

# The Two Legs of Food Security

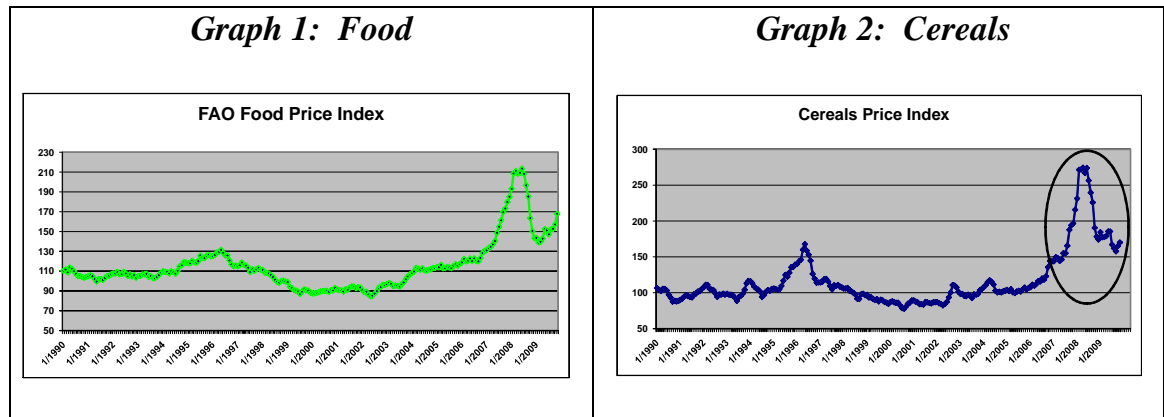
by Jannie de Villiers<sup>(1)</sup>

**A proposal for South Africa presented at the CST-SA ICC International Grains Symposium – Pretoria: 3 February 2010**

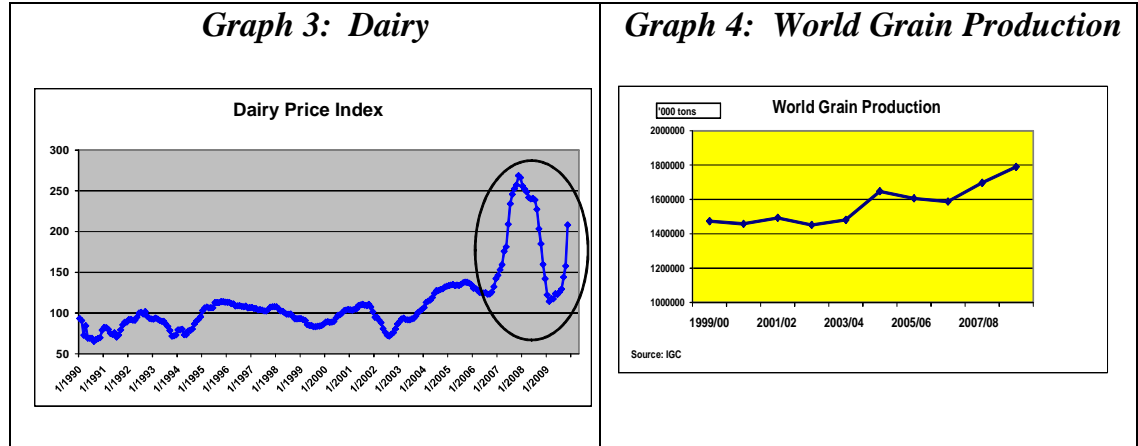
## 1. INTRODUCTION

The energy crisis in the world has triggered the development of the biofuel industry. This development has linked crude oil and grain prices permanently. Crude oil prices are mainly driven by the world economic growth. The impact of this development internationally was thoroughly experienced in the food price spikes that we have seen in 2007/2008. The current world recession has suppressed the demand for oil and other commodities which, in turn, lowered the demand for grains concurrently with an increase in world production. This range of events has caused a ‘lull in the fire’ or a calmness between two storms.

The FAO Food Price Index is a clear indication of this calmness between two major storms.



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The major concern at this point in time is that despite this current calm period, cereal production in the world has recorded new record highs. This means that, should the demand for food and food processed products pick up together with world economic growth, we expect major pressure on food prices all over the world again. This elevates the issue of food security as a very important cornerstone for taking the world forward.

## 2. **FOOD SECURITY**

**Food security** is defined by the *availability* of food which is the responsibility of the free market. This will ensure enough, safe food to be physically accessible to all. The second leg of food security is *affordability* which is the responsibility of Government providing a policy environment whereby competition will drive down prices, economic growth and job creation will provide the means to buy the food and a social safety network to assist those in distress. Lastly, affordability also necessitates infrastructure provision by Government to ensure a proper support system for the market.

**Food self-sufficiency**, however, has to do with surplus production, no imports and exports of surplus food. In South Africa the self-sufficiency index (production as percentage of consumption) for white maize over the past ten years has been 131%. For yellow maize the self-sufficiency index for the same period was 116% but, for wheat the self-sufficiency index is only 77%.

### 3. *A SOUTH AFRICAN PROPOSAL*<sup>(2)</sup>

In an effort to maintain food security in South Africa, it is proposed to use the following building blocks:

#### 3.1 *Free market system*

The free market system has encouraged the world to react on high food prices and increase production to new records. It is proposed to allow the market forces to react this way in order to ensure sufficient quantity of food to the world. Free trade and minimum Government intervention are currently under huge pressure following the failures of sufficient food during the 2007/2008 price crisis.

#### 3.2 *Invest in infrastructure*

- *Transport*

The leaders of the G8 have acknowledged their failure in investing in agriculture to ensure food security to the world. The share of official development assistance to agriculture has dropped significantly falling from a peak of 17% in 1979 - the high of the Green Revolution - to a low of 3.5% in 2004. The leaders of the G8 industrial countries promised the world to rectify this situation within a short period of time. Only time tell will whether or not they have lived to these promises!

Infrastructure related to transportation in South Africa has deteriorated substantially over time. In the 1980's, 85% of all grains was transported by rail and the processing sector has been developed for rail intake. The current percentage transported by rail is in the vicinity of 30% which is  $\pm 20 - 30\%$  less expensive than road transportation. These inefficiencies in our rail system are adding substantial cost to the price of basic food products.

The Developing World is in desperate need to improve infrastructure to ensure food security in the years to come. Recently it was reported that large parts of Kenya ran out of maize following a failure in their rail system. It was reported on the website of [WORLD-GRAIN.com](http://WORLD-GRAIN.com):

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<sup>(2)</sup> The focus in this paper will be more towards the role cereal scientists can play whereas the majority of these building blocks are economically based.

*'The food security situation in Kenya continues difficult and deteriorating partly because the Kenyan port-to-fork food delivery infrastructure remains inadequate to service the nearly unprecedented volumes of food grains needed in the Kenyan interior.*

*Reportedly, ships are waiting as long as four weeks to discharge bulk commodities at the only Kenyan port, the Port of Mombasa. Almost all of the discharged food grains must be bagged for transport and distribution to millers. This labour-intensive and very slow bagging process frustrates the ship offload capacity.*

*Once loaded, the trucks ply a single, two-lane, east-west highway through the major population sites within the country. Kenya's narrow-gauge railway does not operate efficiently enough to provide a viable alternative to truck transport even though east-west truck freight rates are reported to be very expensive.'*

- **Research**

More investment in research is desperately required. Areas where the world needs to expand on capacity is the implications that climate change will have, not only on the availability of food, but also on the safety and nutritional aspects thereof. Research should lead the way to show the adjustments required in agricultural practices, crop cultivars and varieties that can survive with lesser water under warmer conditions. It will be of no use if we can produce enough wheat for the Globe but the change in climate causes new diseases that make food non-consumable.

Climate change will also add to the already longer list of non-tariff barriers preventing countries from trade and in the process prevent the availability of food to all.

We have seen a substantial increase in research capacity and funding in food safety. The mycotoxin network of research specialists in the maize industry is one of the achievements in South Africa.

- **Water usage and research**

South Africa also has to invest more in water usage research. If the quantity of water becomes a problem and we replace all irrigated crops with dry land, South Africa would probably be in a grain deficit situation. We have also noted that the quality of water has deteriorated substantially because of pollution affecting food

safety severely. The pollution is mainly caused by the mining sector as well as unprocessed sewerage being dumped into our river systems.

- ***Regulatory capacity***

The regulatory capacity to register new technology and improvements in the processing and production of food, is very critical. The unlocked potential to overcome the challenges to produce more, safe and nutritious food at affordable prices should not hamper, but speed up, the process. Together with this regulatory capacity comes the need for proper testing facilities. We are in a lack of proper international laboratory facilities and skilled human resources to ensure that the claims for food safety and nutrition are properly met and verified.

A recent report by GAIN from the Bill and Melinda Gates Foundation, indicated the partly success of our flour and maize meal fortification programme. The Chamber of Milling is on record stating that the biggest stumbling block for the success of this programme is the lack of monitoring these regulations by Government.

- ***Energy***

The cost and availability of energy have rocked the world in 2007/2008 and South Africa was not spared when we experienced load shedding early in 2008. The continuous supply of electricity to our processing plants and irrigation systems remains an essential part of food security. The basic rule applies – ‘*no electricity – no food*’.

- ***Skills***

South Africa is currently also experiencing a problem regarding the lack of the necessary skills provided to process enough safe food to the population. Investment in training and training infrastructure is desperately required to combat the backlog of especially scientists in the cereal business in South Africa.

The Maize Trust and the Winter Cereal Trust have awarded several bursaries to post graduate students in the cereal science area in an effort to overcome this gap. To our surprise these qualified students now find it difficult to get a job!

- ***Other areas of investment***

Other areas that are desperately in need of investment revolve around market information. The impact of the Trade and Tariff Policy in South Africa also affects food security dramatically and the substantial increase in non-tariff barriers is not conducive to food security when nations promulgate quantitative restrictions in an effort to feed themselves. Another challenge in South Africa is the sustainability of transformation in agriculture. There are numerous reports of farms that have been transferred and that are currently unproductive. The stakeholders in the industry need to join their efforts and join Government in ensuring the sustainability of the transferred land.

Lastly, very careful consideration should be given to use foodstuffs for biofuel purposes in the Developing World. Whilst we are not food secured, it is difficult to imagine using food to manufacture fuel for the ever-thirsty Developed World.

#### **4. CONCLUSION**

It is of utmost importance that the actions to meet the food security challenges are well co-ordinated between Government and private sector to ensure the best possible results. The focus should, however, be *firstly*, to ensure the availability of enough, safe and nutritious food to the population in a way that it is affordable to most. We recognise that South Africa will be heavily challenged to feed the poor in this country and therefore a proper social safety net remains an important cornerstone of being a food secured country.

My call is for all role players to commence immediately with the work and to stop producing papers and strategies without actions. We will not be able to meet the challenges of food security towards 2025 if our words and papers do not turn into tons of grains to meet the demand of an ever-growing population.

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