farms.

Annual testing reports by the Department of Agriculture show chlorpyrifos residues in nectarines, peaches, cucumbers and other crops. Studies have shown that children exposed to organophosphate pesticides, such as chlorpyrifos, have an increased risk for abnormal neurodevelopment, including persistent loss of intelligence and behavior problems. Even low-dose exposure to organophosphates, particularly in the womb, has been found to harm brain development, leading to higher risk of disorders like autism.

Pruitt spent much of his short tenure, which ended last month amid a mountain of personal and ethical scandals, deflecting questions about his refusal to ban the chemical. In contentious congressional hearings, he repeatedly downplayed the decision and said the research was continuing. At times, he even suggested the agency could instate the ban but gave no clear timeline for when that would happen.

The EPA did not immediately respond to a request for comment.

Environmental groups, many of which have been pushing for years for a full ban on the chemical, applauded Thursday’s ruling.

Marisa Ordonia, an attorney for Earthjustice, one of three environmental groups that sued the EPA in April 2017 to force a chlorpyrifos ban, said in a statement Thursday that the the court had ended “EPA’s shameful actions that have exposed children and farmworkers to this poison for decades.” Erik Olson, the senior director of health and food at the Natural Resources Defense Council, called the ruling a “victory for parents everywhere.”

“Some things are too sacred to play politics with—and our kids top the list,” he said in a statement. “The court has made it clear that children’s health must come before powerful polluters.

In May, Hawaii became the first U.S. state to ban the use of chlorpyrifos.

Chris D'Angelo, *HuffPost*, 9 August 2018

Bees get hooked on harmful pesticide: study

Bumblebees acquire a taste for food laced with a pesticide known to harm them, according to a study suggesting the chemicals pose an even greater threat to pollinators than previously thought.

In experiments, researchers showed that bees initially put off by sugar water containing neonicotinoids -- the most widely-used class of insecticide worldwide -- soon started seeking them out to the exclusion of untainted food.

The findings were published Wednesday in the journal *Proceedings of the Royal Society B*.

Neonicotinoids, earlier research has shown, disrupt the ability of bees to reproduce and lower their resistance to disease.

"At first, it appeared that the bees did avoid the food containing the pesticide," said lead author Andres Arce, a researcher at Imperial College London.

"However, as individual bees increasingly experience the treated food they develop a preference for it."

Even when the position of their feeders was switched, the pollinators made a beeline for the one laced with insecticide.

Neonicotinoids target nerve receptors in insects much in the way nicotine -- the addictive ingredient in tobacco -- does in humans and other mammals.

"Our findings... tick certain symptoms of addictive behaviour, which is intriguing given the addictive properties of nicotine on humans," said lead researcher Richard Gill, also from Imperial.

Unlike contact pesticides, which remain on the plant surface, neonicotinoids are absorbed by seeds and transported to leaves, flowers, roots, and stems as the plant grows.

Several countries have banned forms of the insecticide, mainly due to its impact on Nature's little helpers.

In the European Union, three neonicotinoid-based products will be off-limits in open fields starting on December 19. France has banned five chemical variants starting Saturday.

Canada recently announced it would phase out two neonicotinoids used on canola, corn, and soybean crops.

Widely used over the last two decades, neonicotinoids were designed to control sap-feeding insects such as aphids and root-feeding grubs.

In recent years, fears have been growing over the declining health of bees globally, and the possible role of neonicotinoids.

Pesticides have been blamed as a cause of colony collapse disorder, along with mites, viruses, and fungi, or some combination.

The United Nations warned last year that 40 percent of invertebrate pollinators -- particularly bees and butterflies -- risk global extinction.

AFP, 29 August 2018

US farmland values hit a record despite trade fears

While crop groups have sounded the alarm over US trade wars, here's one measure that shows part of the agricultural economy is still vibrant: US farmland values just rose to a record.

Average farmland values nationwide have increased 1.9 per cent to \$US3140 (\$4242) an acre so far this year from 2017, according to a report released by the US Department of Agriculture. The gain signals that investors are focusing on farmland as a longer-term investment, and may consider the trade tensions to be short term.

"There shouldn't be a decision made on current trade issues and lower commodity prices," said Randy Dickhut, senior vice-president for real estate operations for Farmers National Company, which manages more than 2 million acres in 28 states including Texas, Minnesota, Kentucky and Washington.

While the US disputes with China and other trading partners "enter into the mood, and maybe increase some caution in some buyers", investors are taking note that "good-quality land has held and increased its value", he said.

The economic health of US farmers is in the political spotlight as the key constituency for President Donald Trump bears a disproportionate share of damage in a trade war the White House has fuelled through tariffs on goods from China and elsewhere. Soybeans alone may lose \$US3.2 billion in value in the next year, according to an analysis of USDA data. Rising land values can help bolster farm balance sheets even if crop prices fall.

State by state, the picture is varied.

Missouri saw the largest gain in values, which includes farmland, cropland and buildings on agricultural properties. The figure rose 10 per cent to \$US3700 an acre. The Corn Belt region, which includes Missouri, remained the nation's most expensive, at \$US6430 an acre.

The biggest drop was in Kansas, where values declined 2.7 per cent to \$US1800 an acre. States that are major growers of wheat, including Minnesota, North Dakota and South Dakota, tended to see declines, while states dominated by pasture, such as the Southern Plains states of Texas and Oklahoma, saw gains. Nationwide, cropland values rose 1 per cent, while pasture increased 3 per cent.

The land gain comes at a grim time for farmer revenues. Farm income may drop 6.7 per cent this year to \$US59.5 billion, according to USDA forecast in February. That was before tariffs on US soybeans, almonds and other crops began to impact export revenue. The agency will update the profit outlook at the end of this month.

Alan Bjerga, *Bloomberg*, 2 August 2018

WAPA: EU expects biggest apple harvest in 10 years

The 28 countries of the European Union are expecting an apple harvest of 12,611,000 tons this year. This is 36% more than the last year's harvest of 9,251,000 and 13% more than the average of the past three years. These figures were announced on Thursday 9 August at the Prognosfruit Congress in the Polish capital Warsaw.

The harvest estimated for 2018 is the largest of the past ten years and is of similar size as the 2014 and 2015 harvests. The large Polish harvest of 4,480,000 tonnes in particular will have a major impact on the total European harvest. The expected Polish apple harvest is 56% larger than that of 2017 and 23% larger than the average of the past three years.

The Italian apple harvest is expected to increase by 29% to 2.2 million tonnes. France expects a 5% increase (1.5 million tonnes), while the German apple harvest is expected to be just under 1 million tonnes (+ 66%). Spain expects a lower volume with 473,000 tons less than last year. Only Spain, Portugal and Latvia expect lower volumes than last year.

The apple harvest in the Netherlands is estimated at 259,000 tonnes, 14% more than last year, but 12% lower than the three-year average. Belgium expects a 147% higher apple harvest with 217,000 tons of apples, but that is easily explained after the huge frost damage last year. Also in Austria, the apple harvest with an expected yield of 184,000 tonnes is a lot higher (+ 175%).

Golden Delicious remains by far the largest variety with an estimated production of 2,347,000 tons. The harvest of this variety is estimated 23% higher than last year and 3% higher than the average for 2015-2017. Furthermore, Gala plantings will increase by 15% to 1.46 million tonnes. The production of Jonagold (including Jonagored and Red Jonaprince) is estimated at 1084,000 tons. This is 71% more than last year and 12% more than the average for 2015-2017. The higher production compared to last year is mainly because Poland has started producing much more. The Boskoop harvest (Goudreinet) is estimated at 63,000 tonnes: 86% higher than last year.

The estimated production of Elstar is 335,000 tons. That is 26% more than last year and 4% less than the average production in the period 2015-2017. This is mainly due to higher Elstar production in the Netherlands and Germany. Production in Germany is 36% higher than last year, compared to 12% in the Netherlands. The Netherlands accounts for over 30% of European Elstar production this year.

NFO emphasizes that the estimates are for much less, but due to the drought it may be slightly lower still. The volume of apples suitable for fresh consumption is estimated to be slightly lower than average. Due to the drought a higher percentage of the product will end up in the processing industry. There is also a clean market and due to the early harvest the sales season is longer. China - the largest apple producer in the world - expects a 30% lower production than last year. This probably offers opportunities for exports from EU countries to markets that are otherwise served by China.

The European pear harvest is estimated to be 4% higher at 2.33 million tonnes, an increase of 4% compared to last year and 3% more than the average for the past three years. Italy, the largest pear producer in the EU expects a harvest of 741,000 tonnes, comparable to last year.

The estimate of Conference is 953,000 tons 9% higher than the production in 2017; that of Doyenné du Comice is at 74,000 tons, 26% higher than last year's production. The estimate of Abate Fetel at 333,000 tons is almost comparable to last year's production.

The Netherlands and Belgium account for approximately 65% of EU Conference production. There is serious drought in these countries, which means that the final production of Conference may be lower.

FreshPlaza, 9 August 2018

France toasts 25% wine production jump

French wine production is set to leap 25% this year in welcome news for vineyards after a disastrous cold snap in 2017, the government said Friday.

Agreste, the French agriculture ministry's statistics service, forecast that total production for the year would reach 46.1 million hectolitres, with harvests expected to be strong in the Champagne and Bourgogne areas.

Industry body FranceAgriMer gave a slightly more cautious forecast of 44.5 million hectolitres.

The figures are a return to normal after last year when icy spring weather froze vines from the Bordeaux region in the southwest to Alsace in the east, prompting an 18% drop to 37.2 million hectolitres.

This year, Languedoc-Roussillon, Corsica and the southeast are the only wine production regions where output is forecast to come in below the yearly average.

Growers across France have been battling mildew, a form of mould which thrives under conditions of heavy rain and storms seen in May and June.

The fungus "has been particularly aggressive in the basins on the Atlantic side and above all in the Mediterranean where it has hit harvests," Agreste said.

But the countrywide heatwave this summer slowed the progression of the mould and led to particularly strong harvests in Bourgogne and Champagne but also Beaujolais and Alsace.

The world's favourite celebratory fizz is set to see a bumper year with production up 39% and the Comite Champagne industry group predicting a "very good" vintage.

The Champagne harvest kicked off on Monday, about two weeks earlier than usual, as the first of the region's army of 120 000 pickers got to work in the region's Cote des Bar area.

Fin24, 26 August 2018

Climate change in Champagne has winemakers prepping for future

In the cold, chalky cellars deep underground at boutique Champagne house AR Lenoble, co-owner Antoine Malassagne shares his worries about the future of the region's world-famous fizz. Its classic style depends on crisp, zingy acidity and edgy, fruity, salty, mineral flavours, the result of deep, chalky soil and an until-now very cool climate.

But here's his question: How can the taste we love stay the same in the face of climate change?

So far, global warming has mostly put chilly Champagne in a climatic sweet spot, with average temperatures that ensure grapes ripen every year. But that's not the whole story, says Malassagne. Buds appear earlier, so spring frosts are more destructive. Warmer nights push maturity but also encourage new pests and diseases.

“Harvest is two weeks earlier than it was 20 years ago,” he explains on a very hot July morning at his winery in Damery, a 15-minute drive from Epernay, Champagne’s epicenter. “It used to be mid-to-late September. Now harvest often starts in August, as it will this year. But maturity during hot days and nights results in lower and lower acidity in the grapes, which means less freshness in the wines.” It’s also essential to Champagne’s taste: Acidity is what allows the wines to age.

In 2010, Malassagne started working on ways to make sure there was enough, well, zing in his future bubbly.

Champagne’s basic technique of blending different varieties (chardonnay, pinot noir, and sometimes meunier), vineyards, and vintages is the way winemakers compensated for poor years. Reserve wine from older vintages, for example, added depth, complexity, and richness when grapes didn’t fully ripen.

Now Malassagne is creating reserve wines to add “freshness,” too, by conserving them in magnums under natural cork to preserve brighter flavors. Some 70 000 of these are stockpiled in the long, dimly lit cellar. His two lively, delicious new cuvées — Lenoble Intense “mag 14” and Lenoble Grand Cru Blanc de Blancs Chouilly “mag14”, launched in May — are the first to incorporate these new reserves.

That’s only one of the many ways the Champenois are trying to maintain the sparkling style we know. Champagne Bruno Paillard is experimenting with covering the soil in vineyards with straw to prevent sunlight from destroying microbial life. Others are using winemaking techniques such as blocking malolactic fermentation (the second fermentation in the barrel that converts fresh-tasting malic acid to softer lactic acid) to bring greater perceived acidity to the wine.

Over the past two decades, Jean-Baptiste Lecaillon, the chef de cave at super-star Louis Roederer, has been systematically experimenting with everything from biodynamic viticulture to DNA analysis of yeast to gentler forms of pruning and reinventing winemaking techniques for chardonnay, all “to maintain what has made Champagne’s reputation.”

Roederer is the most innovative large producer in Champagne right now, and its superb wines are just getting better and better. The current non-vintage Brut Premier is the best I’ve ever tasted, and the just-released, brilliant 2008 (from an old-style, cool vintage with a late harvest that continued into October) has a precision and purity that seem almost electric.

One of Lecaillon’s solutions to climate change is to give more natural resilience to the vineyard ecosystem, so the vines can withstand new insects and more extreme conditions. “My conclusion is that with biodynamics, the vines have more energy,” he says. “With deeper roots, they’re better able to handle heat and drought, and the wines have more freshness.”

As we sample great vintages of Roederer’s top cuvée Cristal over lunch, Lecaillon sounded hopeful as he reminds me: “We invented bubbles to make up for unripe grapes. As farmers, our job, our life, our passion has been to adapt to climate change for hundreds of years. If the future heats up too much,” he jokes (I think), “we’ll just have to make Burgundy.”

How bad is the threat, anyway?

The 2003 heat wave, when France baked in record summer temperatures, was a wake-up call for many growers. Over the last six months in 2018, according to the Comité Champagne (CIVC) trade association, the region has been 2 degrees hotter than normal, and this will be the fifth vintage of the last 15 to start harvest in August.

Growers say it’s alarming that temperatures have risen so quickly. A European Academies’ Science Advisory Council (EASAC) report published earlier this year also described how droughts, fires, freakish weather patterns, and extreme heat waves have more than doubled since 1980. But despite heat and several violent hailstorms, this year will see a bumper crop — unless hail hits again before harvest.

Technology offers more potential solutions. Over breakfast in Reims, Thibaut Le Mailloux, the communications director of the CIVC, outlined one of the organisation’s long-term projects, a team effort with the French National Institute for Agricultural Research to invent new hybrid grape varieties that will ripen more slowly in warmer conditions and be more resistant to pests.

Since 2010, their scientists have been crossing pinot noir, chardonnay, and meunier, the three most important grapes with super-géniteur varieties. Starting with 4 000 seeds planted in the CIVC's experimental vineyard, several will eventually be selected that seem to have the resistant genes, and also— this is the catch — offer the same distinctive flavors and acidity. The next step will be to see whether wines made from those grapes age in the same way. All this will take a couple of decades.

Only seven grape varieties are permitted in Champagne. In addition to the three most important, four mostly forgotten grapes — petite meslier, pinot blanc, fromenteau, and arbane — may gain prominence in the future. Lean, green petit meslier grapes, for example, retain huge acidity, even in very hot vintages. Family-owned Champagne Drappier is one of a handful of wineries reviving these.

What about carbon cutting?

The CIVC first assessed the industry's carbon footprint in 2002. Since then, the region's growers have significantly cut emissions, taken to recycling all the water used in wineries, reduced pesticides by 50%, and begun using lighter-weight Champagne bottles, the equivalent in emissions of removing 8 000 cars from the road each year.

Future-focused Drappier became the first Champagne house to be carbon-neutral, and in 2017 began using a bottle made from 87% recycled glass. To encourage electric vehicle use, it has set up charging stations.

The younger generation, such as Cedric Moussé, who manages his eponymous family winery, has a heightened sensibility about climate change. Moussé was 23 when the CIVC began talking about producers reducing their carbon footprints.

"There are 1 000 small things we can do," he says, as he walks me through his eco-conception of a winery. "I think about every choice, from how to plant vines, so grapes take more time to mature, to using bottles, labels, shipping boxes and machinery produced less than 50 miles away." But will it be enough?

Elin McCoy, *Bloomberg*, 6 August 2018

2018-2022 expected to be abnormally hot years

The worldwide heatwave this summer makes 2018 a particularly hot year. And the next few years will be similar, according to a study led by Florian Sévellec, a researcher at the Laboratory for Ocean Physics and Remote Sensing (University of Brest) and at the University of Southampton.

Using a new method, a study, published in the 14 August 2018 edition of *Nature Communications*, shows that at the global level, 2018-2022 may be an even hotter period than expected, based on current global warming.

Warming caused by greenhouse gas emissions is not linear. It appears to have lapsed in the early 21st century, a phenomenon known as a global warming hiatus. A new method for predicting mean temperatures, however, suggests that the next few years will likely be hotter than expected.

The system, developed by researchers at CNRS, the University of Southampton and the Royal Netherlands Meteorological Institute, applies a statistical method to search 20th and 21st century climate simulations made using several reference models to find 'analogues' of current climate conditions and deduce future possibilities. The precision and reliability of this probabilistic system proved to be at least equivalent to current methods, particularly for the purpose of simulating the global warming hiatus of the beginning of this century.

The new method predicts that mean air temperature may be abnormally high in 2018-2022; higher than figures inferred from anthropogenic global warming alone. In particular, this is due to a low probability of intense cold events. The phenomenon is even more salient with respect to sea surface temperatures, due to a high probability of heat events, which, in the presence of certain conditions, can cause an increase in tropical storm activity.

5-year drought raises questions over Israel's water strategy

For years, public service announcements warned Israelis to save water: Take shorter showers. Plant resilient gardens. Conserve. Then Israel invested heavily in desalination technology and professed to have solved the problem by tapping into the abundant waters of the Mediterranean Sea. The once ubiquitous conservation warnings vanished.

Now, a five-year drought is challenging that strategy, as farmers struggle and the country's most important bodies of water shrink.

It's a confounding situation for a country that places itself on the forefront of desalination technology in an arid region, where water is a key geostrategic issue that has its own clauses in peace agreements.

"Nobody expected five years of drought in a row, so despite our desalination capacity, it's still a very, very grave situation," said Yuval Steinitz, Israel's minister of energy.

With severe drought afflicting South Africa, a thirsty invasive plant species has almost drained the Atlantis Aquifer, one of the two natural groundwater reservoirs supplying Cape Town.

Some say Israel's technological prowess may not be enough to overcome the forces of nature.

Situated in the heart of the Middle East, Israel is in one of the driest regions on earth, traditionally relying on a short rainy season each winter to replenish its limited supplies.

Years of decreased rainfall have reduced the Sea of Galilee, Israel's main natural water source, to some of its lowest recorded levels, and Israel has stopped pumping water from it to its national system.

The current drought has also dried out some tributaries that feed into the Jordan River, which flows south into the Sea of Galilee then squiggles 360 kilometers to the lowest place on Earth, the Dead Sea.

The biblical bodies of water are crucial to the survival and stability of Israel, Jordan and the Palestinian territories, but they are increasingly drying up, largely due to climate change, growing populations and the greater use of water for agriculture.

In a bid to achieve water security, Israel has opened five desalination plants since 2005 and plans to expand that effort in the coming years. Roughly 40% of Israel's drinking-quality water now comes from desalination and is expected to hit 70% in 2050.

When the drought was in its infancy, Israel greeted it with a shrug, pointing to its massive investment in desalination. But the tone has changed recently, and over the last few months a televised ad again has pleaded with Israelis to save water because — rehashing a tagline from previous campaigns — "Israel is drying up."

Critics say water conservation — a crucial measure in semi-arid Israel — has been sidelined in favor of desalination.

"Israel definitely put conservation on the backburner. As soon as desalination plants were up and running there was this false sense of security," and water consumption rose, said Sarit Caspi-Oron, director of the water department at the Israel Union for Environmental Defense, an advocacy group.

"Desalination doesn't make up for everything, and when groundwater is suffering from drought and the Sea of Galilee is suffering from drought, you need to conserve," said Caspi-Oron.

In the past, Israel has imposed taxes on water use during droughts and has promoted the use of water-saving devices. But there are no plans so far to pursue the measures this time around.

Desalinated water reaches Israeli households in the country's most populated region along the coast as well as some inland residents. But in northern Israel, residents still rely on rapidly shrinking natural sources. So far, their intake has not been limited.

Once bubbling brooks in Israel's north have been reduced to a trickle. Officials at the historic Tel Dan nature reserve say the springs there will be dry within two months, which could negatively affect tourism in the region.

Among the first to feel the drought's sting have been farmers in Israel's Galilee region. Israel has imposed a limit on the amount of water they can use, which has threatened an already tenuous livelihood and forced many to rethink their crops.

Israeli farmer Ofer Moskovitz can typically grow more than one crop each year, but for the first time he has chosen not to plant his wheat crops and is only growing avocados. Even that change is proving a challenge.

"If I don't water the avocado trees for one day they start getting weak. If I don't water them for a year, 20 years would go down the drain," he said.

The existing infrastructure makes it impossible to deliver desalinated water to farmers in the north, said Caspi-Oron.

There are other reasons not to bank on desalination. The plants require immense amounts of energy and are costly to build and operate. Relying so heavily on desalination also creates a potential security risk, as an attack on the plants could potentially knock out large portions of the country's water supply.

Still, Israel is keeping the technology a priority. The government passed a plan in June to tackle the drought, with its first objective to increase the amount of desalinated water. It also called for springs and tributaries to be rehabilitated and plans to add desalinated water to the Sea of Galilee starting next year, despite criticism from some that this could disturb the balance of minerals in the lake.

Israel is optimistic that the drought can be addressed with a little ingenuity.

The drought "will be solved, there is no question," Steinitz, the energy minister, said. "This area is not new for us. We simply resume our historic tradition to focus and find developing water solutions."

Associated Press, 4 August 2018

Germany faces worst harvest in 24 years after extreme drought

Germany is likely to harvest its smallest crop in 24 years, meaning that local supply will fall short of demand.

The European Union's second-largest grower will produce 36.3 million metric tons of grains this year, 20 percent less than a year ago and the least since 1994, according to German farm cooperative association DRV. Production of wheat, Germany's main crop, will drop 19 percent to below 20 million tons.

"The German grain harvest will be below its domestic consumption for the first time in a long while this year," the organization said in an emailed statement Wednesday.

Dry weather stretching from the U.K. to Russia has curbed crop development, prompting analysts to cut their forecasts for this year's harvests. In Germany, extreme drought in the past few months has hurt crops from wheat to barley, leading to shortages of animal feed and pushing some farmers closer to bankruptcy.

The drought could cost German farmers at least 2 billion euros (\$2.3 billion), according to the nation's GDV private insurers' lobby. The damages across the bloc of 28 nations have led the EU to extend aid to farmers and relax key environmental rules in some countries.

The biggest harvest declines are expected in corn, with output set to slump 49 percent this season to 2.3 million tons, the DRV said. Barley production will fall 13 percent to 9.48 million tons.

Agnieszka De Sousa, *Bloomberg*, 8 August 2018

Heatwave ravages European fields, sending wheat prices soaring

Searing heat has devastated wheat fields across northern Europe while a combination of dry conditions and extreme rain in the Black Sea have hit output estimates, with prices soaring on fears of further crop damage.

Evidence of serious harm to crops is growing as harvesting heads north in Germany, the European Union's second largest wheat producer, and in Scandinavia, prompting further cuts to estimates for the 28-member bloc.

"The situation is catastrophic in northern Europe," Strategie Grains head analyst Andree Defois said on Thursday.

The consultancy last week cut its forecast for this year's soft wheat harvest in the EU, collectively the world's largest wheat grower, below 130 million tonnes, a six-year low, and Defois said it could revise the estimate again.

France, the EU's top producer, has also experienced extreme weather, prompting forecasters to cut their estimates to around 34 million tonnes from 36.6 million harvested last year.

Scandinavia and other Baltic states have also suffered, with Sweden's wheat crop seen falling 40 percent while in Britain, where wheat crops are expected to fall to a five-year low, farmers are anxiously awaiting results as the harvest moves north.

"It's far worse than we expected," Sebastien Poncelet, analyst at Agritel said. "It has been months since it has rained in some parts of northern Europe and in Germany there should be no rain for at least another two weeks."

As harvesting progressed north Agritel revised its estimate for the European all-wheat crop by 3 million tonnes in the past week to 136.6 million tonnes, down 15 million on year, Poncelet said.

Reacting to the crisis, the European Commission said on Thursday it would speed up payments to farmers hit by extreme drought and allow them to use fallow land that normally would not be used for production to feed their livestock.

Wheat prices have surged more than 20 percent on European and U.S. markets in the past three weeks on mounting worries over global wheat supplies. Prices were also supported by a severe drought hitting crops in Australia.

Euronext milling wheat futures hit a more than five-year high of 214.50 euros (\$249.36) per tonne on Thursday.

Overall output is seen falling to five-year lows, the International Grains Council said last week after lowering its forecasts for the EU's top four producers, France, Germany, Britain and Poland.

The wheat rally is reviving memories of 2007/08 when surging prices prompted a food crisis. But analysts say high stocks and other grain crops could compensate for part of the shortfall.

Although a further rally in wheat could eventually inflate consumer prices, said Abdolreza Abbassian, chief economist at the United Nations' Food and Agriculture Organisation (FAO), the impact should be curbed by stocks from 2017's hefty harvest.

Germany's wheat crop, wilted by the highest May temperatures since 1881, is expected to shrink 25 percent this year, farmers' association DBV said.

The damage could see one of Europe's largest wheat exporters needing wheat imports in the coming year and has led to DBV calls for around 1 billion euros in drought aid.

Crops have not been as badly damaged in France, where harvesting had already started as the heatwave hit, and its wheat exporters are now seen as the main beneficiary of their neighbor's weather woes.

U.S. farmers could also benefit - potentially toppling Russia as the world's leading exporter, analysts said.

In the Black Sea region, crops have been hurt by both dry weather and pouring rain, hitting grain quality.

Quality concerns are key in Russia, as it means less wheat of milling or bread-making quality to offer on world markets.

"It is basically clear that the harvest will not reach the last year's record but it is still going to be relatively large," said Arkady Zlochevsky, head of the Russian Grain Union.

"The problem is mostly related to the quality."

Strategie Grains sees the Russian wheat harvest falling 18 percent this year, Defois said. Russia harvested a record 85.7 million tonnes wheat crop in 2017, durum wheat included.

In Ukraine, which exports the vast majority of its output, the wheat crop was seen falling up to 16 percent to 22-23 million tonnes after a spring drought and torrential rains in summer, the country's farm minister said.

Output in Romania, the EU's third largest wheat exporter, should fall at least 20 percent on the year, Laurentiu Baci, President of the farmers association LAPAR said.

"Output drops could be even bigger than that, day by day that percentage is increasing and situation in the field is degrading," he said. "Rains have not stopped for a single day."

Sybille de La Hamaide, Polina Devitt & Michael Hogan, *Reuters*, 2 August 2018

Swiss army airlifts water to thirsty cows in drought-hit pastures

Swiss army helicopters began airlifting water on Tuesday to thousands of thirsty cows who are suffering in a drought and heatwave that has hit much of Europe.

Large red plastic containers hung from the bottom of the Super Puma helicopters carried the water to farms in the Jura Mountains and Alpine foothills.

Some 40,000 cows graze in the summertime in high-altitude pastures in Vaud canton (state) in western Switzerland and each needs up to 150 liters (40 gallons) of water a day, authorities said.

Two large basins have been filled with water to allow farmers with land accessible by road to fill up their tank trucks, they said.

Several dozen farmers have called a special hotline to request help from the helicopters since the emergency operation was announced last Friday.

"I've been renting this pasture for 13 years now. We had to airlift water sometimes but never that much," Gregoire Martin, who runs a farm with 68 cows and 90 head of young cattle at Le Culand pasture in Rossiniere, told *Reuters Television*.

"We already used the army's helicopter two years ago but in the long term we cannot go on like this," he said.

Switzerland will cut import tariffs on livestock feed and offer interest-free loans to help farmers deal with the drought, the federal government said on Monday, amid a heat wave that is killing off fish in the Rhine.

"The situation is very worrying because Switzerland has not known a drought like that ... since 1921," said Philippe Leuba, head of economy and sport for Vaud, who attended Tuesday's operation.

Cecile Mantovani, *Reuters*, 7 August 2018

Sky-high straw prices hit European livestock and dairy farmers

Livestock and dairy farmers across northern Europe are paying soaring prices for straw used in food and bedding for cattle, as hot, dry weather across the region reduces crops.

The higher bills put further pressure on farmers already facing one of their toughest summers yet; many have had to buy more hay for fodder because the grass on which their herds normally graze has not grown. Some predict thousands of pounds in extra costs even for small herds, leading to an overall loss for the year.

"If you look at the price of fodder and straw I would be fairly confident that this year we will lose money [on cattle]," said David Barton, who farms in the normally lush Cotswolds in central England. Wheat straw that would usually cost £35 a ton is nearly £100 a ton. Barton will have to pay about £80 a day to feed his 173 cattle as there is no grass left.

Barton estimates extra spending of about £7,000 over three months. The largest cost, however, will be the loss of meat production as his cattle will not put on as much weight.

"They have sufficient food but for them to really grow [as much as in a normal year] they need grass, and currently we don't have any. The loss of production will be significant," Barton said.

Part of bigger problem

The straw shortages are part of a broader problem of reduced grain crops across Europe and other key producing regions, amid high temperatures and low rainfall. In Germany, straw crops have wilted under a combination of drought and the highest July temperatures since 1881, with shorter stalks reducing straw crop yields 20%-40% in the northern state of Schleswig-Holstein. "We are lacking an enormous amount of straw, both for feed and bedding," said Peter Levsen Johannsen, CEO of the chamber of agriculture in Schleswig-Holstein.

"There are regions in which straw is already more expensive than grain," he added.

Analysts said rising input costs could lead to higher store prices. However, retailers are more willing to raise prices for some products than others.

John Lancaster, head of EU dairy consulting at INTL FCStone, said retailers liked to keep liquid milk prices stable but may raise them for butter or cheese.

Reuters, 10 August 2018

Swiss cows get too fat for their own good

As parched pastures force farmers across Europe to purchase expensive feed crops for their hungry herds, a Swiss dairy association may have part of the answer: smaller beasts.

New Swiss Cow, a group advising about 100 farmers, is trying to reverse 50-year-old push for bigger animals in Switzerland, which it says was based on the false premise they would boost economic output by producing more milk. While it's true the livestock long favored by Swiss farmers churn out more milk, smaller cows do it more efficiently by using proportionately less feed and space, according to the association. They also require fewer visits from the vet than their genetically-enhanced cousins, New Swiss Cow said.

"Cows bred for maximum milk output are more expensive than smaller cows, as they need more space in the shed, more fodder and are more prone to diseases," said Michael Schwarzenberger of New Swiss Cow.

Since the 1960s, Swiss cows have bulked up to as much as 800 kilograms (1,764 pounds) by using semen from American bulls, some of which originally came from central Switzerland. Almost half the nation's 537,000-strong dairy herd are fawn-spotted Simmental, which were crossbred with U.S. Red Holstein. That crossbreeding helped to more than double the average annual output per animal to 7,400 liters (1,955 gallons), according to the producers association Swiss Milk.

Still, smaller animals of 500 to 600 kilograms can produce a proportionally greater 6,000 to 7,000 liters of milk, according to New Swiss Cow's Martin Huber, who teaches at a farming institute in Salenstein, near Lake Constance. That rationale applies to other breeds of cow and beyond Switzerland's borders, he said.

However, in addition to the economics, there's another reason big isn't always beautiful in Switzerland, according to the country's main farmers' union. Lighter cows can more easily reach alpine pastures, said Sandra Helfenstein, a spokeswoman for the Swiss Farmers' Union.

“The ideal cow looks different in every country,” said Helfenstein. “Every farmer tries to maximize food utilization and with three-quarters of Swiss land being grassland, having to import concentrated feed is leading to higher costs.”

Those challenges are also being faced in neighboring Germany, where extreme drought and heat over the past few months have ruined pastures and crops, setting the country on course for the smallest harvest in 24 years. That means Europe’s second-largest grains grower will turn to costly imports to feed cows and pigs this year.

Eastern Switzerland has experienced the driest summer on record, and farmers all over the country have been forced to bring their animals down early from the mountains as pastures are depleted, said Reto Burkhardt, a spokesman for the country’s milk producers’ association.

“Scarcity and instability leads to speculation on the grain markets, affecting all farmers in Europe,” said Burkhardt. “We have to live with the weather but it will definitely affect Swiss farmer’s cost base.”

Mara Bernath, *Bloomberg*, 21 August 2018

Europe's scorching summer has caused a crisis for dairy farmers

Ireland’s famous green pastures and cool climate are a perfect environment for grazing dairy cattle -- but not this year.

The sweltering summer turned lush fields brown and led to shortages of fodder for the country’s millions of cows. Months of drought and heat have also caused problems across the European Union, the top milk exporter. Farmers from Ireland to Germany have had to cull herds or stop milking months early.

For the EU’s \$12 billion dairy industry, parched fields have raised animal-feed costs, squeezing farmers’ profits. Ireland’s Agriculture and Food Development Authority expects dairy farms to earn half as much as last year. The feed situation could become critical and milk production may drop in the coming months, according to Arla Foods, the Nordic region’s biggest dairy company.

“In July, we brought in grass that should have been for winter feeding,” said Pat McCormack, who has 100 dairy cows in Ireland’s County Tipperary, where he’s worked for 21 years. “For a farmer with no grass, no silage, no money and kids going to college, it’s a big mental challenge.”

Things have become so bad that cooperative Arla on Thursday said it plans to take the unprecedented step of paying its entire profit to farmers as they face pressure from the drought. The EU has also moved to help farmers battling fodder shortages, such as accelerating payments or easing land rules.

In Ireland, snow at the start of the year soaked fields so much that farmers began dipping into fodder reserves before the drought then hurt grass growth, causing them to use up next winter’s supplies this summer. Some have had to buy feed at extra cost with no crops of their own left to feed cattle.

Those who couldn’t afford to do that have culled herds. Since June, about 16 percent more cows than last year have been slaughtered weekly, according to Ireland’s agriculture department. In Germany, culling is up as much as 50 percent from a year earlier, farmer’s group DBV estimates.

While milk output isn’t directly proportional to herd size and it’s still too early to reliably assess the impact on production, the DBV says milk deliveries in eastern Germany may drop 10 percent from a year earlier. One Irish farmer estimated that daily losses total about 10 euros (\$11.70) per cow.

The heat has also directly affected cattle. While a cow produces about 40 liters of milk a day, hot weather can cause output to halve and take time to recover, said Peter Paul Coppes, a senior dairy analyst at Rabobank International in Utrecht, Netherlands. Farmers have to pay extra for more nutritious feeds if they want to boost productivity.

The additional costs and reduced output come as EU milk prices are down about 4 percent from a year ago, further squeezing farmers. In Denmark, which accounts for about 8 percent of EU dairy

sales, the heatwave's impact on dairy could hurt the country's agriculture sector by as much as \$1 billion this year and raise milk prices in the next six months, Danish agricultural group SEGES said. The dairy industry could face further problems even with more favorable weather, because the heat can impact bovine fertility, the scale of which won't be clear for nine months, said Chris Gooderham, a dairy analyst at the U.K.'s Agriculture and Horticulture Development Board. "This is all going to lead to a financial crisis in the Irish dairy sector unless we see significant upward momentum in the product price," said John Robinson, a dairy farmer with 130 cows in County Kilkenny in Ireland's southeast. "Christmas could be fairly bleak."

Elizabeth Burden & Lucca De Paoli, *Bloomberg*, 31 August 2018

Australia's drought-hit farms like lambs to the slaughter

Danny Stork, a livestock farmer in Glen Oak, 180 km (110 miles) north of Sydney, has 20 bales of hay left for his 100 head of cattle. He is now feeding them light rations in the hope the winter drought breaks.

If it doesn't - and weather forecasts suggest it won't - he will run out of feed and water within weeks, leaving him little option but to send his livestock to the abattoir.

"The dams are dry after months of little rain - we are in survival mode, hoping for a break," said Stork. "If it doesn't (rain), I will have to sell all the livestock, it is that serious."

The drought in Australia's east, one of the worst on record, is impacting every area of rural life, often with global trade and price implications.

Already many cattle graziers are being forced to sell stock they can no longer feed.

Australian farmers slaughtered 659,000 head of cattle in June, the highest monthly figure in three years, according to government data published on Tuesday.

For the time being, strong U.S. demand is absorbing the extra supply, keeping prices 10 percent higher than their average over the last eight years.

But the United States has already amassed more than 2.5 billion pounds of excess beef, pork and other meats in cold storage facilities, according to U.S. data, and may soon ease off buying.

"The big concern is what happens after the northern markets begin to wind down," said Matt Dalgleish, trading manager at agricultural consultant Mecardo.

Other farmers are also suffering.

Australia - the world's fourth-largest wheat exporter - is expect production of its staple grain fall to a decade low as dry condition stymie yields.

Quality is also low as the dry weather bites, a key driver in benchmark global prices soaring to a three-year high this week.

Wool farmers in Australia, who provide about 90 percent of the world's exported fine-wool used in clothing manufacturing, are struggling to feed flocks and meet the current record demand for wool.

Some Australian farmers are opting to cull their dairy herds due to lack of feed, forgoing years of income.

"We are financing dairy farms at the moment and we have seen a lot of dairy cows going into slaughter for beef," said Adrian Redlich, chief executive at Melbourne-based fund manager Merricks Capital.

Even if farmers receive significant rain soon, Australia's cattle industry is in for a period of rebuilding. The size of Australia's national herd is expected to hit a record low, data from Australia's chief commodity forecaster shows, while the rebuild will prolonged as ever more breeding females are slaughtered.

Ninety-nine percent of New South Wales state, which generates one-quarter of Australia's agricultural production, is currently in drought, according to the NSW government.

The big dry is also evident in the northern state of Queensland, and is now creeping into the southern states of Victoria and South Australia, which have been providing emergency animal feed for farms in the east.

Rocketing demand for feed, including low-quality wheat, barley and hay, has led to price outbreaks and prompted the creation of unusual trade routes as feed travels thousands of kilometers on ships, trains and trucks to grain-starved mills and parched farms.

But supplies are running out.

"I have sold a significant lot of hay to New South Wales but I've got very limited tonnage left," said Garry Hansen, a grain and livestock farmer from Coomandook in South Australia, almost 1,500 km (930 miles) south-west of Stork's NSW farm.

"South Australia has pretty well been cleaned out of all of that."

After several months of bone-dry weather, some of NSW's worst-hit regions received rainfall in early August but larger amounts of moisture are needed to promote pasture regrowth.

Australia's federal and NSW state governments are providing more than A\$1.5 billion (\$1.1 billion) in drought relief packages, designed to offset the cost of feed and freight, and increase access to mental health services for farmers feeling the strain.

Longer term, graziers need a sustained break in the dry weather to allow dams to be replenished and grass to grow.

"Hay prices and barley prices have gone through the roof," said Duncan Whittle, general manager of strategy and development at *iGrain.com.au*, a company that matches grain buyers and sellers.

"We are seeing prices of A\$400 a tonne where 15 months ago they were A\$100 to A\$150."

He said animal feed shortages were hitting some of the same areas in NSW that last year sent hay to Queensland to help their northern counterparts in the grip of another drought.

Jonathan Barrett & Colin Packham, *Reuters*, 8 August 2018

Despair as crippling drought hammers Australian farmers

A crippling drought is ravaging vast tracts of Australia's pastoral heartlands, decimating herds and putting desperate farmers under intense financial and emotional strain, with little relief in sight.

While the country is no stranger to "big dries" and its people have long had a reputation as resilient, the extreme conditions across swathes of Australia's east are the worst in more than 50 years.

A smattering of rain earlier this week did little to ease one of the driest starts to the year on record, turning pastures to dust and destroying huge areas of grazing and crop lands.

With no feed, farmers have been forced to ship in grain or hay from other parts of the country to keep sheep and cattle alive, spending thousands of extra dollars a week just to stay afloat.

Some exhausted graziers spend hours each day hand-feeding their stock because the ground is too dry for grass to grow. Others have been forced to shoot starving cattle.

"They are shooting their stock because they don't want them to suffer. They are shooting them because they just can't afford to feed them anymore," Tash Johnston, co-founder of charity Drought Angels, told *AFP*.

Farmers have also had to ration water for their families and their herds because the dams on their properties are dry or nearly empty.

Many face the prospect of abandoning their homes altogether – some after being on the land for generations.

It is a scenario repeated across New South Wales state, where agriculture contributes more than Aus\$15bn (\$11bn) to the state's economy annually, employing more than 77 000 people.

Authorities on Wednesday officially declared the entire state in drought.

Conditions are similarly dire in Queensland to the north, where the state government says nearly 60% of land is suffering drought conditions.

"This would be the first time in two generations, back to the 1930s, that we haven't got a crop up in the autumn or winter time," Greg Stones, who runs a small farm of cattle, sheep, grain and crops near drought-hit Gunnedah, a five-hour drive north of Sydney, told *AFP*.

"The land is too dry... We've put cattle on the highway (near the farm) for the first time in my life (so) they get a bit of rough grass."

With farmers facing ruin, the national government stepped in last weekend, pledging a Aus\$190m package of immediate relief measures.

It includes two lump sum payments worth up to Aus\$12 000 per household, and changes to an assets test to grant support to thousands more farmers.

There was also cash for counselling and mental health services, with drought-related stress and even suicide a mounting concern, compounded by the isolation many feel on their remote properties.

"We are the land of droughts and flooding rains. We recognise that. It's a very volatile and often capricious climate and Australian farmers are resilient, they plan for drought, they are good managers but it can become really overwhelming," said Prime Minister Malcolm Turnbull.

"They understand drought is part of the Australian climate and they manage for it, but this drought is longer and more widespread than any drought we've seen in over 50 years so that's why we've got to provide additional support."

NSW Farmers' Association president James Jackson welcomed the government measures, but cautioned it was vital to ensure ongoing support, particularly to address mental health.

Others said it was too little, too late.

"I think the only problem is it was probably a little bit late coming for some people. They didn't act fast enough," Col Barton, whose family has been on their farm east of Gunnedah since 1938, told *AFP*.

"All the climate gurus that know all about the weather still can't tell us when (the drought is) going to break. We've got no idea so we run blind. We've just got to plan and hope and pray that it rains."

Australia's weather bureau has warned there is no end in sight and the Red Cross has set up a relief appeal, while the Salvation Army is distributing food hampers.

It is not just farmers doing it tough, but also the towns that service them.

Murrurundi, some 300km north of Sydney, has received less than 170 millimetres of rain this year and could run out of drinking water within months.

Severe restrictions are in place, including three-minute showers and only two washing loads of clothes a week, with fears the town may need to truck in supplies.

Grazier Mark Wylie has spent Aus\$30 000 in the past six weeks boring for groundwater, to no avail.

Even if he or Murrurundi authorities find a water source, he told local media: "It's a finite resource, it won't go on forever."

Water diviner Glen Shepherd, who has lived in the town for more than three decades, said these were the driest conditions he had ever seen.

"It's shocking to see," he told *AFP*. "And the people in the city don't realise, or they are starting to realise now, everything does come off the land – the bread, the cereal, the milk.

"If the drought doesn't break, it's going to happen," he added, referring to farms going out of business.

AFP, 8 August 2018

Hundreds of thirsty cows swarm water truck in video that brings home Australia's awful big dry in stunning fashion – as 100 per cent of NSW is now affected by the drought

Hundreds of thirsty cows have been filmed swarming a water truck after their owner drove more than an hour to get water just to keep them alive.

The stunning footage, shot with a drone, comes as 100 per cent of NSW is declared drought-affected, and there is no end in sight to the worst big dry in Australia for decades.

Farmer Amber Lea, who uploaded the video, told the *Mercury* that her 1300 cattle simply would not be fed unless she collected the water.

'Watering points or allocated watering troughs were too low...mills had stopped pumping,' she said.

'There was no supply...we often have to drive 50 to 70 kilometres one way to get water for them'.

The NSW Department of Primary Industries' Combined Drought Indicator has revealed 38.7 per cent of NSW is now drought-affected, 38.2 per cent is in a drought, and 23 per cent of the state is suffering through an intense drought.

Zero percent is listed as non-drought or recovering from drought.

The NSW Government has announced a \$500million emergency drought relief package as the state suffers.

On Sunday, Malcolm Turnbull announced extra cash payments of up to \$12,000 for drought-stricken farmers through the allowance.

It comes as the Bureau of Meteorology revealed most of NSW has received less than 20 per cent of its usual rainfall since January, and Australia as a whole just experienced its warmest and driest July in 20 years.

It isn't expected to get any easier for farmers or other livestock currently suffering through unseasonably high temperatures.

Extreme temperatures have already been recorded in NSW and south-east Queensland this winter, leading to concerns a 'hot and deadly' summer is coming.

Sahar Mourad, *Daily Mail Australia*, 8 August 2018

Drought coming for Southern African Development Community

Southern African Development Community farmers have been advised not to sell their food stocks harvested last season as the region expects an extended dry spell this coming rainy season. SADC director for Food, Agriculture and Natural Resources, Domingos Gove, made these remarks on Saturday during a media briefing on the status of food security in the region.

According to Gove, the sparse rainfall received last season was influenced by 'La Niña'; it has negatively affected crop harvests in the region and a drought is expected to worsen this season.

He added that major maize-producing countries such as South Africa and Zambia also recorded declines in harvests in the last season, with yields decreasing by 23% and 34%, respectively.

This situation would thus threaten food security in the region, and farmers were advised not to sell their produce in order to save up for the expected drought.

"The food security situation in the region is good, but situations of food insecurity may occur in more vulnerable communities in countries such as Lesotho, Malawi, Mozambique, Namibia, Zambia and Zimbabwe," Gove said, adding that although crop prices are currently relatively low, they "may increase with the shortage of food production".

FreshPlaza, 14 August 2018

SA retailers get to grips with Namibia charter

SA retailers supplying products to Namibia have to abide by that country's retail charter, which aims to control access to the local market to allow for the development of local suppliers.

The Spar Group is among those finding it challenging to operate in Namibia because local supplies are not always readily available.

The retail charter was introduced by the Namibian government in 2016 to promote increased procurement of locally grown and manufactured goods. It has become the Achilles heel for SA retailers, which would largely have home products in their stores.

According to the Namibian Trade Forum, one of the main objectives of the charter is to increase the retail shelf space devoted to local products.

The charter aims to raise local procurement from 6% of purchases of all retailers, ultimately ensuring that 20% of products are sourced locally.

"Should there be a short supply of product, this often results in stores not having sufficient stock for at least two weeks, if not longer," said Mark Godfrey, group financial director at Spar.

Independent retailers connected with Spar are able to source up to 70% of their product requirements from local suppliers or manufacturers in Namibia. Spar's sourcing is done by the group's Namibian buying office in Windhoek.

"Suppliers see them on a regular basis and discuss retail product requirements for the stores in Namibia," Godfrey said.

"Trading arrangements are negotiated on behalf of our retailers and, once in place, retailers are encouraged to support them by placing orders directly on these suppliers for direct delivery.

"Spar manages the financial administration on behalf of the retailers, thereby also giving the suppliers further financial security of payment."

Pick n Pay, which has 38 stores in Namibia, has franchise partners that actively seek out Namibian products.

"Our franchise MD in Namibia is the chairman of the Retail Charter Council and we work constructively with government and communities wherever we operate," said David North, group executive for strategy and corporate affairs.

North said that in Namibia, Pick n Pay buys as much local product as it can obtain, particularly meat, fruit and vegetables.

A spokesperson for Shoprite, which has the largest store network of 152 stores in Namibia, said the group "is supportive of general transformation and opportunities for investment in local economies that aim to uplift the geographical areas and countries that we trade in and the people that we do business with".

Godfrey said the Namibian government has been involved in the matter "and we appreciate this as well as our retailers' commitment to support local suppliers where possible".

Palesa Vuyolwethu Tshandu, *Business Day*, 21 August 2018

'South Africa's agricultural outlook is grim'

A recent report from the Bureau for Food and Agricultural Policy (BFAP), points to current and future production difficulties within South Africa's agricultural sector.

The BFAP wrote about the agricultural output for 2018-2027; its analysis is based around food production, inflation and its effect on the South African consumer.

The research organisation points out that an extremely volatile local agricultural sector makes baseline estimates and forecasts a possibility, rather than a certainty.

BRAP report that while a depreciating exchange rate will assist South Africa's agricultural trade in the global market, dollar-based imports will become more unaffordable. Rising fuel prices coupled with a weakening currency pose huge threats to the agricultural sector, which relies heavily on machinery and transport vehicles as a foundation for sustainable production. Farmers will be forced to maximise efficiency in the coming years in order to remain profitable.

By far the biggest and most worrying cloud currently looming over the agricultural sector; the uncertainty regarding government policy on the issue of land expropriation without compensation, which has already halted private investment in farming.

While agricultural role-players anxiously await the inevitable implementation and subsequent effects of land reform, they're avoiding further financial investments. This will have a very negative impact on production, raising unemployment. Cost inflation will put further pressure on ordinary South African consumers.

Compounding local and global issues have already led to a steep rise in food prices. An increase in VAT, coupled with soaring petrol prices put further burden on the shoulders of consumers. Problems facing the agricultural sector have also had a knock-on effect on food prices, an effect which is due to worsen over the next 10 years.

Most worrying is the fact that the increases in food prices will restrict 54% of South Africa's adult population from having a balanced eating plan, unless they manage to cut back on non-food items.

FreshPlaza, 28 August 2018

Speed limits for fishing boats, relocating abalone farms, and other highlights from a brand new plan to make agriculture 'climate smart'

Climate-smart agriculture, or CSA, can help South Africa adapt to the harsh realities of climate change, the department of agriculture, forestry and fisheries (DAFF) says in a new draft strategic plan – and the time to start preparing is now.

The department published its draft Climate Smart Agricultural Strategic Framework on Friday. It is open for comment until early October.

A climate-smart agriculture plan should be "farmer-centred", the department said, "with government steering but not rowing the policy development boat".

The framework is intended to "guide actions at all levels of government, investors and development partners" in efforts to bring climate-smart agriculture into the mainstream.

The draft, as it stands, is a "negotiated balance between the scientifically sound, the diplomatically acceptable, politically relevant and the demands and realities of farmers, foresters and fishers", the DAFF said.

Here are some of the highlights from the framework.

Speed limits for fishing boats.

The framework includes several recommendations to limit the effort expended in fishing, including "fitting vessels with governors to limit maximum speed" and upgrading vessels to better engines.

The document stresses the use of fuel in fishing again and again, in various different ways, but makes only passing mention of fuel in agriculture, saying that smallholder farmers should be disincentivised from high fuel consumption, without any detail on how this should be done.

Relocating abalone farms.

Priority initiatives should include considering the relocation of fish farms at threat from rising sea levels, the framework drafts says.

"Particularly, this is will probably affect abalone farms."

Studying indigenous knowledge systems for tips.

Another priority action should be "gathering and understanding the vast body of knowledge which traditional communities, particularly those in hazard prone areas, have collectively generated on disaster prevention and mitigation, early warning, preparedness and response", the department says.

Livestock farmers should be encouraged to use "medication that draws from local indigenous knowledge", the framework suggests, in one of the few concrete examples of integrating traditional knowledge into policy, as the draft document says should be done.

Using social media and Wikipedia.

Climate-smart agriculture requires a lot of good data, the strategic framework says, on everything from health trends to weather patterns.

It also needs social media.

"Innovation information sharing platforms such as Facebook" and Wikipedia should be used to collect and store knowledge, the draft policy says.

"The knowledge generated and the information collected must be effectively managed and communicated through modern foras such as social media targeting youth."

Better plants and animals, though no mention of GMOs.

In 73 pages the draft framework never refers to genetically-modified organisms in any way, either positive or negative – despite being very clear on the need for new breeds of animals and plants.

South Africa should develop new livestock and fish breeds "not only for climate-resilience and sustainable productivity, but also for improving farming practices that reduce [greenhouse gases] emission," the document says.

It also recommends "breeding and screening" for traits such as early maturity, drought tolerance, the ability to withstand being submerged or exposed to salt, low glycaemic index, and high levels of carbon sequestration.

Smarter finance solutions, possibly underwritten by the government.

The draft policy recommends at least considering a whole range of finance interventions and tweaks to encourage climate-smart agriculture.

- A 10-year tax holiday for products that come from climate-smart agriculture, and subsidised loans for such efforts
- Payment for ecosystem services (PES), a system of incentives for landowners to restore degraded land and use resources sustainably
- Index-based agricultural insurance packages
- Government re-insurance to support rolling out crop insurance to smallholder farmers
- Guarantees, or insurance, against loss of harvest because climate-smart agriculture changes are implement.

Phillip de Wet, *Business Insider SA*, 7 August 2018

Orange River farmers witness Oriental fruit fly outbreak

Recently, several detections of the oriental fruit fly has been reported in the Orange River area within the ZF Mgcawu District Municipality in the Northern Cape.

The Department of Agriculture, Forestry and Fisheries announced earlier this year in February and April that several detections of this pest -also known as *Bactrocera dorsalis*- were reported at regular intervals between Groblershoop and Upington, including Grootdrink, Karos, Keimoes, Augrabies as well as Kakamas, areas alongside or close to the Orange River.

With citrus and grapes being the main fruit produced in the affected area, these detections pose a serious threat to production of these fruit crops as they are also preferred hosts of the Oriental Fruit Fly. This pest could have dire consequences for food security, yield reduction job losses, market restrictions, if not properly controlled.

The Department is implementing phytosanitary measures where infested areas are quarantined in terms of the Agricultural Pests Act, 1983. This method will be used to contain the spread of the pest in the affected area.

lol.co.za reports how members of the public are advised to not remove the fruit-fly trapping buckets placed along roadsides in production areas and other public areas.

All traders and transporters of fruit and vegetables that are hosts of the Oriental fruit fly must apply to the department for a removal permit if fruit from infested areas are removed or destined to be sold in the areas that are free from the Oriental Fruit Fly.

FreshPlaza, 31 August 2018

Tree-borer beetle found in Northern Cape pecans

South Africa has discovered the polyphagous shot hole borer, a tiny beetle that drills holes in trees and leaves a deadly fungus, in pecan trees in the country's Northern Cape province.

The beetle is a threat to a range of crops in South Africa including avocado, macadamias, peaches and oranges, as well as grapevines, the Department of Agriculture, Forestry and Fisheries said in an emailed statement.

"The pest bores into the wood, transmitting the fungal pathogen in the process and the entire tree may die because of the fungal rot," it said.

While chemical control, usually through injecting infested trees with fungicides and insecticides, may prove to be an effective control, it may be expensive, the agriculture department said.

Studies conducted in other countries indicated that "it is not a pest of concern for commercial citrus production," said Vaughan Hattingh, chief executive officer at Citrus Research International.

Alastair Reed & Felix Njini, *Bloomberg*, 29 August 2018

South African table grape industry returns to normal crop and positive growth

Good winter rains to date have largely broken the severe drought in the Western Cape. This positive outlook, linked to new plantings and new cultivars, brings the South African table grape industry back on its positive growth curve.

The updated and online vine census, together with a concerted effort by SATI to have all producers update their current vineyard status, allowed for the most accurate 'picture' of actual vines in the ground at just over 21,000 hectares. This forms the basis of the table grape industry crop estimates. The rest of the value chain, both locally and abroad, also rely on the crop estimates for their seasonal planning.

Given the hectares planted and the expected yield, the South African table grape industry is confident that it would return to its steady growth curve and has the realistic potential to yield a crop of 70 million cartons (4,5kg equivalents) and even more. This of course depends on a few critical factors such as favourable weather conditions before and during harvest, the availability of sufficient irrigation water, as well as the ability of producers and other stakeholders to optimise their systems to handle a bigger crop.

The newly planted higher yielding varieties together with a significant number of new hectares (no less than 5,400 hectares are newly planted and 3 years old and younger) will be coming into full production. This indicates a potential crop of 70 million cartons (4.5 kg equivalent) or more in the coming 2018/2019 season.

The previous highest intake volume was 67 million cartons during the 2016/2017 season. Despite the drought of the past 3 years, which mostly affected the three growing regions in the Western Cape, the better rains points towards much better and near normal conditions for the coming season. It is in the Olifants River in particular where a substantial improvement is expected, but similarly the Berg River and Hex River regions should benefit significantly from the current favourable water situation compared to a year ago.

In the Northern Provinces and Orange River regions, which were not affected by the drought, good and normal yields are expected. Increased production requires additional planning. SATI, government and other stakeholders are working diligently to ensure a good and sustainable performance of the industry. Amongst others, more favourable shipment protocols to existing markets and access to new markets are top priorities. This requires extensive research, trials and other inputs to support our strategy and initiatives.

SATI plans to release a first 2018/2019 season crop estimate in the second half of October.

FreshPlaza, 24 August 2018

Grape exports by country

International fresh grape exports by country totaled to \$8.3 billion in 2017.

Overall, the value of grapes exports rose by an average 6.8% for all exporting countries since 2013, when shipments of fresh grapes were valued at \$7.8 billion.

The value of globally exported grapes appreciated by 4.5% from 2016 to 2017.

Among continents, European countries accounted for the highest dollar worth of grapes exported during 2017 with shipments valued at \$2.5 billion or 29.8% of the global total.

In second place were exporters from Latin America excluding Mexico but including the Caribbean at 23.5% while 19.2% of worldwide grapes shipments originated from Asia. North America came in at 13.8% followed by African shippers at 10.2% with Oceania (mainly Australia and New Zealand) at 3.5%.

Worldstopexports.com listed these are the 15 countries that exported the highest dollar value worth of fresh grapes during 2017:

- Chile: US\$1.2 billion (14.4% of total exported grapes)
- United States: \$903.4 million (10.8%)
- Netherlands: \$862.7 million (10.3%)
- Italy: \$858.1 million (10.3%)
- China: \$735.2 million (8.8%)
- Peru: \$651.2 million (7.8%)
- South Africa: \$541 million (6.5%)
- Hong Kong: \$363.2 million (4.4%)
- Spain: \$321.2 million (3.8%)
- Australia: \$294.8 million (3.5%)
- Mexico: \$246.1 million (2.9%)
- Egypt: \$233 million (2.8%)
- Turkey: \$195.5 million (2.3%)
- Greece: \$149.8 million (1.8%)
- Uzbekistan: \$98.6 million (1.2%)

FreshPlaza, 17 August 2018

Branded interactive fruit growing videogame hopeful of success during awards season

South Africa's largest exporter of South African apples and pears, Tru-Cape Fruit Marketing has a fresh-fruit brand that is recognised in 104 countries around the globe. In its on-going attempt to punch above its weight class when it comes to targeting the hearts and minds of consumers, it has invested in what might be a global first: an interactive app-driven game to try to wrestle young minds away from big-budget confectionery brands towards a proven healthy food choice.

Following the success of Fruit-Full, the game that Tru-Cape developed with the help of interactive agencies Red Cherry and BigBrave, they have decided to enter the game into industry competitions that assess best of the breed.

Tru-Cape's marketing director Conrad Fick explains: "We were looking to explore new marketing channels to communicate Tru-Cape's brand intrinsics to the end user, as well as to keep Tru-Cape top of mind when consumers purchase apples and pears. This mobile game has educated users about

these facts as well as created awareness around the challenges and complications involved in producing quality fruit”, he says adding that as Tru-Cape strives to only deliver high quality fruit, safe, efficient procedures are followed, in strict compliance with international health and environment protocols such as GlobalG.A.P.

BIGBrave’s Brett Lindsay says “Fruit-Full, the game that is free to download from iTunes and Android stores, has already had over 4500 downloads, has close 1000 active players and has maintained a 4.2 score out of five by players. Tru-Cape, Red Cherry and BIGBrave partnered to create a mobile game aimed at educating consumers about the process from planting to the in-store purchase of apples and pears, in a fun and engaging manner.”

Lindsay continues, “We are constantly looking for ways to improve the game. We recently released Version 2 of Fruit-full, which shows off a new user interface, 3D global navigation with zoom functionality, as well as a number of new features that will help with the overall Fruit-Full experience from orchard to shop. We are pleased to be moving out of concept phase and we look forward to seeing the game scale into the future. The average daily play time of Fruit-Full since it launched a year ago is ± 8 hours per day over ± 2 sessions per user per day. The game is performing well and we are glad that so many people are enjoying it.”

Red Cherry’s MD, Jenna Murray-Smith says: “This game amplifies the company’s efforts to grab the attention of young minds away from junk food and confectionery brands, towards apples and pears as a natural product that is a healthy snack and a recommended part of the daily diet. A project like this would not be possible without the valued partnership with various stakeholders.”

Tru-Cape’s Fick says that they have launched Fruit-Full version 2 which provides players with a much better user experience with some game enhancements. “The new version also provides the ability to include planned feature updates and improvements to the game which are slated for the rest of the year. A country-wide competition currently underway incentivises users to play the game and work their way through the full Tru-Cape cycle from planting seeds to selling the fruit. This allows players to be educated about the care and time it takes at every point of the production cycle of the Tru-Cape business while also building interest around the game and the Tru-Cape brand.”

FreshPlaza, 31 August 2018

Rapid increase in SA blueberry production – Absa report

Blueberry production in South Africa is increasing at a faster rate than previously anticipated, according to a recent Absa Agribusiness Outlook report.

According to the report, initial industry estimates were that by 2022, about 2 000ha would be planted to blueberries.

“About 1640ha were planted during the 2017/18 season.

Looking at the current growth, development and involvement prospects, the industry expects that [the] 2 500ha [mark] may be reached by the end of 2019.”

It was further expected that an additional 500ha of blueberries would be added every year over the next few years.

These additional plantings were expected to lead to a steady increase in production.

Great returns and a 30% increase in annual global demand were encouraging expansion of this industry, the report said.

A blueberry producer, who spoke to Farmer’s Weekly on condition of anonymity, said the local blueberry export industry had created its own gap in the European market by pruning local berry plants in such a way that they could be harvested during a window period of low supply levels in the EU.

Local producers exported their produce during this period, which ensured that they received a premium for their blueberries.

OZblu: “We want to become the Crimson Seedless of blueberries”

Delegates from seventeen countries attended the OZblu grower's conference at Nyami Berries in Mooiooi, South Africa's Northwest Province, to receive this take-away: “It's very simple. All markets are growing.”

Blueberries from the Southern Hemisphere plus Mexico reached 230,000 tonnes during the 2017/18 season, a 25% increase on the previous year. A forecast for the next four years sets a further growth of 59% for the hemisphere and for South Africa an expected 60% growth. Peru has had a spectacular season, with its export volumes 75% up from 2016/17, a growth trend set at 33% for the coming four years.

“The logic in the industry has changed completely and what we had in the past regarding supply, is not valid any longer,” says Andrés de Witt of LaFrut, Chile. “Blueberries are now grown on all continents, in the North and South, winter and summer, which means massive availability and a flattened supply. Blueberries from the Southern Hemisphere have pretty much doubled over the past four years. When is that going to happen again?”

Roger Horak, OZblu founder and Global CEO (pictured with OZblu breeder Dave Mazzardis on his left), looks to table grapes for ideas on how to differentiate within the blueberry category. “A minimum level of crunch and minimum brix is going to become the standard. At OZblu we want to become the Crimson Seedless of blueberries. Crimson Seedless defines the red grape category, it never disappoints. We want to be recognised as the benchmark in the blueberry category. The onus is on us to convince retailers that we can deliver on that promise.”

The biggest weakness of fruit generally, he continues, is variability. “At OZblu we have a distinct advantage because we have a very long range of unbelievable varieties. OZ Bonita [OZblu variety 9-12] from Peru tastes the same as an OZ Bonita in Perth which tastes the same as an OZ Bonita in South Africa. This allows us to brand the same variety, produced from different regions under one brand whilst delivering a quality and consistent eating experience to the end consumer - everything as Ozblu.”

OZblu has made a pleasant discovery of its varieties, the work of Australia-based Dave and Leasa Mazzardis, during the past season: sea freight improves their berries, and customer feedback confirmed this. “We were expecting the berries to be consistent, but we didn't expect them to be better when they arrive on the other side, which was the constant message from our customers,” says Roger Horak. He continues: “Air freight is absolutely dead. If your fruit cannot make the journey, you're not going to make it.”

United Exports, marketer of OZblu, therefore employs air freight to a far smaller degree than other South African blueberry exporters. Their berries are sent in perforated bags, not employing MA or CA technology, for which the necessity has disappeared due to the shelf life inherent to their varieties.

Chile, the world's second largest blueberry producer after the USA, is facing a “massive” challenge, according to Andrés de Witt of LaFrut, Chile, who spoke at the conference. The Chilean industry is based on Northern Highbush and Rabbiteye varieties developed twenty to thirty years ago for the US market, not for long distance export trade. Increasingly, in the face of stiff competition from, among others, Mexico and Peru, the Chilean industry has come to realise that the softness of their berries is a weakness.

“Twenty percent of the varieties in Chile are obsolete,” declares Andrés de Witt, “and of the remaining 80%, a good 60% will need to be changed within the next five years.”

“Chile developed the sea freight industry, we've got a lot to thank them for, but that explains why we, as the custodian of the varieties, are sometimes so difficult – we've seen what happened to

Chile," Horak notes. "As Andrés says, they've been slow to change and many varieties are fast becoming obsolete."

"In China, way more than any other country, people live on their phones. They're shopping on their mobile devices and an online trader was telling me how the most important thing for his supply was brand and quality, because the huge advantage on these platforms [like WeChat] is that you're delivering straight to the customer, but they actually have people who do a final pre-sorting prior to delivery, because if you deliver a poor product, and the customer puts a thumbs-down on their purchase, he says your sales plummet. As simple as that. If they put a thumbs-up on a product, he said you can open the golden doors, it's absolutely amazing," says Horak, who opened the conference by reminding growers that OZblu blueberries achieved 1.6 to 2 times more than the average daily market price in China this past season.

"The Chinese customer will pay for it if it's good, but if it's not good, you're gonna get smashed."

Shu Yao of the Haisheng Group, the world's leading producer of apple juice concentrate, told the conference that China's current blueberry production of 40,000 tonnes was far below the market demand of 1.1 million tonnes.

Bloom on a blueberry is highly prized in the Chinese market, something that OZblu is actively breeding for. Another pleasant surprise for them was that Chinese buyers have started specifically asking for OZ Julieta. A UK retailer has told Horak that OZ Julieta was the best sea freight blueberry they'd ever tasted. "OZ Julieta is right in the sweet spot we're trying to hit."

In the UK OZblu's aspirations are in the top and standard plus side of the category. The overall fruit category in the UK is flat in terms of market growth, but with blueberries there is 7.7% market growth, as a result of larger purchases per trip (bigger pack sizes) and premium varieties and brands. A further increase of 30% in UK blueberry sales is "hugely achievable", says Duncan Forbes, commercial director at United Exports.

UK blueberry consumers are year-round consumers, while European consumers (particularly Italians) are still more seasonal in their berry consumption habits, which is of relevance to South African growers providing them with counter-seasonal berries. The company expects volumes to Germany to come close to UK volumes over the next couple of years, while the blueberry turnover increase in the Netherlands is 26%. Scandinavian markets consume large volumes of blueberries, as do Russians and some other Eastern European countries.

As for the organic segment, strong in Scandinavia and resurgent in the US, OZblu is developing varieties and looking for suitable production areas in South Africa. "We don't want just a little corner of organic on a farm, we want to do it to the same standard as everything else," Horak says.

Regarding the South African market, OZblu is certain it will be able to provide blueberries year-round, as desired by retailers. In 2016, OZblu provided retailers with 252 tonnes of blueberries, while last year it was 348 tonnes, a year-on-year growth of some 38% of quality new varietal blueberries, despite the domestic market being flooded with older varieties that are no longer as attractive for export markets.

"What we're doing here in South Africa on the varietal side of things will have a positive impact on South African consumers and the actual flavour of the South African fruit, whether it's for the local market or, indeed, export. South African blueberries are in a different tier to what customers and clients can get from Peru and Argentina," notes Duncan Forbes.

Carolize Jansen, *FreshPlaza*, 6 August 2018

South Africa welcomes removal of citrus from high risk-list

South Africa has welcomed the outcome of a meeting of the European Commission's Committee on Plant Health in the week of 9 and 10 July 2018. During this meeting the proposal of eight EU member states (among them France and Spain) to introduce a category of high risk plants and

products (which included citrus) under article 42 of the new plant health regime, was rejected. The new plant health regulations will come into effect by the end of 2019.

Up until now the EU has set a principle of a 'soft border' which means a product is acceptable for import until proven to pose an unacceptable risk. The proposal submitted by France on behalf of Mediterranean countries would set a 'hard border', which means access is denied a product until proven it poses no risk, by placing constraints on certain categories of the incoming fruit trade. According to their proposal, commodities like citrus would as a matter of course be subject to the regulatory measures called upon during a moment of crisis, like the detection of Asian greening disease or HLB.

This would, in terms of the World Trade Organisation, impose a measure inconsistent with the risk posed by the likes of citrus black spot. Not surprising, then, that Northern European member states have opposed the list of eleven products, which was later reduced to eight (excluding citrus) and is now left with a single item.

The Southern grouping frames this rejection and decision, driven by Northern member states, as a lack of solidarity within the European Union, while within the South African citrus industry proposals such as the one submitted by France and Spain, are widely regarded as protectionism.

"We had high hopes for this new proposal," commented the president of Valencian Association of Agricultural Producers (AVA-ASAJA) Cristóbal Aguado after the outcome of the committee meeting, "and unfortunately, [we] have been frustrated, once again, by the lack of solidarity of the northern countries. We find it unacceptable for the maximum level of protection not to be granted to a product such as citrus, which is besieged and threatened by diseases such as Black spot, which has been detected in citrus shipments imported from South Africa, or Greening, to name just two."

In 2013 he had called for the immediate closure of borders until such time as "South Africa is capable of guaranteeing the export of citrus with adequate plant health."

Currently, CBS interceptions on South African citrus destined for Europe stand at zero for the 2017/18 season. The South African position is that CBS is not a quarantine disease and has never established itself during decades of South African citrus traded in Europe. Recently South Africa's stance was bolstered by the US decision that citrus from South Africa's CBS areas can in the near future be sent there, provided it is subjected to an import rule.

"We're very happy and obviously we worked extremely hard beforehand to stop the proposal by providing scientific data on these products to EU member states," says Deon Joubert, South African Citrus Growers' Association's envoy for market access and the EU. "Our viewpoint is that it's not in the best interests of a fair and liberalizing world trade. Every affected market will react in turn and it will frustrate trade and ultimately economic growth. The world is already tinkering on the verge of undoing all the benefits of liberating agricultural trade in the late 1990s."

"Within two years the CBS issue should be put to bed," opines a South African citrus industry expert and farmer. "It's a political issue."

Carolize Jansen, *FreshPlaza*, 7 August 2018

Citrus export ship to Asia is positive news

If the Western Cape were a country, it would be the world's fifth largest exporter of citrus fruits.

South Africa is currently the second biggest exporter of citrus in the world after Spain, accounting for 10% of the global market. The Western Cape currently exports the majority share of this, at 62%, making it the largest exporter of citrus fruit in the Southern Hemisphere.

Over 6% of the global market share of citrus was exported from the Western Cape in 2017. To put this in perspective, China and the USA, which hold the spots as the world's third and fourth biggest exporters, hold global market share of eight percent and 7 percent respectively.

Most of the province's exports are oranges (54% of all exports in 2017). However, soft citrus (19%) has shown excellent growth in the past ten years, and lemons and limes, which showed good growth between 2012 and 2015, have since tapered off considerably.

Europe is the biggest market for Western Cape exports, however, the market size has declined from 55% of all Western Cape citrus exports in 2008, to 47% in 2017. The Asian and Oceania markets however have made up the decline, growing from 34% in 2008 to 42% last year.

At a country level, the United Kingdom and the Netherlands are the biggest buyers of Western Cape citrus, however, citrus exports to China have shown remarkable growth.

The Chinese market is currently valued at R752 million, with 50.5% real annual growth recorded since 2008.

Exports to Hong Kong, Saudi Arabia, Bangladesh and Portugal are also showing good growth, revealing good potential for new markets.

Minister of Economic Opportunities, Alan Winde said "Europe has long been a major destination for exports, but the growth we're seeing in the Asian market is showing a new shift. This is especially positive news with the uncertainty around Brexit and what this means for European and UK exports."

"Our Project Khulisa strategy has been to focus on growing the agricultural and agri-processing sectors, thereby creating new jobs. By developing new export markets for our produce, while still providing a world class product to our traditional markets, we can grow this economy. We've also been focused on growing our Halal exports, and the growth of citrus exports to countries like Saudi Arabia, Oman and Bahrain is a positive step towards meeting this Project Khulisa goal."

"Citrus farming also creates jobs in the winter months, once the harvest of the summer deciduous fruits and grapes has taken place, creating more employment opportunities for seasonal workers," Minister Winde said.

FreshPlaza, 8 August 2018

Citrus farm workers go on strike over 'slave' wages

Farmworkers in Addo and Kirkwood in the Eastern Cape went on a day's strike on Tuesday, accusing some employers of refusing to pay them the recently agreed minimum wage of R20 per hour.

They also demanded the reinstatement of workers expelled during a previous strike in June and the withdrawal of a High Court interdict against officials of the South African National Civic Organisation (Sanco), *GroundUp* reported.

Four hundred workers in Addo marched to the offices of the Sundays River Citrus Company where they handed over a petition. At the same time workers in Kirkwood handed over a petition to employers with the same demands.

Hannes de Waal, spokesperson for the Sundays River Citrus Producer Forum, said the march was a violation by Sanco of a High Court interdict that his organisation had obtained.

He said "a number of individuals with their own agendas" were working against the interests of both producers and employees.

"An interdict was issued against such individuals as they do not have the right to threaten workers and farmers, nor do they have the right to access workplaces. They are therefore expected to stay a minimum of 500m away from such places and respect the fact that they have nothing at all to do with the relationship between employer and employee."

He said the forum was in contact with Sanco leadership and had come to the conclusion that Sanco was "a great organisation with fine principles" and that this was a breakaway group.

Vuyisile Sikani, who is the regional chairperson of Sanco and chairperson of the Sundays River Workers Forum, read the petition to the protesters before handing it over to Mark Keun, the human resources manager of Sundays River Citrus Company.

Sikani said employers should withdraw the court interdict against Sanco, reinstate workers expelled after the June strike, and apply "with immediate effect" the minimum wage of R20 per hour.

"The employers should also stop victimising employees, and workers should be transported in safe and covered vehicles to and from work."

He said if these demands were not met within 48 hours, "We will embark on a mass action resulting in a total shutdown. We will stop production on every farm and factory."

Sanco regional treasurer Zoliswa Scritch said seven people in Kirkwood and one in Addo were facing charges of public violence and malicious damage to property as a result of the June protest.

"We want their cases withdrawn because there is no evidence that they were involved in the destruction of property."

Scritch said some employers were still paying "a slave wage" of R17 an hour.

A seasonal worker who did not want to give his name told *GroundUp* he was still earning R17 an hour and his employer was threatening to withdraw the end-of-season bonus if the workers insisted on a pay increase.

De Waal said: "We need to study the demands received and will certainly reply to them. It is our view that all growers are complying with the R20 minimum wage, unless anyone can prove that fact to the contrary."

Joseph Chirume, *GroundUp*, 29 August 2018

Avocado season: from "tricky" to "diabolical"

Traders who didn't get their timing right got "burned" this season, an avocado exporter tells *FreshPlaza*. "It was a tricky market and timing was everything. It's like chalk and cheese compared to last year. No-one foresaw these kinds of volumes."

The secret to reasonable returns was to get out of the European market early, before the big volumes from Peru headed that way. Like the South African crop, theirs has also boomed and was, some say, similarly underestimated at the start of the season.

The South African industry was fortunate that Peru entered the market later, and exporters who were able to take advantage benefited from that window, but since then it has been a depressed European avocado market, although there's been some stabilisation in the meantime.

"On Hass, during some weeks this season we obtained more or less the same prices as last year," an exporter says. "But the green-skinned price in Europe was diabolical and that's because of the high volumes."

"We didn't expect prices to drop quite as much as they did," says another exporter who markets fruit from an early-ripening area, which was fortunate to enter and then exit the market early in the season.

Avocado orchards in the north of South Africa are in full flower and indications are that next season will be a good off-year, perhaps more than 12 million export cartons, a plantsman reckons, which will bring relief after this season's "thrashing" of prices.

Anecdotally, there are avocado farmers who say their income is the same as last year, despite putting much more fruit on the market. On the local market, these are the lowest prices in five years, after three years of limited volumes, according to a trader. "On the up side, we had enough stock to be able to trade freely and offer a variety, which was nice."

Locally, greenskin avocados obtain R50 (3 euros) to R60 (3.63 euros) per 4kg carton while – contrary to global trends – Hass still gets lower prices, R35 (2.11 euros) to R45 (2.72 euros) per 4kg carton.

Carolize Jansen, *FreshPlaza*, 14 August 2018

Kenya overtakes South Africa to become Africa's biggest exporter of avocados

Kenya's impressive volumetric growth rate per year and access to new markets have helped the country to overtake South Africa as the number one exporter of avocados from Africa. The East African country became the largest exporter of avocados in Africa in 2017, exporting a record volume of 51,507 tons to the world. South Africa, traditionally the lead exporter of the world fruit from the Agriculture-rich continent, relinquished the position and trailed Kenya for the first time ever in history with 43,492 tons.

Kenya's pool of the biggest importers includes the United Arab Emirates, Saudi Arabia and more recently, the Russian Federation. The UAE tops the list with some 12, 041 tons for the 2017 timeline. Saudi Arabia is the country's fourth importer with some 4,874 tons worth of imports in 2017. The Russian Federation currently holds the 5th position in trade volumes that have culminated at 4,171 tons in 2017. The second, third, and sixth major export markets for Kenya avocados are all in Europe. The Netherlands leads the pack with 10, 556 tons of the fruit from the 2017 statistics. France is the third biggest importer: its net volume stood at 10, 423 tons in the same year. The United Kingdom and Spain close the top 7 with volumes that verged on 2,944 and 1,734 tons respectively in 2017.

As the main producers of avocado in Africa, Kenya and South Africa have had a bittersweet trading relationship. In 2010, South Africa banned the importation of avocados from Kenya, citing quality concerns. The ban lasted for close to a decade until a July 2018 revocation. The resumption of trade has come as a blessing to many smallholder farmers in Kenya. By 2014 when the ban on avocado was still in force, the East African nation's trade volume with its southern counterpart clocked at a high of \$0.7 billion (imports) and \$327.7 million of reciprocal trade (exports). The return of trade will also bring on board international buyers as importers will have more confidence to buy the now-endorsed Kenyan fruits.

According to John Oroko, CEO of Selina Wamucii, one of Kenya's fastest growing avocado exporters, it was only a matter of time before Kenya became the leading avocado exporter on the continent.

Oroko said: "Kenya has had a steady year on year growth since 2012 and, despite facing a severe drought in 2017, managed to export a record over 50,000 tons. I have every reason to believe this year will be way better given that we had rains and the avocado sizes have increased significantly. Of importance to note is that Russia and Hong Kong (a key gateway to mainland China) have had over 500% market growth and these are very key markets for our avocados if the country is to maintain its lead."

"The EU market is already a mature market for Kenya's avocados and significant growth can only be achieved with the nurturing of these new and strategic emerging markets for Kenyan avocados especially China and Russia. The future indeed looks very bright."

Tim Wahome, *FreshPlaza*, 14 August 2018

How SA cotton industry created 5 500 jobs in four years

It's been four years since the Department of Trade and Industry launched an initiative to increase capacity and competitiveness in South Africa's textile and apparel industries. CEO of Cotton SA Hennie Bruwer spoke to Robyn Joubert about the programme's achievements so far.

- *What's the difference between the Southern African Sustainable Textile and Apparel Cluster (SASTAC) and the Sustainable Cotton Cluster?*

On 1 April 2014, the Department of Trade and Industry [DTI] officially launched a five-year plan to establish a national textile cluster, SASTAC, supported by a R200-million grant fund. Its aim was to improve capacity and competitiveness and to create jobs in the cotton, textile and apparel industry value chains.

The cotton industry formed the Sustainable Cotton Cluster (SCC) in May 2014 to serve the cotton-specific interventions. It's made great progress, and there's now a big drive to get the other fibres on board.

The SCC brings together the entire cotton supply chain under one umbrella: farmers, ginneries, yarn manufacturers, dyers, finishing plants, weavers, retailers and consumers.

The stakeholders are working together to improve the economic, social and environmental sustainability of the cotton industry.

- *What is the Integrated Supply Chain Programme?*

SASTAC has developed a supply-chain traceability and procurement platform, which offers full traceability and visibility of the value chain from farm to retail.

The Mr Price Group has been actively involved in the SCC since its inception, and served as the pilot for the first Integrated Supply Chain Programme (ISCP) in 2015. The ISCP is driven by retail demand and is built on virtual partnerships among supply chain stakeholders, from farm to retail. It supports 'near sourcing' and 'quick response' and provides for supply chain transparency, price surety and stakeholder trust.

- *Since the ISCP pilot, Edcon, Clicks and Woolworths have come on board. What's convincing retailers to join the SCC?*

It's now well known that the model offers retailers essential benefits like proximity to market, speed to market and readiness. Local raw material sourcing and production also minimises risk and offers local beneficiation, job creation and investment in latest technology.

It gives participants in the supply chain access to shared production inputs and resources, as well as improved channels to market, due to price stability and supply certainty.

- *What cotton value chains have been created?*

The cotton cluster has established 11 value chains on items made with 100% cotton. Product lines like T-shirts, chinos, towels and underwear have been implemented. A lot of local businesses are involved and these lines have already created value of over R2 billion.

- *Has the cotton industry grown or contracted since the SCC was launched?*

Production has increased more than sevenfold from 25 000 bales in 2013, to roughly 180 000 bales this season.

We've seen investment on the ginning side. The Loskop Cotton Gin in Marble Hall has been replaced with a totally new gin with increased capacity; and another gin in Koedoeskop, Limpopo, is being erected.

The capital investment in farming and ginning amounts to over R200 million.

- *What growth are you seeing on farms?*

Farmers are buying harvesting machines. Most are the latest technology and consolidate picking and baling. This eliminates a lot of labour-intensive activities and makes the farmer more productive and cost-effective, especially in the case of dryland cotton production.

The only problem is cost: top-of-the-range cotton pickers cost between R9 million and R11 million. They harvest 15ha/day to 20ha/day, so you need at least 1 000ha under irrigation to make the investment viable.

- *How many jobs have been created in four years?*

The Bureau for Food and Agricultural Policy estimates that for every 1ha of cotton harvested manually, 1,3 jobs are created within the value chain. However, where the crop is harvested mechanically, this drops to about 0,3 jobs/ha.

We have roughly 38 000ha planted to cotton this season, up from 7 500ha in 2014, and estimate that this has created over 5 500 jobs from farm to retail. The majority of jobs have taken place at farm and gin levels.

- *Where are South Africa's cotton growing areas located?*

In Limpopo, Northern Cape, North West, KwaZulu-Natal and Mpumalanga. The industry has about 150 commercial farmers and 1 300 small growers, who farm roughly 5 000ha on 2ha to 5ha plots.

- *What funding is there for small farmers?*

During the 2017/2018 season, five cotton projects in three provinces were funded. A total of 4 500ha was planted to cotton and 1 000 farmers were supported.

- *How much local cotton have retailers bought?*

Retailers have committed to about 8 000t of lint in the current season.

- *How is the local cotton price derived?*

It's derived from the international import parity price which has always served as an indicator for local price determination. The local price is currently lower than the imported price for cotton.

This has predominantly been the case since the Cotton Cluster was initiated four years ago.

- *What are the constraints to growth in the industry?*

One of the biggest bottlenecks is the fact that local spinning and weaving capacity is almost 100% utilised.

We need more investment in harvesting, and spinning and weaving technologies if we are to compete globally.

- *What are your ultimate goals for the cotton industry?*

The potential to increase production to record levels is possible, especially with the availability of the latest biotechnology. We also want to increase the local beneficiation of cotton to a level where we can do import substitution of 50% on four basic retail items, such as T-shirts, towelling, chinos and underwear.

This will lead to the creation of more than 75 000 new jobs and an injection of almost R10 billion into the economy.

Robyn Joubert, *Farmer's Weekly*, 20 August 2018

A tax on eggs just jumped by 50% – but producers say you probably won't pay more

From Friday, all table eggs sold in South Africa carry a new tax: a levy of 1.5 cents (or R0.015) per dozen, due to be spent mostly on "consumer communication and education".

But for many producers the 1.5 cent levy replaces a voluntary contribution of 1c per dozen, the SA Poultry Association told *Business Insider SA*, so although it represents a 50% increase, it remains so small that the industry "does not expect that the implementation of the levy will impact on egg prices.

The tax amounts to about 0.1% of a regulatory guideline price for wholesale eggs, but is closer to 0.09% of the average shelf prices recorded by Statistics South Africa for 2017, after a nearly 12% increase in prices during the year.

Based on 2017 numbers, the total tax should amount to around R9 million, in an industry likely to have revenues of well over R15 billion.

At least 20% of the money the tax brings in must be used for transformation initiatives, in an industry often criticised for lacking significant black economic empowerment.

The bulk of the money, however, an anticipated 70%, will go to marketing and education aimed at consumers, and research.

After four years any money not spent on such initiatives will become available for the minister of agriculture to spend as he or she sees fit.

The levy is due to increase by a fraction of a cent every year, to reach 0.18 cents, or R0.018, during 2021.

It applies to all table eggs, or non-fertile eggs for domestic consumption, and so will be paid by both local producers and importers.

A special transformation committee will consider sustainable transformation projects using the new funds, the Poultry Association said.

Phillip de Wet, *Business Insider SA*, 1 August 2018

SA's small milk producers under pressure from imports

Smaller milk producers in South Africa may be in for a tough time as prices and demand fluctuate, due to the South African market coming under increasing pressure from cheaper imports, among many other factors.

This was the opinion of Dr Koos Coetzee, an economist at the Milk Producer's Organisation (MPO), who said: "Processors will buy imported milk if they can't get it cheaper locally, [which means] producers will have to make a profit at export parity [prices]."

Economies of scale were also becoming increasingly important, and Coetzee said smaller milk producers would need to combine their production output and sell milk co-operatively to encourage milk processors to buy from them.

"The fact is that we are part of the [global economy] and local prices will be based on world prices. Producers will in future have to produce at a cost [that is] comparable to [international] costs," said Coetzee.

He said international producer prices for 2017/2018 were expected to be between R4,40/ℓ and R4,85/ℓ.

Most milk producers were making a profit at about R4,50/ℓ, but profit margins and break-even points were farm-specific, with a producer's debt, capital structure and many more factors influencing profit, he explained.

Farmer's Weekly had previously reported that 40 milk producers in the Free State had received notification from Desmunda Transport, the company that delivers milk to a number of milk processors, informing them no more milk would be acquired from them as from 5 August.

According to Desmunda Transport, its contracts had been terminated by the processors.

Allegations have since surfaced that Free State producers were adding water to their milk, for example, and that this was one of the reasons why Desmunda Transport had cancelled milk offtake agreements.

However, Phillip Swart, manager for producer services at the MPO, told *Farmer's Weekly* no accredited laboratory had confirmed this allegation.

"Not everyone is playing open cards in this matter," he said. Swart said he suspected one of the main factors in the decision to terminate agreements had been the fact that some transport routes had proven to no longer be economical.

"It costs a lot to run expensive trucks. There are often long distances between producers and the quality of roads is often poor.

"It may not benefit buyers to [collect from] small producers," he added.

Gerhard Uys, *Farmer's Weekly*, 7 August 2018

Paarl grape grower opens R30 million agri-worker housing development

A group of 30 farm workers at the South African table grape farm Nieuwe Sion in Simondium, Paarl, became the proud owners of a purpose built R30 million agri-worker housing development on 2nd August. The owners of the farm Dr David and his wife Elaine Potter, who lives in England, resolved to create an environment that would leave their workers better off than when they joined the farm. They joined the Sustainability Initiative of South Africa (SIZA) and then took their vision further in May 2015, by launching a R30 million housing development aimed at giving their workers access to the property market.

"The Potter's vision of empowering their workers moves beyond the payment of living wages and the creation of a safe and worker friendly production environment. Their ultimate goal is to help workers and their families, especially their children, become less dependent on the farm for their financial

wellbeing, by giving them access to the mainstream economy," Fielies du Toit, the farm's manager explained.

Last week's key handover ceremony was attended by Western Cape Government Ministers Bonginkosi Madikizela (Human Settlements) and Minister Alan Winde (Economic Opportunities), Conrad Poole, Mayor of the Drakenstein Municipality as well as other key stakeholders in agriculture. Dr Potter said they are proud to be able to "gift" this development to the farm workers who "must use it as a space to support and uplift each other. The complex was designed to meet the wishes of all, which is to keep the community of workers together."

Paul Morris, one of the worker representatives with 30 years of service on the farm, thanked the Potters for "opening their hearts and lifting us as farm workers this high. We really appreciate the gifting of our new houses. It is a huge opportunity for us. We will look after it," said Morris to loud applause and singing from his equally thankful colleagues.

Willem Bestbier, CEO of SATI, congratulated the Potters, workers and management of the farm and said the high-quality development is testament to what can be done when industry and government work together to the benefit of people.

Nieuwe Sion is a 70 ha table grape, nectarine and soft citrus farm in Simondium in the Western Cape. The new complex has been named Lumier to signify a new dawn in the lives of the workers.

The complex will supply housing to 140 souls, in the form of twenty-two two to three bedroomed houses, varying between 60 and 70 square metres, as well as eight annexed buildings with single quarters for retired workers. There is a crèche and aftercare facilities for workers' children, a community centre and sport's field, all designed with the input and needs of the farmworkers being addressed. "The lay-out has been architecturally designed for the complex to be self-sustaining, environmentally friendly and to foster a sense of community," Du Toit said.

FreshPlaza, 6 August 2018

Banking & Capital Markets

The Land Bank says expropriation without compensation could cost the government R41 billion overnight – or it could be amazing

Land expropriation without compensation could set off a domino effect of defaults that would make it liable to repay its funder R41 billion, the Land Bank said on Monday – "which we would not be able to settle".

If done well, land reform could benefit South Africa and the bank, its chairperson Arthur Moloto said in an annual report released on Monday afternoon.

But the Land Bank has agreements with built-in protection against expropriation, he cautioned, which meant it would have to come up with at least R9 billion to not go bust – immediately.

That R9 billion in debt is the portion that carries a "standard market clause" on expropriation, said Moloto in his statement in the annual report.

The clause directly equates any government seizure or expropriation that "wholly or substantially" curtails the Land Bank's ability to do business with an "event of default".

The result: "If Expropriation without Compensation were therefore to materialise without protection of the Bank's rights as a creditor, we would be required to repay R9 billion immediately."

Under other standard clauses on cross defaults, an inability to pay that R9 billion would immediately make the bank's entire R41 billion funding portfolio "due and payable immediately", said Moloto. That money the bank "would not be able to settle. Consequently, government intervention would be required to settle our lenders."

At the end of March the bank had R2.4 billion in cash available, and just under R3 billion in investments and receivables.

The Land Bank now considers land expropriation to be "very likely".

But despite the risks, the Land Bank believes expropriation could be a positive thing, Moloto said.

"The risks and opportunities posed by this option for land reform depends on the manner in which it is implemented. We anticipate an approach that is intended to shield the economy from undesirable negative impacts, and to specifically strengthen agricultural production, employment creation and food security."

A "grim" result would come only through poor execution, involving one or more of six things, Moloto said:

- productive land being taken out of production;
- a failure to protect creditors;
- a lack of effective institutional processes;
- corruption;
- "poor or undefined" methods of selecting beneficiaries; and
- a lack of decent support for beneficiaries.

The bank is particularly concerned about the support, including non-financial support, for recipients of expropriated land, whether or not land seizures come with compensation.

And without adjustments to the "institutional mechanisms to deliver land reform", "it would be futile to expropriate land without compensation" said Moloto.

The Land Bank reported gross loans worth R45.5 billion at the end of March, with a healthy – and improved – 6.7% non-performing ratio.

Even after taking a hit on crop insurance during the last year, that left it with a R254 million profit for the year.

The South African government is the sole shareholder in the bank.

Much of the Land Bank's funding comes from the South African bond market, with pension funds heavily invested in its debt. However, it has been trying to broaden its sources of funding especially for development projects.

In the last financial year it signed a €55 million (around R920 million) unguaranteed loan with German state-owned development bank KfW, and secured a long-term \$93 million (around R1.4 billion) facility from the World Bank.

Phillip de Wet, *Business Insider SA*, 20 August 2018

Banks continue lending to farmers despite threats

The heated debate over land reform in the past few months has not discouraged banks from lending to the agriculture sector.

The Banking Association of SA's (Basa's) unaudited figures of the big four banks show that loans to commercial farmers have increased 11.2% to R148bn at the end of June, from R133bn in December 2017.

Banks have about R1.6-trillion in property loans.

Basa said this was "hard evidence" that banks are committed to sustainable land reform and are confident that SA can find practical solutions to the challenges of restitution, redistribution and security of tenure.

Basa MD Cas Coovadia said that while it was essential for SA to deal with land reform, a critical issue was attracting investment and stimulating growth to tackle the issues of poverty as well as unemployment.

It had to be determined whether a change in the constitution would promote growth and investment or inhibit it, Coovadia said.

“The last thing we need ... is rhetoric or legislation that gets investors or potential investors jittery and stops us from moving from the very pedestrian growth that we have,” he said.

The disparity of land ownership due to apartheid could be dealt with through public-private partnerships with the government and the agribusiness sector, Coovadia said.

While Basa did not think the constitution had to be changed to ensure land reform, any change should be done in a way that does not undermine property rights.

“If property rights are undermined, that is a critical pillar for investment and that would measure negatively to draw investment,” he said.

Bungling the execution of expropriation without compensation could create uncertainty in SA for a number of years, said GM for human settlements in the market conduct division Pierre Venter.

Venter pointed out that the agriculture sector was quite a small part of the assets of the commercial lenders.

But a mass default could create a contagion risk for the banks sector.

“You’re not suddenly going to find all agricultural land expropriated at the same time, so it would be staggered over a long period,” Venter said.

Submissions that Basa would make to parliament next week over whether the constitution should be changed to explicitly allow for the expropriation of land without compensation included ones about a land summit and the creation of an ombudsman for land reform.

Coovadia said that the land summit to review the land-reform programme would host the critical interested parties and give them an opportunity to discuss whether compromises should be made.

The creation of an ombudsman would also create a level playing field for people seeking land restitution, he said.

Pericles Anetos, *Business Day*, 30 August 2018

SA banks weigh new fund to boost black farm ownership

South African banks are in talks to start a special fund to accelerate the transfer of land to black people in an effort to protect billions of rand in assets tied up in farm loans.

Lenders are wading into the racially charged land-reform debate as the ruling party embraces calls to change the constitution to allow expropriation without compensation. While the African National Congress sees the step as a means to improve equality 24 years after the end of racial segregation, the main opposition party says it is trying to deflect blame from its failure to properly manage earlier land-reform efforts before elections next year.

“We’re absolutely convinced as an industry that for the long-term sustainability of economic and social well-being in this country, we do need to address the serious problems and inequities we have,” Banking Association of South Africa managing director Cas Coovadia said by phone. “There could be various mechanisms through which we do that. A joint fund could be one such mechanism.”

White farmers own almost three-quarters of South Africa’s agricultural land, according to an audit by lobby group Agri SA published last year, down from 87% during white rule. Laws passed in 1913 allocated only about 7% of South Africa’s arable land to black people, leaving more fertile land for whites.

Lenders have R148 billion outstanding in loans for agricultural land, compared with R1.07 trillion for residential mortgages, according to the association, which represents 35 local and international lenders. While the industry supports the ANC’s desire to correct skewed ownership patterns, the

constitution already makes provision for expropriation and any changes should avoid undermining property rights, Basa said in a submission to parliament earlier this year.

“The narrative at the moment is one of irrational action as far as expropriation is concerned, irrespective of the impact of investment and growth,” Coovadia said. “The narrative that needs to be promoted is one that says land reform and restitution are a legitimate issues for this country given our history.”

President Cyril Ramaphosa has repeatedly said that land reform would be done in an orderly fashion, writing in the London-based *Financial Times* last week that there will be no “land grab.” The planned constitutional amendments will provide greater certainty to both those who want and own land, and promote growth, stability and food production, he has said.

Negotiations on the formation of a fund are still at their early stages and one of many ideas being considered, Coovadia said. No sum for the investment had been discussed yet, he said.

“It need not just be a fund put together by the industry,” Coovadia said. “It could be a fund which other business formations participate in.”

Absa, the country’s largest agricultural lender, has proposed two separate funds be managed by professional team — one to focus on rural land and another on urban projects. It made the proposal in a submission in June to a committee created by South African lawmakers to investigate possible next steps in dealing with land reform.

The rural fund will be aimed at creating more black-owned commercial farms by funding the purchase of land, providing technical assistance and facilitating market access for beneficiaries. The urban fund will be targeted at building an affordable housing market and forming more black-owned property developers by providing guarantees against some losses for high-risk residential projects, Absa said.

Through the banking association, Absa and its peers including Standard Bank, Nedbank and FirstRand, have also called for a national land audit to identify unproductive land. Absa is also willing to sponsor researchers who can find ways of developing a new land administration system to improve security of tenure, it said.

The lender’s starting point on land reform echoes that of a paper prepared in 2011 for the Department of Rural Development and Land Reform that pointed to a “total system failure” rather than just a single piece of legislation, Absa said. Land reform needs to be done in a way that looks at the entire process “rather than a narrow legal question on expropriation without compensation,” the bank said.

Roxanne Henderson, *Bloomberg*, 29 August 2018

The IDC is gradually eroding its capital base

In 2010 the Industrial Development Corporation (IDC) was a self-financing national development finance institution whose primary objectives were to contribute to sustainable economic growth and the economic empowerment of all citizens. Eight years later, and the IDC’s mandate has expanded to “provide funding for the development of industry in South Africa and the rest of Africa”.

The IDC also has its eye on the \$100 billion investment target optimistically expected to be pumped into South Africa over the next five years, and Ebrahim Patel, minister of economic development, is of the view that the IDC “will need to play a critical role in sourcing and co-funding a significant part of this investment in line with its role to develop the nation’s industrial capacity”.

Chairperson of the board Busisiwe Mabuza provides assurance that the IDC remains committed to inclusive and transformative development. In carrying out its mandate, R23 billion has been committed to funding black industrialists over the five-year period to March 2020, and 67% has already been approved. Over a three-year period to March 2018, R6.5 billion has been approved for

female entrepreneurs, and R4.4 billion for youth-empowered businesses. The total funding approved in 2018 amounted to R16.7 billion, an increase of 9% on 2017, and disbursements came to R15.4 billion.

Paying out these large amounts has resulted in an escalation of financial liabilities to R33 billion (2017: R30 billion), of which R8.6 billion consists of foreign loans. Cash and cash equivalents are R6 billion (2017: R7.6 billion), but this buffer is slowly dissipating. Loans worth R9 billion are payable within a year, and R15 billion within five years.

The auditors identified the following key audit matters:

- Impairment of loans and advances
- Valuation of unlisted investments
- Impairment of cash-generating units at Foskor.

IFRS 9 (financial instruments) only became effective on January 1, and the auditors no doubt vigorously tested the fair value of investments. But in my view, based on the increasing impairments and diminishing returns, these will be presenting problems in the future.

There is still uncertainty as to whether the NEF will be absorbed into the IDC. In keeping with its low level of public transparency, the IDC failed to provide an update in its 2018 integrated report, even though taking on the NEF would have serious financial implications.

The NEF is in need of extra funds, and on June 27 Business Day reported that the NEF was in the process of requesting approval for a R500 million loan from the IDC. At first blush the 2018 annual report presents a picture of a financially stable group. But a more in-depth examination of the financial statements provides an indication that the profitability of the group has been slowly decreasing over the years, particularly when capital gains are excluded.

Capital gains can also be a sign that good investments are being sold to finance the IDC's growing financial commitments.

Nevertheless, the unabated granting of capital is in my view placing a strain on cash flow, and is slowly eroding the cash surplus. It should also be noted that the cash status has been propped up by the sale of investments.

The IDC's investments include listed equities, unlisted equities, preference shares, and loans and advancements. There is no differentiation between investments to protect capital and provide a return, and investments which consist of the granting of capital to entrepreneurs.

There is no transparency in the loans and advances, and no mention was made of the loan that has been well covered in the press, namely the loan to Oakbay. This is all that Patel had to say in the online version of the 2018 Integrated Report: "During 2017, the IDC was in the news for its loan to Oakbay ..." and the remainder of the sentence disappeared. One would assume that the Oakbay loan is included in the impairments above, but one does question whether there are other skeletons waiting to emerge.

Due to its increasing funding commitments, the IDC is becoming more reliant on loans from external parties.

Servicing the finance charges on these loans is negatively impacting the cash flow.

Loans worth R9 billion will become due and payable within the year (R2.3 billion of foreign loans and R6.8 billion of domestic loans). The IDC will have to come up with the funds, and it will be very unfortunate if good investments have to be sold to finance these commitments. The financial goliath that the IDC once was is showing weakness. The time has come to take stock and rebuild what it has lost.



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