Implications of the lingering 2015 drought on the economy, agricultural markets, food processors, input suppliers and the consumer [1]
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Introduction

The SA economy had a growth rate of 0,7% in the third quarter of 2015, following the decline of 1,3% in the second quarter. Growth in the Agricultural sector realized a decline of 12,6% and the worst is coming. Various economic confidence indexes shows strong declines and some are at the lowest level in more then 20 years. The outlook worsened with International credit rating agencies downgrading the SA investment outlook. The unwarranted firing of the Minister of Finance Nhlanhla Nene on 10 December led to the rand crashing, due to developed economies withdrawing capital from SA. This not only affected the exchange rate, but had a substantial effect on the white maize price increasing, pushing it up to an all record level of close to R4000/ton.
Since then the price increased to R4781/ton for white maize, March Safex contract (dated 4 January 2015) as the drought continue and insufficient white maize plantings took place.

The Reserve Bank increased interest rates end of November 2015, based on the view of the risk of inflation increasing beyond the 3-6% target range. Food inflation is expected to worsen considerably ,the biggest impact of higher inflation will be on the lower income consumers, where the plight will worsen, with basic food prices increasing sharply and household income will decline dramatically.
A number of Municiplaities has enforced severe water restirictions, as water supplies run out and some rural towns are left with no normal water supplies (due to inadequate planning en infrastructure). Water availability to farmers in some irrigation schemes has also been limited severely -which will force them to stop producing. Heat damage to new crops (and irrigated crops-as air evaporation is higher then the capacity of the irrigation system) has been reported, as continous heat waves are experienced in the country.

In combination with an interest rate hike and exchange rate depreciation, South Africa is facing a double edged sword, in the grip of a multiyear drought, *with an estimated 60% of maize planted (end December 2015) and the planting window for normal yields closing. The indication is that 40% of the planting intentions of soybeans was planted by the end of December 2015 (with panting window gone). The effect of a severe sub optimal summer grain crops will be felt through the complete value chain into 2016 (and beyond).*

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[1] Prof Johan Willemse, Dr D Strydom (Departement of Agricultural Economics) and M Venter.

Stats SA values agriculture’s direct contribution to GDP at 3-4% per year, however various studies has shown that the indirect effect of agriculture (taking into account forward and backward linkages) is closer to 25%. This taken into account, the input suppliers actual production, processing and retailing with exports also being significant.

According to a Stats SA publication, the Agricultural sector is already in a deep recession. The annualized percentage change in the seasonally adjusted quarterly value added, shows declines of -18% (Q1), -19,7% (Q2) and -12,6%(Q3). Agricultural economists are of the view that it will get much worse during 2016 and that the negative knock-on effects will not only impact farmers and input suppliers as well as the rest of the economy, for the first time will feel the effect of widespread drought, for a number of years to come.

The reason for the long run negative impact, is the fact that South Africa does not have a safety net for farmers. During drought years farmers have to use their own reserves or capital to utilize and leverage extra borrowing capacity for farming business in order to continue to absorb the losses of the current and previous year. More importantly, due to using their own capital, capital reserves are being depleted, and this creates the scenario where credit is used to finance production cost for the coming production year. It is imperative to note that many farming businesses do not receive a monthly salary, but only an income at harvest of his crop or livestock, and this varies from year to year and is not adjusted by inflation annually like a salary.

With the current scenario Livestock farmers find themselves in a situation where they have to use their cash savings to buy feed in order to get the animals in a condition to sell, but now the problem is feed prices have increased dramatically and the availability is hampered by the drought, causing even more emergency selling/slaughtering of animals, and thus pushing down farmgate prices for livestock farmers.

Compounding the scenario livestock farmers find themselves in is, that of continuity, if the farmer sells/slaughters his total herd or the majority of the herd, it means he loses genetics built over a long period of time and it would take him a minimum of 7 years to recover his herd losses.

Another major uncertainty regarding all farmers in South Africa is the question of security of ownership. Freehold land is the basis for external financing and is needed as security by financiers. Policy uncertainty and initiative’s by Government to reduce the security of land ownership also reduces financing capacity of commercial farmers.

Many farmers in 2015 were not able to source sufficient input financing for the current production season, this is due to the liquidation of some input financing companies and also the risk is too high to lend money to a cash strapped farmer, especially with indications of another interest rate hike.

If a farmer does manage to get financing from a financing institution, the options to take out multi-peril crop insurance is severely limited. This is due to international re-insurance companies pulling out of agriculture in South Africa during 2014/15. One example of a big role played in the multi-peril crop insurance market is Barclays Africa who sold its agri crop insurance division during 2015, in order to reduce their own risks. Various attempts by industry and organized agriculture to get Government to agree and adopt a agri risk insurance system (with some Government security/support) as successfully applied in the USA, has failed to date.

It is not only commercial agriculture that is affected by the lack of clear leadership and business enhancing policies by Government, but also the more vulnerable emerging farmers who do not have ownership or title deeds to land, according to government policy. The predicament that emerging farmers find themselves in is, they do not have assets (like land) to use as collateral to raise credit. Emerging farmers also have to use their savings to buy feed for animals and later resort to slaughtering productive animals at lower prices, not to mention the number of livestock dying of hunger. The dying of animals is taking on an unprecedented scale in remote rural areas, wiping out emerging farmer herds and life savings. The government made drought assistance available in KZN (R114 million rand) to emerging farmers and this was used up in two days early December 2015.

Looking at the broader population financially vulnerable South Africans are also not in a position where they can apply for food support due to the lack of supply of food. The situation in a year like this is, that malnutrition and hunger will increase even more than it is currently, in a normal year according to the WHO 53% of children under the age of 6 months is affected by malnutrition in South Africa. The threat created by the drought is that Basic food prices, i.e. maize meal, vegetables, doubled in price the past year and the rate of price increases are accelerating as the drought is persisting

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Multiyear drought impacting Grain and oilseeds crops

Summer rains are already too late[2] and too little for some of the eastern production areas to plant row crops like, maize and soybean. In the remaining areas more to the western parts of South Africa, time is running out to plant in the optimal planting window and this will affect yields and pushing them down below average yields.

Table 1 gives a brief summary of the 2015 row crops yield (total tons harvested) and expectations of yield (total tons harvested) for the year 2016 crop.

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[2] Grain SA, Free State Agriculture, . Fanie Brink media info.10 Dec.2015.

Table 1: Current and expected volumes in crops and trade (*Updated 6 Jan 2016)* 000 tons				
	2015 crop	2016 crop est*	2015 Imports	2016 Expected imports*
Yellow maize	5238	4000	900	>2500
White maize	4702	1800	*80*	>-3500 (if available)
Soybeans	1059	800	150	>500
Sunflower seed	660	800		
Groundnuts	56	35	7	>30
Winter wheat	1505		1800	2000
Rice imports			1200	1300
Total 000 tons			**4117**	**9480**

Sources: National Crop Estimate Committee.(2015 Crops) SA Grain Information services

*Own estimates 2016

*White maize imports =only domestic shortage/international not readily avaliable

Some conclusions and insights:

- *Grain imports will increase substantially from an already high 4.1 Mill tons to a 9,48 million tons (depending on white maize availability)during 2016/17*. Harbor and rail/road logistics will be under severe pressure and there are doubts that SA will be able to move such a record quantity of grain inland, given the weak railway system and poor road logistics. This could cause bottlenecks in supplies and product shortages from time to time.
- The current continuous depreciation of the ZAR against the USD, is making it more expensive to import grains, an exchange rate depreciation does not only affect import of grain but costs of other input supplies, like fertilizer, oil, chemicals.
- Calculations indicate that grain imports will require roughly R25 – R30 Bn of foreign currency in the next year. This excludes the losses of grain farmers, estimated to be close to R10-12 Bn for 2015 alone.
- Yellow maize imports will increase from 900 000 ton to a minimum of 2.5 Mill tons. International export markets will be lost for yellow maize, these export markets were fought hardly for and will take great effort and time to rebuild. The contrast is that South Africa exported 2,2 Million tons of yellow maize annually, before the drought.

- Yellow maize prices already increased substantially by 75%
- (Dec^{14} to Dec^{15}). The probability that fundamental factors can lead to great decreases in prices in 2016 is highly unlikely; prices will remain high till early 2017. Again a key driver of higher prices, taking supply out of the equation is an ongoing weakening of the ZAR against the USD and USD prices for grain increasing due to greater international demand.
- *White maize crop is expected to be substantially smaller with a local shortage to domestic demand larger then 3,5 million ton during 2016/17 marketing year. We also supply neighbouring countries and they will also be hard hit .Physical shortages of white maize mea is exected.*
- White maize prices already increased by close to 100% (Dec^{14} to Dec^{15}).
- *The second week in December prices jumped to a record price of nearly R4000/ton.Since then it increased to just below R5000/ton on 6 January 2016. With very limited supplies available internationally. Prices are expected to increase even further in coming months.*
- Millers report that sales of white maize meal has dropped by 10-15% due to the high prices and indicating strain on the lower income groups. (Various reports suggest that hunger and malnutrition is increasing). Posing a serious threat to political stability, a hungry man is an angry man.
- During the past year limited white maize imports were possible where Mexico and Zambia, being the only commercial producers of the crop. Limited supplies is available in the USA.
- Zambia has run out of exportable white maize. Overseas imports into 2016/17 is further limited by South African GM regulations, currently prohibiting specific cultivars to be imported. Maize millers are expected to request some leeway in the application of the regulations as an emergency measure.
- The soybean crop will be significantly smaller, as most farmers in the eastern production area (Delmas, Ermelo, Bergville) have run out of optimal planting time for soybeans.
- Soybean crop plantings should have been completed in November 2015. This is creating the scenario where soybean imports will increase to keep processing plants running and some will close down processing and rather import soymeal and oil to fulfill contracts. This is a negative for jobs due to companies investing millions of ZAR to build processing plants in order to curb the expensive import of the processed soybean products.
- The potential for the Sunflower seed crop could increase substantially, because in the central/western production areas, planting can still be done till the end of January 2016. Yield risks and drought risks are smaller than other crops. Also sunflower is less capital intensive than for example maize (Input cost Maize = 6-8k/ha vs Sunflower 2-4k/ha). The downside of sunflower is that there will not be crop residue for farmers to use as animal feed within the winter season.
- Groundnuts plantings are already reduced significantly and it is too late for further plantings therefore the crop will be smaller. Export markets will be lost and imports will increase.

- The wheat crop harvested during 2015, is also significantly smaller due to a drought in the Western Cape and the Free State.
- Imports are expected to escalate to a new record level, supplying roughly two thirds of the needs for bread baking. Most of the wheat imports are coming from Russia/Ukraine which is concerning given the social-political uncertainty between the two countries and Russia moving in to Siria.
- Domestic wheat prices are at record levels, due to the weakening rand, but also a formula based import duty, currently R911/ton (expected to increase shortly towards R1200/ton). The conundrum is that with the local crop harvested, millers/bakers see the import duty, which farmers lobbied for due to unprofitable low international prices, has now increased to a level that it creates an extra burden on already overburdened consumers and could request emergency relief on the new imports.

Sugar crop scenario

The SA Sugar Cane association reports that sugar cane crushed by the mills reduced from 20 million ton in 2013/14 to 17.7 million ton in 14/15 and expected to drop further in 2015/16. Income to sugar cane farmers dropped significantly (of which a large part is small scale producers). Cane yields will remain depressed for the next 2-3 years. (due to production being a multiyear crop and weather lags) Sugar companies are running well below capacity, pushing up unit costs and reducing profits. Exports of sugar are also declining.

Potato scenario

Currently the potato market has an oversupply of potatoes, however due to recent heat waves, creating dry hot weather the quality of potatoes were affected. This created a limited supply of good quality potatoes and resulted in a price increase above normal seasonality.

Seed Potato producers, (especially in the Western Cape) can't sell their seed potatoes, as there is very little demand from commercial potatoes producers to plant potatoes, a result of a lack of soil moisture and irrigation water. They are now offering potato farmers a payment option of over a year, where in the past payment had to be made at delivery.

Due to a lack of demand Seed Potatoes are now given as animal feed in drought areas, resulting in huge financial losses to the particular seed potato producers (seed potatoes also have strict quality controls). The effect of the lower demand for seed potatoes will be seen in next year's supply of seed potatoes, putting seed potato growers in a position to decrease supply greatly. This will affect next year's potato crop, which will push up potato prices that have already increased. Yet again the poor will be affected the most.

Beef and sheep industry scenario

Given the fact that we are already mid summer, half of the growing period for natural grazing is already lost, which will result in insufficient grazing through the 2016 winter (if and only if sufficient rain falls in December). The natural grazing in South Africa (From KZN to Northern Cape coast) has been depleted and thus no grazing capacity is left. Farmers are trying to keep core breeding herds alive, however feed is limited/expensive due to the past three years drought conditions.

According to the Red Meat Producers Organization more then 40 000 cattle have already died in KZN (November 2015) and the rate is increasing rapidly during Decemeber and January 2016. Farmers are slaughtering animals to save on feeding costs and also preserve natural grazing'However slaughetring capacity is limited and the quality is lower grade meat-for which teher is not a readily market available.High quality beef, via feedlots continue to be available, however caoacity is limited and the market uptake is slow, due to consumer income declining.

The reduced new summer crop plantings will also lead to reduced fodder supply in the 2016 winter. This will have an impact on prices for live animals, which has already been reflected in the significant decrease in prices, due to oversupply of meat in the market as there are few buying appetite buyers and abattoirs are running at full capacity.

It has to be noted that although there is currently sufficient meat supplies available (at affordable prices), when the drought is broken, famers will have to start rebuilding production herds, with a normal production cycle taking up to 7 years before herds are rebuilt and supplies restored, this was proved in the US where the prices of female cows reached record levels in 2014-2015.

During the period of production herd rebuilding, we will experience high prices (due to shortages). Unfortunately the high prices will only have a limited benefit to producers, as they will have very little livestock to sell. Animal diseases like (Brucelose) is currently being spread due to the movement of animals to areas where grazing is still available. The risk of new diseases spreading throughout the country is real, with grave consequences. We also know that the Government Veterinary Service does not have the resources and thus are not able to cope with this current high volume movement of animals in the country.

Intensive livestock industry scenario

In the case of intensive livestock (chicken, eggs, pork and dairy) feed costs are approximately 60% of total production costs. Grain and oilseed (feed protein) prices have already increased substantially by 50-80%) during the year. Most producers are losing money and closure of production units is inevitable, while the surviving producers, will have to increase product prices significantly to break even and survive during the next 2-3 years. This is however difficulty in the case of dairy farmers, due to large super market chains importing UHT milk from Poland and marketing it in the South African milk market at prices South African producers cannot compete at.

Feed and chicken company share prices are already showing significant decreases as the market discounts the risk of not making profit in the future, due to current market conditions.Relative cheap imports from the USA of unwatned meat remain a risk.

Again, it is a matter of time before prices to the consumers will increase significantly, as remaining producers and retailers pass costs on to consumers to absorb. The poultry industry fully expects volumes (bought by consumers) to decrease but are prepared to rather stay profitable and survive on smaller volumes to remain sustainable. Currently the uncertainty regarding the trade policy AGOA between the US and SA is creating more uncertainty for the poultry industry.

Input suppliers scenario

Input suppliers to agriculture will have significantly reduced sales, leaving them with unsold stock and heavy financial losses. Machinery sales are already down between 20% (tractors), 40% (combine harvesters) for 2015 and will reduce further in 2016. Again the Ag machinery industry will experience heavy losses forcing them to scale down.

Seed producing companies will receive unused seed back from farmers resulting in large unsold stock which will be unfit to be sold in the 2016/17 planting season. Furthermore, they have to produce seed during this current drought, to be able to supply seed to farmers in 2016/17 planting season. The impact could be very negative.

Chemical companies (Fertilizer/insecticides/chemicals) will have large unsold stock resulting in heavy financial losses and some of the stock will not be fit for the purpose two years later. The chemical industry is fighting a losing battle against currency depreciation, because most active ingredients are produced internationally and only formulated in South Africa, this will push up prices even though stock levels are high due to the drought. Also insecticide, pesticide, fungicide prices are not directly derived from the oil price, thus if the oil price decreases it will not impact the agro-chemical market substantially.

Summarizing and perspective:

Unemployment/ urbanization/crime/economic impact

- Unemployment will increase throughout the country, but more so in rural areas. The soscio economic impact is feared and cant be left unintended.
- Economic activity will be reduced severely, especially in rural areas. Hunger and crime will increase and we can expect another large movement of people into city areas.Indications are that upto 2 million people could be moving to urban areas. Indeed the outlook is very

negative and human misery is on the increase.

- Food inflation is expected to increase strongly during the next year.Basic staples, like maize meal prices prices has already increased 30-40% on shelf-reducing the purchasing power of consumers substantialy and will leave people with less money and also be able to buy less food with a fixed income.Poverty and malnutrition will increase-a basis for social unrest .
- Economic multipliers indicate that a 1% drop in output in agriculture will lead to a 1,5% drop in output in the larger economy. In rural areas the multiplier is close to 4. We expect severe economic hardship in rural areas and de-population.
- Agriculture's labor multiplier is also much higher than the rest of the economy at 24,1 while the whole economy is calculated at 8. The result is that a decrease in agricultural output will shed much more labor, than what the case is in the rest of the economy.

It is not an overstatement or over dramatization of the current drought situation. The impact will be severe in rural areas, but it will rapidly escalate through the economy and directly into reduced consumer welfare/increase in undernourishment (as consumers will by less food with the same money). Social instability risks are at an elevated level and with a government with very poor policy skills and economic insight, and with very little effective "drought aid" we are expecting an very stormy 2016/17.

Without substantial support , to enable farmers to qualify for production loans end 2016-the dire consequences will continue into 17/18.

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