PART 7

DEALING WITH HIGH FOOD PRICES:

RECOMMENDATIONS

CHAPTER 1

SUMMARY OF FINDINGS

1.1 Overview

The regional supply and demand situation and rising world prices for the major grains triggered an upward trend in most agricultural commodity prices in South Africa towards the second half of 2001. This trend was fuelled by the sharp depreciation of the value of the Rand against all major currencies in the world, leading to an even faster rise in commodity prices by early 2002. These events sent inflation spiralling out of the target range of 3 to 6% set by the South African monetary. Food inflation moved from a relatively stable and low rate of between 4 and 10% to a high of close to 20% in October 2002. Subsequently, the exchange rate strengthened, agricultural commodity prices dropped by up to a half of their peak levels and the rate of food price increases declined rapidly to 3.8% in September 2003. The November 25, 2003 CPI release of StatsSA reports food inflation of 2.5%, clearly indicating a much improved situation.

1.2 Main findings from price monitoring

The various analyses of food retail prices reported in Part 3 of this Report clearly confirm the initial sharp increase in basic commodity prices (notably maize). This initial shock then spread through several value chains followed by a levelling off of price increases for virtually all food items, and even a decline for some products (red meat, maize meal, samp and cooking oil). However, while it is true that these prices came down from their peaks in 2002 and early 2003, the decline was in all cases not as large as the initial increases during 2001/2002. When one considers the period (Jan – Oct 2003) over which the Committee monitored food prices, the trends reflect price declines for 11 out of 24 monitored by the Committee. The data are shown in Table 1.1, which also shows a few anomalies, including products such as milk powder, peanut butter, margarine and onions, whose prices have increased at far above the current rate of food inflation.

Our analysis of food inflation for different income groups shows that poor households experienced higher inflation rates than wealthier households. At its peak in October 2002, poor households were confronted with year-on-year food inflation of 23.1% while richer households only experienced food inflation of 19%. The benefit to the poor of the recent lower prices for most staple foods is reflected in a food inflation rate of 3.35% compared to that of richer households of 4.21%.

Table 1.1 Changes in monthly average retail prices for selected food products

	Jan 00	Jan 01	Jan 02	Oct 02	Jan 03	Oct 03	Percentage change Jan-03 to Oct-03
Cheapest Maize Meal per 10kg	25.26	22.21	23.94	33.55	33.12	27.25	-17.70%
Bread Brown – 700g	2.56	2.68	2.84	3.34	3.51	3.56	1.41%
Bread White – 700g	3.12	3.16	3.16	3.72	3.83	3.95	3.24%
Snowflake Cake Flour – 5kg	20.35	19.68	20.99	25.29	23.71	24.45	3.12%
Tastic Rice -Rands per 1kg	6.63	6.53	7.19	7.39	7.32	6.7	-8.44%
Cooking Oil – 750ml	4.16	3.76	6.57	6.91	7.03	6.52	-7.25%
Rama Brick – 500g	6.41	6.29	6.89	7.49	7.26	8.26	13.75%
Peanut Butter – 410g	5.62	6.22	6.51	7.8	7.91	9.58	21.19%
Full Cream Milk Sachet – 1L	2.56	2.86	3.28	3.87	4.05	4.35	7.25%
Elite Milk Powder – 1kg	33.09	36.26	39.9	48.13	48.11	52.97	10.11%
Full Cream Long Life Milk – 1L	3.32	3.73	4.15	5.36	5.38	5.88	9.33%
Cheddar 1st Grade - R/kg	27.25	29.08	31.41	35.81	36.18	37.29	3.06%
Choice Butter – 500g	10.71	12.7	13.23	14.49	15.78	15.63	-0.99%
Stewing Beef – R/kg	16.84	18.8	22.41	25.73	23.6	22.36	-5.28%
Bulk Lamb Pack – R/kg	27.38	27.47	28.78	33.44	33.94	31.19	-8.10%
Pork Braai Chops – R/kg	24.26	22.27	25.58	30.57	32.06	25.63	-20.05%
Fresh Chicken Whole – R/kg	11.94	14.09	14.91	17.13	16.76	16.7	-0.36%
Cheapest Large Eggs - 12 S	5.34	5.54	6.34	7.89	9.07	8	-11.76%
Granny Smith Apples - 1.5kg	6.3	5.83	6.52	7.76	8.75	6.31	-27.95%
Tomato Loose – R/kg	4.75	5.49	6.47	6.66	6.66	6.66	0.00%
Onions Loose – R/kg	2.57	3.14	3.99	4.42	3.56	4.52	27.02%
Cabbage – Each	2.66	2.79	3.33	3.8	3.57	3.81	6.63%
Potatoes Bag (10kg) -	13.55	20.73	23.05	46.79	40.95	28.3	-30.89%
Cheapest White Sugar – 2,5kg	9.39	9.67	10.22	10.49	10.97	11.23	2.32%
Joko Tagless Tea Bags - 100 S	12.55	12.93	14.59	16.17	16.20	15.30	-5.6%
Ricoffy Coffee – 750g	23.02	22.65	22.53	27.45	27.27	27.45	0.7%

Rural households also experience food prices and food inflation differently than urban households. Our analysis in Part 3 (Chapter 5) has shown that prices in rural stores are generally higher than in urban centres. This applies largely to all processed goods, while fresh produce and sometimes milk prices at these stores are lower. Mark-ups between retail and wholesale prices are fairly high, but are largely due to transport costs between wholesale outlets and the trading store. Price trends in rural stores also show some levelling off, with decreases notable in prices for maize meal, dry beans and red meat.

The fact that the Committee received virtually no inputs and complaints from the public through the toll-free number and e-mail line after June 2003 gives some indication that food inflation abated and that consumers did not pick up any extraordinary increases. The monitoring process by the Committee also found no 'sharp' increases in food prices over the period since its appointment. The existence of a monitoring mechanism, increased public awareness as well as improved and more stable macro-economic conditions all assisted in achieving slower food inflation and even food price reductions in some cases.

Lower food inflation does not necessarily translate into cheaper food. This is normal, since lower inflation implies only a lower rate of increase in prices. Thus, prices are on average still increasing, albeit at a lower rate than a year before. As indicated earlier it is only certain food products that are now cheaper than in 2002 while others are more expensive, which is why there is still a common complaint that the consumer's monthly food bill has not declined. The Committee's analysis in Part 3 (Chapter 2) shows that in September 2003 the total cost of the basket of food items monitored by the Committee was only 1.5% cheaper than in September 2002, confirming the sentiment expressed by consumers. The fact that food is not cheaper in nominal terms mean that many poor households will still find it difficult to afford a basket of basic food. Government thus still has a duty towards these households and it is therefore necessary to consider potential options for intervention. These are discussed later in this Report.

The future of price monitoring

The Committee found the monitoring process to be a useful exercise to understand and monitor food price trends of specific food items. This promotes the protection of consumer rights, provides valuable information for policy analysis and leads to better understanding about the variation of prices in similar products in rural and urban settings. As one observer commented: "The one good thing about the Food Pricing Monitoring Committee is that there is a Monitoring Committee". The advantage of this system of monitoring price trends is that it allows qualitative observations of other factors and behaviour that influence food prices in different social environments.

The Committee is of the opinion that the National Department of Agriculture should implement a reliable and consistent price monitoring network throughout the country, as this affords policy makers the opportunity to gain first hand qualitative and quantitative data on price trends, and enables the department to make informed decisions and implement appropriate actions.

1.3 Main findings from the supply chain analysis

Any analysis of food supply chains has to start with an analysis of producer prices at the farm gate (i.e. agricultural commodity prices). Increasing commodity prices (helped by world prices and the exchange rate) were largely responsible for increases in retail food prices during 2002. On the other hand the subsequent sharp decline in commodity prices back to levels of pre-2001 did not have the same dramatic effect on retail prices, as one would expect. Figures 1.1 and 1.2 below provide confirmation of this statement.

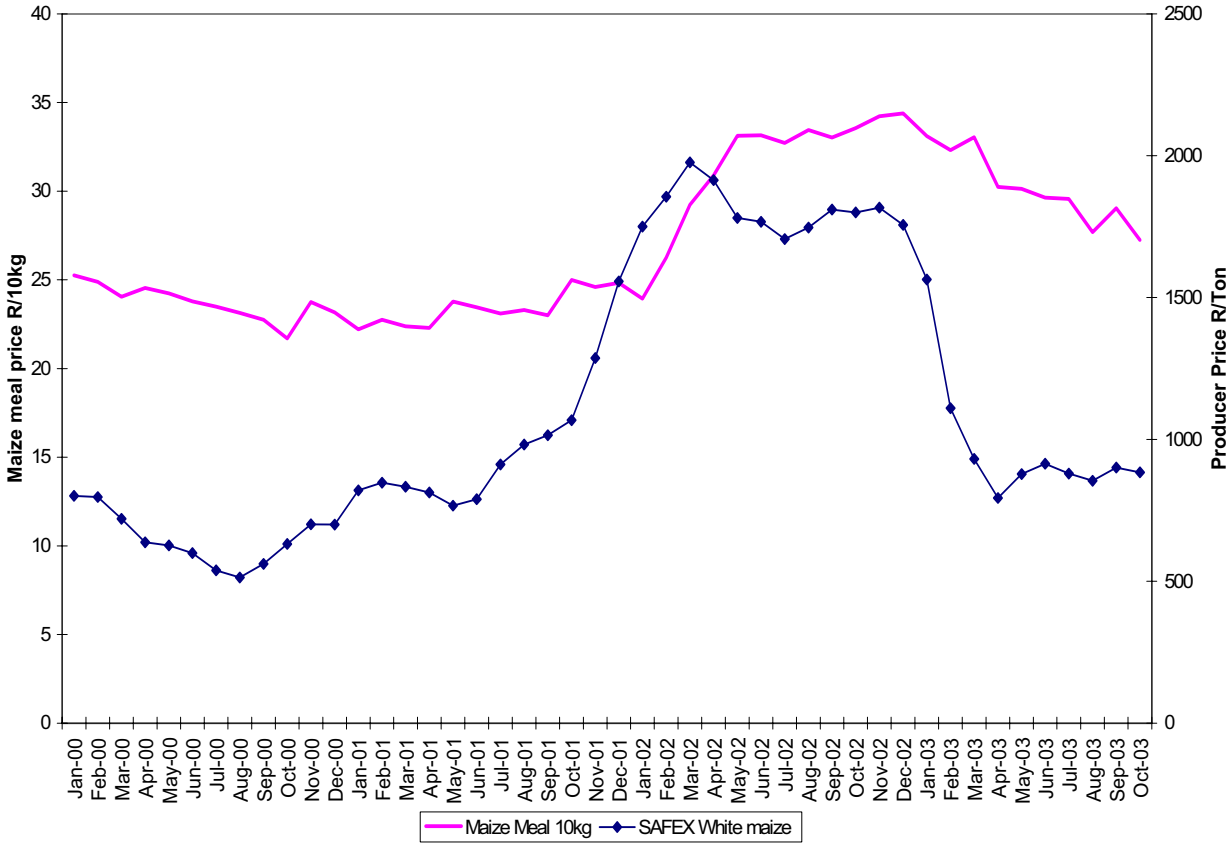

Figure 1.1: National average retail price for 10 kg maize meal and SAFEX producer price for white maize: Jan 2000 to Oct 2003

Trading positions

Sharp rises in commodity prices and the fact that they remained high for a number of months after the 2002 harvest created suspicion about trader behaviour on the agricultural futures market (SAFEX). Large losses by one trading house early in 2003, and an investigation by the Financial Services Board into trading practices of this firm, also confirmed this suspicion. The investigations of the Committee have shown that a combination of factors, including a large open trading position on the futures market, inexperienced traders and incomplete information about the real size of the South African crop as well as the supply and demand situation in the SADC region, created a situation where hoarding of the market was possible for a certain period during 2002, after which the market corrected. New rules on trading positions on the futures market and improved, unbiased and timely information are clearly required.

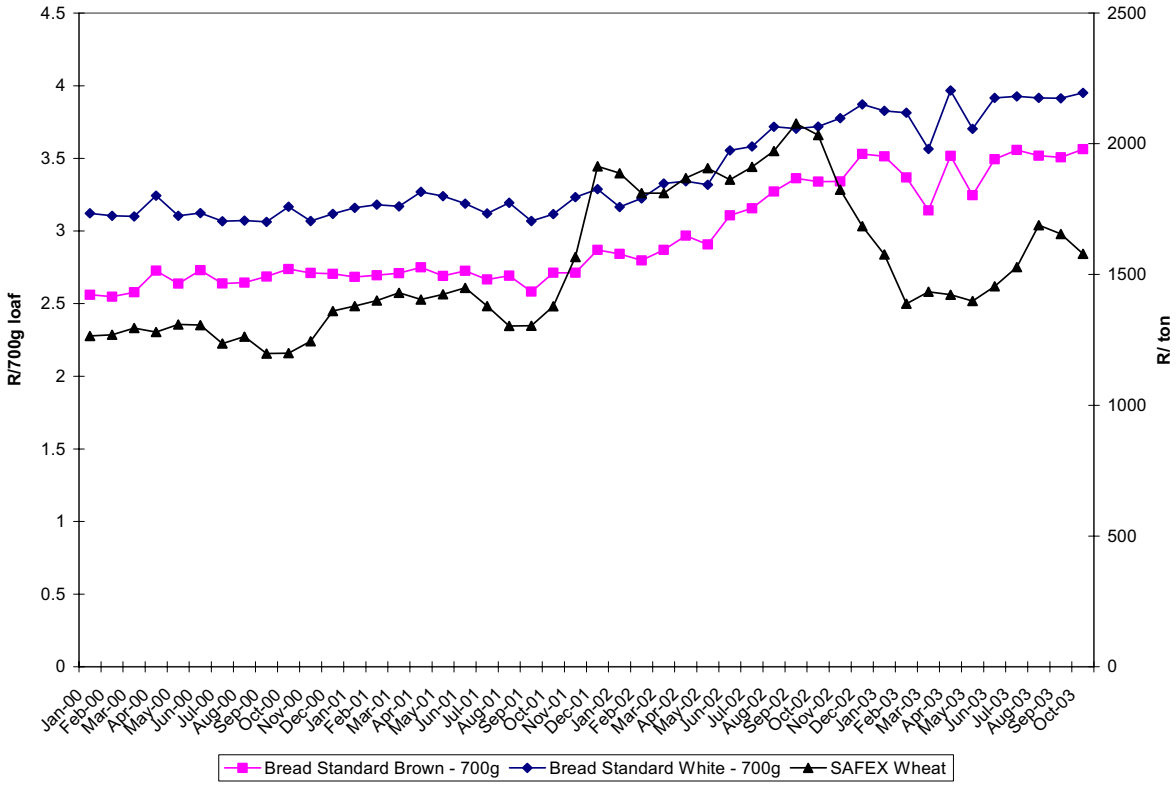

Figure 1.2: Brown and White Bread (700g loaves) National Average Prices vs SAFEX wheat price: Jan 2000 to Oct 2003.

Price flexibility

The analysis of the various supply chains in Part 4 and 5 of the Report provides some explanation for the downward stickiness of retail prices. Other costs such as processing costs, wages, and distribution costs also increased with the normal inflationary trend, making it difficult for manufacturers to reduce prices fully. The ability of manufacturers to recuperate losses and/or to prevent losses through appropriate pricing policies and therefore not to pass through the full benefit of cheaper raw materials to the consumer can partly be explained by the oligopolistic structure in most of the food industries. This aspect came out fairly clearly from the investigations of the Committee highlighted in Part 4 and 5. The analyses here provided substantial evidence of oligopolistic behaviour and monopolistic competition. Brand loyalty by consumers, a limited number of competitors, market segmentation by supermarkets and manufacturers and also the nature of demand often put the supermarket/manufacturer in a position to dictate price.

The structure is such that manufacturers –despite temporary losses – could ensure that profits and return on equity were maintained within a financial year to keep shareholders happy. This structure makes it very difficult for smaller players to enter this market. The competition is so fierce with everything based on economies of scale, small margins but high volumes and turnover. Smaller players do not have the scale of operation to compete in this game. Thus, the volatility in commodity prices and the exchange rate has a clear impact on smaller suppliers and manufacturers, as they find it very difficult to absorb the shocks. All of this has the potential to bring about further concentration in manufacturing and retailing. It furthermore remains evident that the

South African food economy is more and more beginning to replicate the UK, European and US market structures, moving us closer to a supermarket driven economy[1]. In such an environment government seems to have its work cut out – monitor price trends and pricing behaviour on a continuous basis and ensure effective policing of the competitive environment through the Competition Commission.

The Committee holds the view that the long period of correction in the prices of food indicates the role of many factors, which include market power/structure as well as supply and demand forces and lag effects. High prices and high margins were detected in certain markets and in certain months. It is true that the market eventually corrected, but in the process poor households were adversely affected. This should be a major concern to government and to society as a whole. The effect of high prices on food affordability and right of people to sufficient food is still a reality which needs to be addressed.

The Committee's work presented a much clearer understanding of the working of various food supply chains in South Africa. The results provide a clear understanding of costs and structure within the food supply chains for the first time. Nevertheless, the information remains very sketchy since most of the analyses were based on industry averages. It is therefore difficult to link any changes in prices to specific behaviour by any role player. Confidentiality and the proprietary nature of detailed financial information of any one company made it difficult for the Committee to be able to pick-up any 'unjust' price increases.

Thus, although the market structure could provide the opportunity for predatory and unjust pricing, there is limited evidence that this has happened. What the analyses of the Committee do show is that all price increases seemed to track changes in the prices of raw materials, other costs and the exchange rate. Figure 1.3 shows the trends in retail prices for rice, an imported commodity, to illustrate how the exchange rate influenced prices. In this case, international commodity prices plus the exchange rate should directly influence the retail price. This happened here as the food manufacturer increased the retail price in 2002 in response to the rising landed cost of rice. As the exchange rate appreciated, prices improved immediately. Prices are now back to their 2001 levels confirming that with limited processing costs within South Africa, prices will track international prices and exchange rate influences. This, plus the results of most of the supply chain investigations provide sufficient evidence that collusive and unfair business practices are not prevalent.

[1] Through the Committee's investigations it also became evident how little research is done on the food retail market in South Africa. Knowledge about the trends and practices in that market is limited and needs to be researched and documented.

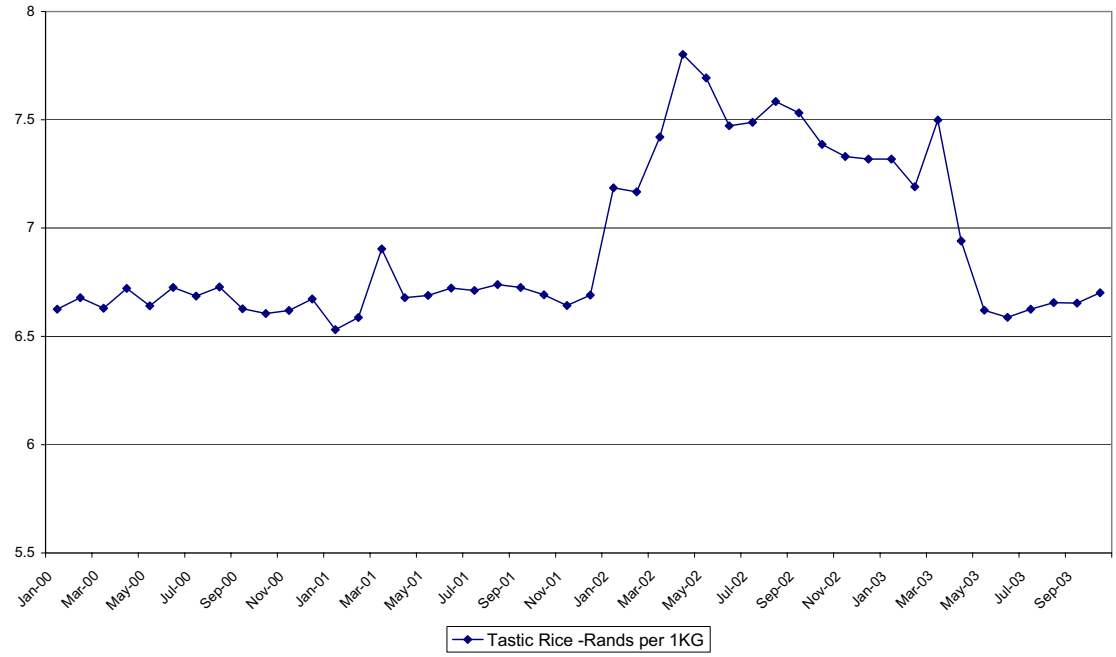

Figure 1.3: 'Tastic' rice national average price: January 2000 to October 2003.

Despite finding limited evidence of unjust price increases, collusive and unfair practices, government still has a duty to address some of the imperfections in the market. It is against this background that recommendations on potential interventions are debated. This will be done along five main themes discussed in the next four chapters:

- Strategic grain reserves
- Direct government programmes
- Improved agricultural information systems
- Increasing competition and reducing barriers to entry
- SAFEX rules, transport and logistics

The recommendations discussed in the next chapters have to be seen against the argument raised earlier that there is an important role for government in the food sector. The sole objective of government's engagement with the role players in the food chain is to ensure food security at household level. It is the duty of government to act to ensure that all its citizens have access to basic food because it is a fundamental human right and is also entrenched in the constitution.

CHAPTER 2

STRATEGIC GRAIN RESERVES: DOES IT PROVIDE A WORKABLE FOOD SECURITY SOLUTION?

2.1 Introduction

Concerns regarding the negative impact of the recent sharp increase in retail food prices have focused the attention of policy makers on methods to curb price instability and to deal with food price increases. The possibility of implementing strategic grain reserves as a measure to stabilise prices has been widely reported and confirmed by an announcement by the Minister of Agriculture during a media release in October 2002. The Chairperson of the Parliamentary Portfolio Committee on Agriculture also alluded to this possibility with the aim to: 'ease pressure on poor communities during periods of high food prices'.

Subsequent to these announcements and various media reports, the Committee was requested by the National Department of Agriculture to provide an independent assessment of the potential role of government in stabilising prices of staple foods through a strategic grain reserve or through a strategic reserve fund.

This Chapter builds on that report by firstly debating the likely objectives of a government controlled strategic grain reserve programme in section two, followed in section three by an analysis of the experience of other Eastern and Southern African countries with strategic grain reserves. In section four trends in producer and retail prices of the most important grain commodities in South Africa are highlighted. In section five the report considers the international experience with price stabilisation measures in general and strategic grain reserves in particular. Finally, the potential interventions and their merits and demerits are discussed, based on the point of intervention, the costs, externalities and price stabilising effect.

At the outset the Committee would like to highlight that there are two issues of concern in this debate on the viability of a strategic grain reserve namely **price instability** and **price increases**. These are two distinctly different issues and need to be addressed separately. As we discuss below, grain reserves are usually kept to stabilise commodity prices but also to avoid a country (or region) running out of food. This is different to dealing with sharp increases in the price of food or dealing with very high food prices. The latter most likely requires a different set of interventions.

2.2 Why a strategic grain reserve?

Strategic grain reserves are primarily used to deal with food emergencies and to prevent food supply crises when climatic adversities have negatively affected supplies. In addition, strategic grain reserves or *buffer stocks* can be used for price stabilisation. This implies that government prevents the price from falling below a floor level by buying grain from the market and adding to its stocks. If the price goes above the ceiling price, then government sells grain in the market by depleting its stocks until the price is driven down to below the ceiling level. The price is thus

stabilised within a range or price band. This concept of price stabilisation can only be applied under market conditions where prices are allowed to adjust automatically to reflect shifts in supply and demand. Also, this process requires a government agency that can intervene in the market, and other players such as co-operatives, grain traders and millers whose actions bring about price fluctuations. The policy can also only be implemented for non-perishable products.

The question remains, however: why would government want to keep a strategic grain reserve? Potentially a government grain storage programme may have the following objectives:

- To stabilise supply;
- To stabilise producer prices by accumulating stocks in times of price weakness and liquidating stock in times of price inflation;
- To protect and increase producer prices;
- To avoid sharp increases in food retail prices in periods of shortages by releasing grain from the reserve (thus buying in grain during surplus periods at low prices, storing it and selling from the reserve in periods of short supply and high prices);
- To ensure adequate supplies of staple grains in the country (and, in the case of South Africa, perhaps the SADC region) (the so-called Joseph's policy – see box 1).

Box 1: Joseph's buffer stock programme

The classic method of price stabilisation for agricultural products or of providing food reserves for consumer use is the use of buffer stocks, the first reported case of which is described in the Book of Genesis, 41:29-36. The handsome and talented Joseph, interpreting the dreams of Pharaoh, King of Egypt, foresaw seven years of good crops followed by seven poor crop years. The able Pharaoh, commissioning him to conduct an extensive buffer stock programme, reaped large rewards for the people of Egypt and the surrounding territory. Joseph, the Bible says, was successful because he knew in advance the exact length of the periods of surplus and shortage; an advantage not shared today by Ministries of Agriculture or their advisors.

The United States government introduced one of the first grain storage programmes when the Commodity Credit Corporation was established in 1933 through an executive order of President Roosevelt. The original objective of the Commodity Credit Corporation (CCC) storage programme was to stabilise supplies against variations in production due to good and bad weather. The three fundamental functions of the storage programme were to protect and increase farm prices, to stabilise farm prices and to assure adequate supplies of farm products.

In many developing countries strategic grain reserves were established to fulfil the prime function of dealing with food emergencies and to prevent food supply crises. It can also serve other functions as discussed above, such as playing a role in price stabilisation.

Stabilisation of (commodity) prices through the holding of grain reserves has been an important element of food policy in many countries – both developing and developed,

although it has been widely criticised in recent years. In India, for example, grain output depends largely on the uncertain monsoons and, as a result of the extreme variation in output, price instability is a major problem. Domestic price stabilisation therefore remains one of the key objectives of food grain policies of the Indian government. This objective is met mainly through the holding of buffer stocks by government agencies. The grain stocks in India are, however, also used to supply grain through the Public Distribution System to poor consumers at subsidised prices.

The countries in Eastern and southern Africa that established strategic grain reserves did this to deal with food emergencies caused by crop failures. The purpose of these grain reserves is to provide an acceptable basic food supply until such time as additional supplies can be mobilised. The size of these reserves were usually estimated on the basis of a per capita cereal requirement per year or the estimated market demand, and the fact that a lead time of 3 months is necessary to procure and deliver additional supplies. Some of the countries in Eastern and Southern Africa that established grain reserves for this purpose include:

- Ethiopia (180 000 tons)
- Mozambique (60 000 tons)
- Tanzania (100 000 tons)
- Zambia (180 000 to 225 000 tons)
- Malawi (180 000 tons)
- Kenya (270 000 tons)
- Zimbabwe (936 000 tons)

Malawi was able to successfully combat two food emergencies in 1987 and 1991 as a result of having a strategic grain reserve at its target levels. Whether it succeeded in keeping prices low and stable is however not clear, but at least food was available.

Going beyond Southern Africa, it is also known that China holds large grain stocks as insurance against catastrophic crop failures or other disruptions that could affect food supply or force the country to rely on imported grain. China has a strong preference for self-

Box 2: China's Grain Reserves

China maintains much larger grain reserves than any other country. Chinese officials argue that there are four reasons why China needs to have higher reserve levels than those typically recommended by the FAO:

- Mobility of grain is limited within China. China cannot move grains from surplus areas to deficit areas quickly enough to avert food shortages.
- Historically, China has experienced multiple year crop failures and therefore has to keep a reserve for more than one year.
- Substitutability among various grain types is limited and therefore reserve levels for each type of grain should be sufficient.
- Production technology and price elasticities could change from time to time as market conditions change.

China has at least five major categories of grain reserves:

1. Central government (state reserves). The Chinese Government set up 14 grain companies who directly control and operate 2800 grain warehouses with an estimated storage capacity of 25 million tons
2. Government grains in circulation. These reserves include grain purchases based on protection prices, which can be resold at market prices.
3. Local government reserves. Separate grain reserves at country, township or village level as a buffer against short-term price fluctuations. Usually around 1 to 1.5 months consumption needs.
4. Retail and wholesale grain stores. Refers to private stocks or "free market" grain in the commercial pipeline.
5. On-farm storage

Under the 1995 reforms the government mandated a minimum reserve of 3 months of grain consumption for grain surplus provinces and 6 months for grain-deficit provinces.

Source: Hsu, H-H and F. Gale (2001). USDA revision of China grain stock estimates, ERS-USDA

sufficiency in grain (See Box 2). The objective here also relates to combating food shortages.

For most countries in sub-Saharan Africa the need for a grain reserve mainly originates from the fact that white maize has to be imported in case of a food emergency, and white maize of the required quality for human consumption is not normally readily available outside the region. When drought affects the region as a whole, with several countries facing shortages of white maize at the same time, this could – and as was seen in 2001/2002 - lead to very high prices of maize. For this reason there might be a preference from governments in the region to hold a physical reserve rather than a cash reserve. One should, however, also bear in mind that there is a price premium on South African white maize in the world market because of higher quality. This should potentially encourage farmers overseas (counter-seasonal) to grow white maize for the South African market when our price increases due to e.g. a drought, but this has not happened in the past due to the 'maize of African origin' clause in futures contracts.

The justification for a grain reserve in many developing countries also lies in the fact that there are many barriers to trade and to importing of emergency supplies. The barriers could be poor infrastructure and limited foreign exchange. Under these circumstances it probably makes sense to keep a grain reserve. The cost of holding such a reserve is however problematic – an aspect that is discussed in more detail later.

The sharp increases in food prices in South Africa during 2001/2002 also echo the problem faced by many other Eastern and Southern African states in the wake of structural adjustment reforms, namely food price instability. Dealing effectively with price instability is now one of the major challenges facing policy makers in the region. However, while other countries in southern Africa faced real food shortages resulting from crop failure in 2001, South Africa has not experienced a major drought in the post-1994 period. For this reason – as highlighted by various government spokespersons – the focus in this country has been on ways of dealing with price instability, and in particular on sharp and unexpected food price increases[2].

The objective is therefore to stabilise prices and not to stabilise quantities, consumer expenditures or farmer incomes. There are many ways by which prices can be stabilised: e.g. buffer stocks/grain reserves, production controls, taxes and subsidies, export and import control, etc., each with its own advantages and disadvantages. Given the brief to the Committee, we will thus only focus on the potential role of strategic grain reserves in achieving price stability. It will however also be necessary to discuss the merits of alternatives towards the end of the report.

Given that price instability is a reality facing all countries in Eastern and Southern Africa following the liberalisation of grain markets, it is useful to review how other countries in the region have dealt with price instability. This is discussed next.

[2] However, it is important to distinguish between calls for stabilisation and calls for subsidisation (i.e. higher producer prices or lower consumer prices).

2.3 How have other countries in Eastern and Southern Africa dealt with price instability[3]?

Zambia
In response to market stabilisation objectives, the Zambian government established the Food Reserve Agency (FRA) in 1995, officially charged with holding strategic grain reserves. The approach to stabilisation has mainly involved selling maize at below market prices to industrial millers. This was done with the objective of stabilising food prices for consumers, but in the process succeeded in disrupting private trade and preventing the development of private traders and small-scale milling. While FRA's mandate is to stabilise the market, private traders complain that the FRA has in fact introduced greater uncertainty.

Kenya
Kenya's approach to stabilising maize prices has shifted dramatically since 1994. Direct maize procurement, sale and buffer stock holdings have shrunk to marginal proportions and have been replaced by the use of variable trade bans and tariffs. Since the reforms were affected, private trade has shown that it could supply consumers with sufficient quantities at much lower prices than before. Kenya has experienced neither food hoarding nor food queuing in the major cities since the reforms were implemented.

Mozambique
For the past number of years the government of Mozambique has had no direct role in stabilising maize prices. Fixed producer prices were changed to reference prices, however there was no legal requirement to pay these prices. The relatively free trade regime in Mozambique has had varying effects on price stability. It seems that allowing imports from South Africa (and trade in general) has clearly stabilised retail prices during the 'hungry seasons'.

Zimbabwe
Zimbabwe's approach to stabilising maize prices has diverged most significantly from the other countries since the beginning of 1998. Whereas the other countries encouraged imports to stabilise domestic market prices, Zimbabwe resorted to price controls on maize grain and maize meal.

Summary
Price instability is a reality in any free market. However government intervention to deal with price instability can unintentionally depress the participation of private traders in the market, and thus create the potential for even greater instability. The cases of Kenya and Mozambique show that the private sector has been able to stabilise domestic prices through imports and domestic operations. This illustrates again that any intervention could have unintended consequences that must be guarded against.

[3] This section draws heavily on the MSU International Development Working Paper, No. 72, 1999 by T.S. Jayne and others: Successes and challenges of food market reform: Experiences from Kenya, Mozambique, Zambia and Zimbabwe. Michigan State University, East Lansing, Michigan.

2.4 Are agricultural commodity prices and food retail prices in South Africa unstable and volatile?

In this section we continue the debate on whether there is a need for price stabilisation in South African grain markets. The question is therefore; are prices generally characterised by instability and could we identify the sources of these instabilities and address them without interfering with the functioning of the market.

Generally, it seems that calls for the stabilisation of grain producer prices through the use of grain reserves in South Africa have been done on the premise (and perhaps hope) that this will lead to a minimisation of the volatility (read instability) in consumer prices (of grain and grain related products). However, the stabilisation of producer prices in order to stabilise consumer prices will only work **if the volatility of the farm gate and retail prices are similar.** For this reason we have estimated the volatilities of producer and consumer prices for the period September 1999 to March 2003. In addition to the volatility measures, a brief trend analysis was conducted to compare the general movement and growth path of the nominal producer and consumer prices for the major grain products.

Commodity prices naturally increase and decrease; however, these fluctuations usually occur around an average price. The volatility of prices is a measure of the frequency of fluctuations in prices beyond one standard deviation around the mean. Volatility can be measured daily, weekly, monthly and annually depending on the data available and the price being studied.

White maize and maize meal

The volatility of the white maize SAFEX nearest month contract and the retail maize meal price was calculated for four different time periods to enable comparisons amongst different years and over the entire period. The periods are January 2000 to January 2001, January 2001 to January 2002, September 1999 to May 2002, and September 1999 to March 2003. The table below (Table 2.1) gives an indication of the volatility in prices for maize meal and the SAFEX price for white maize. The volatilities are calculated from monthly data and have been annualised to indicate annual volatility.

It is evident that maize meal prices have increased in volatility, however not to the extent of the SAFEX white maize nearest month contracts. Thus, stabilising or reducing the volatility in the SAFEX white maize price will have little or no effect on the consumer price of maize meal. This was also illustrated in the figures in Part 4 (Ch2).

Table 2.1: Annual price volatility in white maize and maize meal

	Maize Meal	SAFEX White Maize
	%	
Jan-2000 to Jan-2001	6.5	32.8
Jan-2001 to Jan-2002	9.2	28.6
Sep-1999 to May-2002	11.3	30.6
Jan-2002 to Jan-2003	16.6	22.2
Sep-1999 to April-2003	14.6	35.9

Wheat, cake flour and bread

Similarly, the wheat SAFEX price is also more volatile than the consumer prices of both cake flour and brown bread (see Table 2.2). Again, stabilising the producer price will not have a great effect on reducing the volatility of consumer prices of bread and flour.

Table 2.2: Annual Price Volatility in wheat compared to bread and cake flour

	Snowflake Cake flour (5kg)	Brown bread (std. 700g)	SAFEX Wheat
	%		
Sep-1999 to April-2003	14.65	11.95	20.64

Sunflower, cooking oil and margarine

Table 2.3 shows a similar difference between the volatility in SAFEX sunflower prices and the volatility of cooking oil and margarine consumer prices. The closer a final product is to the original raw material, the closer it will follow the price fluctuations of the raw material price. This is because there are fewer inputs and other costs that would affect the stability of a price.

Table 2.3: Annual Price Volatility in sunflower, cooking oil and margarine

	Cooking oil (750ml)	Rama Brick (500g)	Rama Tub (500g)	SAFEX Sunflower
	%			
Sep-1999 to April-2003	14.57	14.58	11.44	22.44

Readers are again referred to the Figures in Part 3 and 4 to see how SAFEX sunflower prices and cooking oil prices follow the same general, upward trend. Conversely, margarine's price trend is flatter (and less volatile) than the SAFEX sunflower price.

A casual visual observation of the figures presented in Parts 3 and 4 reflect a common trend, namely extreme stability of retail prices from September 1999 until late 2001 when there were sharp increases in retail prices for a period of 6-8 months, with a stabilisation at a higher plateau since mid 2002. An important concern is to find an explanation for the period of instability between November 2001 and June 2002.

Sources of instability

The theoretical and empirical literature on price stabilisation highlights the importance of distinguishing different sources of price instability, in particular those resulting from domestic supply fluctuations, and those resulting from international price and exchange rate fluctuations. Supply fluctuations are likely to be the main determinant of price instability where the margin between import and export parity is wide. However we know by now that the instability in South African agricultural commodity prices occurred at a time when the 2001/2002 season eventually realised a normal crop, sufficient for domestic needs. Thus supply fluctuations in South Africa were not the cause of the price instability.

Grain traders and food manufacturers interviewed by the Committee have all confirmed the role of the exchange rate depreciation, high world prices, the looming food shortage in the SADC region, the impossibility of importing white maize and the

role of a dominant trader in bringing about the sharp increase in prices. This was a unique simultaneous occurrence of events – all exogenous factors – that brought along the sharp rises in producer prices which ultimately also brought about the increases in consumer prices during 2002. The exchange rate not only affected commodity prices but also had an impact on the cost of transport (rising fuel costs); the prices of other raw materials used in food packaging such as paper, cardboard, plastic and polymers; prices of machinery and parts used in the manufacturing process – all of which contributed to the sharp increases in food processing and food marketing costs. (Incidentally this was also highlighted in the Vink and Kirsten, 2002 report to the National Treasury)

Although there were sharp increases in the prices of most of the basic foods during the 2001/2002 period, the evidence also points to relatively stable consumer prices over the 3 year period (2000 to 2003), suggesting that food manufacturers, distributors, traders and retailers are absorbing a large proportion of the instability in commodity prices to ensure relatively stable consumer prices. It seems to the Committee that the countervailing forces within food supply chains are to at least some extent able to smooth out extreme instability occurring at producer level and thereby ensuring rather stable retail prices *(Note: Price stability should not be confused with the price level or price increases)*. It is not in the retailer or food manufacturer's interest to have rapidly fluctuating or unstable prices – it is too costly and in any case the retailers are only taking price increases once a month or once a quarter from their suppliers.

2.5 The price stabilising effect of strategic grain reserves: Evidence from the literature

Despite arguing in section 2.4 against the need for a grain reserve given the stability of retail prices, it would still be worthwhile to review the experience of other countries using grain reserves to stabilise prices.

Governments in both developing and industrial countries have sought to stabilise commodity prices by using buffer stocks. However the use of nationally or internationally managed buffer stocks for this purpose has been widely criticised in recent years as being inefficient and costly. Knudson and Nash (1990) examined the experiences of several developing countries with domestic price stabilisation programmes and also came to the conclusion that in most countries where price stabilisation involves handling of the commodity by government agencies the costs have been extremely high. Gulati *et al.* (1996) found that in India the unit costs of public storage operations are substantially higher than those of private traders. Empirical studies have also indicated that the current levels of public stocks in India are far in excess of optimal levels and part of the funds spent for this purpose could easily be diverted to productivity enhancing investments in agriculture (Ray, 1994).

As noted earlier, the government of Zambia established the Food Reserve Agency (FRA) in 1995, officially charged with the responsibility of holding strategic grain reserves. However, the government has used the FRA to subsidise industrial milled meal for the urban population. This subsidy enabled the selected industrial millers to acquire maize grain at roughly 25% below prevailing market prices. This gave them a major advantage in the maize meal market compared to other millers who did not have access to FRA grain (Johansson, 1998).

A potentially harmful result of strategic reserves is the unequal access thereto. In Zambia, for example, after local maize supplies are depleted, imports by the Strategic Grain Reserve are channelled almost exclusively to the large-scale millers, thereby marginalising the small scale-milling sector. This in itself causes a major increase in maize meal prices for the urban poor, as they are forced to shift to more expensive roller meal.

Experiences from countries such as Kenya, Mozambique and Zambia have shown that private investment in grain distribution, processing and cross-border trade under liberalisation have improved consumer's ability to stabilise expenditures on maize meal. These market-orientated means of stabilising food prices weaken the rational for expensive government price stabilisation schemes. But this does not imply that there is no meaningful role for the state to play in stabilising prices in a market economy. It is however, doubtful whether strategic grain reserves will best serve the government's objectives.

In India it was found (Jha and Srinivasan, 1999) that the magnitude of grain stocks held for price stabilisation as well as the costs of physical storage have become prohibitively high, creating the need for finding cost-effective alternatives including non-interventionist and market oriented methods for price stabilisation. The aspect of cost of storage as well as potential alternatives to grain reserves is discussed later in the document.

The cost of establishing and maintaining the reserve is likely to be higher when it contains several grain types, as the need to maintain different stock combinations in different areas will increase demands on transport, handling and administration. Thus, from a purely cost and operational viewpoint it will be advantageous to have only one type of grain in the reserve e.g. white maize as in most African countries to date, rice in the Far East and wheat in the Near East.

The increasing criticism against the use of grain reserves for price stabilisation is related to the fact that liberalised trade in itself has a price stabilising effect. Hence the gains from price stabilisation, while positive, are smaller with free trade that when trade distortions exist. The need for buffer stocks is also diminished when risk sharing can be facilitated through such means as futures markets and efficient credit markets (Schmitz, 1990). In similar fashion Jha and Srinivisan (1999), comparing different stabilisation options in India, found buffer stocks to be ineffective in stabilising prices under liberalised trade.

Schmitz (1990) also makes an important point when he refers to studies that show that poor countries can still experience famine when production shortfalls occur, even with stable prices. Usually the problem is a shortage of foreign exchange in order to purchase food. For this reason it is often argued that it is better to store money and not food because it is not the lack of food globally that is the problem. The problem lies in the lack of purchasing power to buy it. In addition good transportation networks would be another necessity to avoid food insecurity and famines.

2.6 Evaluating price stabilisation options in South African grain markets: The trade-off between price stability and the cost to the taxpayer

To further illustrate the difficulty associated with a government grain reserve programme, this section shows the impact of government holding a physical grain reserve or utilising the futures market to stabilise prices.

A physical grain reserve

As highlighted in the review of the literature above, it seems that the popularity of buffer stock programmes has declined considerably since the end of the Cold War and as world agricultural trade has been liberalised. Many governments have realised that it might be less expensive to rely on trade to bring about domestic price stability. Consequently many governments, including South Africa, abolished buffer stock/grain reserve programmes during the 1990s. By contrast, many countries that could potentially face food emergencies due to a crop failure for staple crops that are not readily traded in the world market (such as white maize and millet/sorghum), and poor transport infrastructure and foreign exchange constraints, have decided to continue with grain reserve programmes (See Section 2.3).

These facts have also possibly contributed to a general perception in South Africa that a government grain reserve programme will be fairly costly and an unlikely route to take. This is confirmed by our estimates of holding such a reserve – say 3 months of consumption of approximately 1 million tons of maize.

The holding of physical grain will require extensive and specialised administrative expertise. The administrative function could be outsourced, but this would also involve a large cost.

If the physical grain is bought it will require the immediate payment of a fairly large sum of money. Considering the current average market price of R850/t, a reserve of 1 million tons would require an initial outlay of R850 million[4]. From that point onwards a storage fee and a cost of capital component becomes applicable. Given a daily storage fee of 34c/day and the cost of capital at 35c/day, the total carry cost would be some 69c per ton per day. If grain is to be stored from July to March (8 months or 244 days) it implies a total carry cost of R168/t or alternatively an additional cost of R168 million over the 8-month period – equivalent to R252 million per annum.

Due to the fact that the weather and other factors influencing food prices in South Africa cannot be predetermined, this cost will be a burden for the Government each year up to the point when the grain reserve is actually needed. The current food price crisis is the first such crises since 1992/1993 when prices of staple foods increased as Southern Africa, including South Africa, experienced one of its worst droughts. Recent history therefore tells us that the possible benefit of keeping a grain reserve would only have materialised in one out of ten years. In the other nine years the government would have added an annual bill of at least R252 million to government expenditure, which could have funded a number of more direct interventions to the benefit of the poorest households.

[4] The price of R850 is fairly low given the very high levels of 2002 and the current cost of production.

Another alternative to carrying the physical grain would be to carry the same grains exposure in the derivatives market, which could, in the longer run, be more advantageous.

A 'virtual' grain reserve using the derivatives market

One way of avoiding the cost of physically storing grain is to use the derivatives market to hedge potential increases in staple commodity prices. The execution of a grain hedge can be triggered once food inflation reaches a level unacceptable to government. At such a predetermined level of inflation the hedge will be executed. If grain prices continue to rise the hedged position should generate a profit, which could be used to fund targeted food security interventions for the needy. It is literally a situation of using the agricultural futures market to hedge the food inflation rate of the needy.

Another point at which the hedging activity of the government can be triggered is when commodity prices approach export parity levels. This will require the continued monitoring of export parity prices. Once export parity is reached the buy of the hedge should be executed. The hypothesis is that prices don't fall below export parity level, because at that level sales would rather take place to the export market instead of being sold locally. The export parity level thus becomes the lowest point for prices in the domestic market. From this point price can only stay at the export parity level or increase towards the import parity level.

If the hedge is executed at the export parity level and prices then start to increase towards the import parity level the hedge will generate a profit, which can be applied to subsidised food programs.

If for some specific reason government needs the physical stock (the underlying commodity) or needs to remove it from the system, it can still be bought in the physical market when needed. If at that point the prices have increased, the profits from the hedge portfolios can be used to subsidise the grain being bought. It would also be possible to use hedged fund profits for buying physical stocks in the international market.

A possible situation where this need could arise is where domestic market prices rise above local import parity, which also implies that a long hedge renders a profit equal to the increase. Government could then start an import program by using the hedge profits and own funds to import the physical stock from a location cheaper than the local market. This is an arbitrage play, which will also guarantee a risk free profit. By definition the profit in the hedge will be greater than the increase in the international price, for it is the only way by which the local price could have gone above the local import parity level (See Box 3).

Box 3: Buying physical stocks with a hedge

Consider a scenario where the SAFEX prices approaches the export parity price (of say R433/t). At this level the long hedge position needs to be executed and thus the futures contracts are bought at say R440/t. If prices now increase to import parity (say R1117/t) then the long hedge would have yielded a profit of R674 (R1117-R440). If government now decides to import the commodity it will cost a net price of R443/t, (R1117/t import costs minus the R674/t profit).

If SAFEX prices are at R1200, then the profit from the hedge comes to R760. If the government now decides to arbitrage the situation they can import at R1117/t minus the R674/t portion of the SAFEX profit to give a net price of R443/t, and still have the remaining R86/t profit. This arbitrage action will eventually force the local price back to at least import parity level.

Compared to the cost of holding the physical stock, a derivative portfolio with the same one million ton exposure will only require an initial cash outlay for the initial margin of approximately R100 million[5]. Needless to say the approximately R750 million difference in initial cash outlays makes a significant difference to the cost of finance of the two portfolios. Furthermore, since such a portfolio does not require the holding of physical product but only the management of a single market-instrument structured portfolio, it places a far smaller administrative burden upon the portfolio holder.

Although this position would also incur a cost of finance, it must be remembered that the position would also be earning interest at a daily money market rate as quoted by SAFEX. Currently this rate is in the region of 12.5% per annum, thus the total net cost of finance would be the difference between the cost of funding and the interest income. Given current interest rates the cost of finance will be around R1.6 million, substantially less than the R168 million related to carrying the physical stock.

This scenario basically illustrates the strategy of: “rather let the international market carry the stock and when really necessary take delivery, but for the largest part of time the carry and logistics function will be the market’s problem”.

Advantages of a structured portfolio

One of the benefits of derivative instruments is that they can be structured into portfolios or products to give various payoff profiles and cost structures, for example where the portfolio is structured to provide a benefit from extreme financial gearing/leverage given big price movements. Typically government could apply this approach in pursuit of a very low cost if prices stay low, but the maximum benefit as soon as prices increase by large amounts. Under low price situations there is no need to be involved in the food sector, but under high prices when government needs to be involved it can earn the profits to do so at a low opportunity cost. This characteristic originates from the fact that the derivatives market provides for literally endless alternative strategies.

[5] When the government takes delivery of the stock they will however pay the spot price of the contract on the day of delivery – for example R850 per ton.

A **major risk** facing government however, is that the state could find itself in a position where it holds a large share of the open positions on the market, counter to the position limits that are due to be introduced by SAFEX/JSE. In addition there is also the danger that the market can turn against your position, resulting in huge losses. Potentially large grain traders holding positions or doing physical transactions on the basis of the known hedge position of the government could also target the government. These issues will consequently have to be considered carefully on the basis of some ground rules if government wants to go this route.

Some suggested ground rules

The basic idea with a structured portfolio is to hedge an index, in this case the consumer price index for food. This is a common practice in the financial and securities markets. Furthermore the government could apply structured portfolios to hedge the price of a certain quantity of grain, which could be earmarked for the most needy households in times of crises.

In running such a structured portfolio the following rules should apply.

1. The rules and trigger levels should be publicly known and actions should not deviate from them.
2. The management of the portfolio should not be restricted to only one firm, but spread across all the registered broking members to avoid insider trading.

2.7 Opinions from grain traders on a potential strategic grain reserve

During June 2003 the Food Price Monitoring Committee interviewed various role players in the grain trade and also asked them their opinion about a proposed strategic grain reserve. Some traders were in favour of a virtual strategic grain reserve since it would increase their turnover and profitability as trading houses. Several traders expressed concern about whether a virtual grain reserve would have a meaningful impact on SAFEX prices because of position limits. Given the size of such a reserve, the government might be affected by the limits on open positions in the futures market**.**

Most traders were of the opinion that the costs of implementing a physical strategic grain reserve and the difficulties of administering it, may be too costly and too interventionist and not to be recommended. Even those players that could potentially make a profit out of managing such a grain reserve were honest enough to indicate their opposition to such a programme. Millers were also worried about the initial price effect of government suddenly being a major player in the market.

2.8 Conclusion

In setting up a potential strategic grain reserve and testing the viability of such a system the following issues were debated and considered in this Chapter:

- ü Composition of the reserve: Should the government hold physical grain or rather a cash or virtual reserve?

- ü The size of the reserve, bearing in mind that storing maize and other grains is expensive.
- ü The costs and financing of the reserve: Establishing and maintaining a reserve is a costly exercise and needs to be determined with great care. A grain reserve is likely to be a continued cost burden to the state.

Given the international experience with strategic grain reserves, the maturity and openness of the South African economy and especially the agro-food system, it is unlikely that setting up a grain reserve would outweigh the stabilising effect of international trade. South Africa has sufficient foreign exchange reserves, a sound financial system and a strong private sector, and could therefore rely on world markets to perform the storage duty for South Africa if ever we would need such reserve stocks.

This position can however be disputed given the strategic importance of white maize and the fact that limited quantities are traded internationally. This could potentially justify the need for strategic grain reserves if we experience a devastating drought that will result in all crops being wiped out. The chances that this would occur have been estimated at one in every 10 years, making it difficult to decide about the size and cost of the reserve. One should also keep in mind that milling companies usually keep 4 months of stock, which is in any case equivalent to the size of a typical grain reserve.

According to the literature grain reserves are typically established to counter food shortages and to stabilise prices, and not often to lower consumer prices. Given that stability of prices at retail level is the ultimate objective of a grain reserve, it was necessary to determine the extent of price instability. The FPMC through its monitoring duties has established that retail prices are relatively stable (despite the sharp increase during 2002). These prices are more stable than the fairly volatile commodity prices, showing that food manufacturers and retailers take a lot of volatility out of the system, and in the process presenting the South African consumer with long term stability in prices.

Nevertheless, sharp increases in prices of staple foods remain a concern. There remains in our view the possibility for government to use structured portfolios to hedge the inflationary risk or the price of raw material, which they could use for relief programmes. Potentially such a structured portfolio (or simple hedge position) could generate profits that could also be used in government food programmes. However, the management of such a portfolio requires specific skills, and presents many potential dangers related to insider trading, etc. Thus, the implementation of such a proposal will require considerable preparation and will presents large risks to government.

It is the contention of the Committee that the strategic grain reserve (virtual or physical) will not be the best route to provide relief for the poorest households. The changing nature of the food economy will imply that stable and lower prices at commodity level will not necessarily be passed through to retail level. More direct measures discussed in Chapter 3 might be a better option to ensure affordable food to communities.

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CHAPTER 3

OPTIONS FOR DIRECT GOVERNMENT ACTION

3.1 Introduction

Food price increases have a devastating impact on the poor and affect the 'right to food' which 'entails an obligation of the state to respect, protect and fulfil the access to adequate food of all its people at all times'. The highest law of the land, the Constitution, also enshrines the right to food:

> "Everyone has the right to have access to sufficient food and water… and the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights."

In this context government has a duty to act. Government's duty is further emphasised by the massive poverty and unemployment in the country. There are high prevalence rates of HIV/AIDS and growing numbers of orphans. Studies show that 60% of the poor get no social security grants. In the spirit of building a strong productive population and fostering social cohesion; reducing crime, and encouraging investment it is important for government to act and to ensure that these households do have access to food.

While a number of programmes are already in place to assist food insecure households, this Chapter debates whether these measures are sufficient and operated in an efficient manner to ensure that the poorest people are protected from hunger. In the previous Chapter the Committee argued that it is not fully convinced that Strategic Grain Reserves will bring about an immediate or long-term relief to the poorest families in South Africa. It is for this reason that the Committee considers various direct actions by government to address this serious problem.

Examples of direct government assistance programmes are:

- Price controls and rationing to ensure that the quantities of staple foods are available at a reasonable cost for all. This type of intervention is usually only implemented under very specific circumstances such as in times of war. Most interventions of this nature collapsed when the subsidies were withdrawn and were not necessarily successful in ensuring food security for the poor.
- Providing food to the needy through various means e.g. Food for work, school-feeding schemes, food parcels, and agricultural starter packs.
- The provision of social welfare grants to needy families.
- Establishing a comprehensive social security system e.g. food stamps, income grants, etc.

On the supply side the following programmes could address food security problems:

- Increasing the availability of land and other farming inputs like water, fertiliser etc. Improved agricultural support and agricultural research systems could also enhance agricultural output.
- Reinvestment in agriculture on a massive scale, i.e. investing in technology, irrigation infrastructure, human capacity and improving storage systems to reduce post harvest losses.
- Elimination of conflicts and political instability in the region.
- Improving transport infrastructure between agricultural areas and large urban centres and other areas of large population concentrations.
- Lobbying for free global trade. The European Union and America subsidise their farmers, whose product then competes with produce from farmers in developing countries who are not subsidised.

The purpose of this Chapter is specifically to debate the merits of direct government interventions such as school nutrition programmes, food stamps and some form of income grant. In addition to a much stronger government commitment to agricultural development the Committee is of the opinion that these interventions will address the problem of food security and the affordability of food much more effectively.

3.2 School nutrition programmes

Studies from Kenya and the Philippines show that malnutrition stunts children's intellectual and physical performance. Temporary hunger (caused amongst other things by sudden increases in food prices) is also detrimental to a child's health by reducing attentiveness and mental and physical activity, thus negatively impacting on the child's capacity to learn. The World Food Programme therefore believes that providing a nutritious meal at school is a simple but concrete way to give poor children a chance to learn and thrive thus contributing to human capital formation as well as to the immediate problem of hunger.

Research confirms that basic education is an effective investment for economic growth. This is because, once literate, a person will have skills and be more employable in future, and be better able to know what is nutritionally best for her/his development. The cost of school nutrition programmes will be high but are undoubtedly a long-term investment in human capacity. This is an important intervention for South Africa since the lack of human capital has been identified as one of the impediments to growth.

South Africa implemented, as one of the presidential lead projects of the Reconstruction and Development Programme, the Primary School Nutrition project. The Primary School Nutrition Project had noble goals of:

- Improving education as hungry pupils can only think of their hunger and thus cannot concentrate on their lessons;
- Boosting attendance and in some cases freeing children from the necessary task of looking for food not only for themselves but often for their families;
- Dealing with parasitic infections and micronutrient deficiencies. Eradicating parasites in the body will enhance the absorption and retention of food;
- Dealing with malnutrition, as a 1994 anthropometric study showed high levels of stunting and wasting amongst coloured and black children;

- Providing health/hygiene and nutrition education.

After a few years many of these schemes across the country collapsed. According to a 1997 study produced by the Child Health Unit of the Health System Trust, the reasons for the collapse of many of the school feeding schemes include:

- Irregular supplies of food;
- Food lost through spoilage or black market activities or theft;
- Inadequate rations in calories and nutrients and unacceptable food, stale food;
- Disruption of teaching for meal preparation, burden on school staff. The responsibility for preparing the food sometimes fell on the teachers who allege that it put an additional burden on them "we have been side tracked into preparing sandwiches during teaching time and now we are expected to run food gardens as well, it is too much";
- Burdensome reporting/monitoring. It would take months for claims to be processed and paid;
- Unavailability of infrastructure i.e. water, electricity, kitchens, storage facilities, logistical difficulties in transporting large quantities of food with poor transportation and communication systems;
- Failure of government departments to cooperate. The department of public works was also not brought in to upgrade facilities e.g. kitchens, via the public works programme.

After analysing 17 programmes in different countries, the United Nations came to the following conclusions. For school feeding schemes to be successful and effective, programmes should have:

- Clear but flexible objectives;
- Political support, strong leadership and good management (adequate training, staffing and supervision of both programme staff and community workers, teachers cannot be expected to both cook and teach);
- Geographical targeting of schools in socio-economically deprived areas worked better than any other form of targeting;
- Community mobilisation or partnership with the NGO sector;
- Food must be of good quality, preferably high in protein, culturally acceptable and given to the children in the morning.

Recommendations:

School feeding programmes should be targeted at areas with the highest poverty gap i.e. squatter camps, townships, rural areas and farm schools so as to concentrate the intervention on children that need it the most. Within the primary School Nutrition Programme each province previously targeted differently; the Free State, KwaZulu-Natal, Mpumalanga and Northern Cape used geographic targeting, while the rest targeted individual children within schools. The latter arrangements do have complexities and it is a much better practices to provide food to all children in a school if the school is in an area that is targeted.

School feeding should begin from Early Childhood Learning centres (even those run by the communities) up to grade 12. Indeed the White Paper on Education acknowledges "The care and development of young children must be the foundation of social relations and the starting point of human resource development strategies from community to national levels". Research indicates that a malnourished child never recovers to his full intellectual and physical capacity.

We concur with the government decision to transfer the responsibility for school feeding programmes to the Department of Education. We further recommend that the financial resources needed for the school feeding programmes should be provided to the school governing body on a monthly basis, based on enrolment numbers and feeding days per month. School feeding then becomes the responsibility of the school. The onus will be on the school governing body and the head teacher to report on expenditure. Regular inspections by the Department of Education will be necessary to ensure that the programme is implemented effectively without any corruption. Putting the funds into the control of the school governing body and the headmaster avoids bureaucracy, delays in payments, unclear policies, and government departments that refuse to cooperate.

Nutritious snacks (e.g. peanut butter sandwiches, milk and vitamin fortified fruit juices) should be provided in the morning. Only those schools with the necessary infrastructure (kitchens, fenced land, water, secure storage etc.) should attempt to augment the feeding programme with growing food gardens.

An example of a successful school-feeding programme is the Peninsula School Feeding Scheme operating in the Western Cape. The PSFA targets the poorest schools with a nutritional snack comprising two slices of brown bread, peanut butter, jam and a micronutrient enriched, soya-based milk drink. Their field workers ensure that the children receive their meal daily, early in the morning, by monitoring the preparation and serving on a regular basis.

The menu was devised in consultation with nutritionists from the Department of Health and the Universities of Stellenbosch, Cape Town and Western Cape, and piloted in schools with the co-operation of suppliers. This menu seeks to balance nutritional benefit, limited funds and the logistical constraints of mass distribution and preparation. Through co-operation with the Health Department and the Medical Research Council, the PSFA participates in and supports de-worming and health and sanitation initiatives, based on World Health Organisation criteria.

3.3 Interventions enhancing household food security.

There are other interventions that can enhance household food security. One option would be food stamps and another form of income grant. Both are debated below as potential recommendations for improving household food security.

3.3.1 Food stamps

Food stamps as a social security net are most widely used in the United State of America. Giving food to needy families through food stamps began during the great depression of the 1930s, but the program as it is known today was formalised in 1964.

Since 1974 all states were required by law to offer the program to low-income families. The food stamp programme was always means tested and enables families to purchase bread and cereals; fruits and vegetables; meats, fish and poultry; dairy products, seeds and plants which produce food for the household to eat. Food stamps cannot be used to buy liquor, pet food, hot meals, soap, linen etc. The existence of electronic transfers has reduced fraudulent use of the stamps and the sale of stamps for cash.

According to a study done by Hirsh and Rank for the Food Assistance and Nutrition Research Small Grants Program of the United States Department of Agriculture, 49% of American children and 51% of adults will at some point in their lives use food stamps. Usage varies greatly with race, education and marital status. African Americans, individuals with no college education, and single women with children are at high risk of using food stamps to feed themselves or their children. The number of people using food stamps is influenced by the growth in the economy and changes in the policy of eligibility. For example; between 1994 to 1999 participation decreased from 27.5 million to 18.2 million people. This figure has increased to almost 21 million in April 2003. However, not all those eligible participate in the programme. For example according to the USDA, in 1999 only 57% of eligible households participated because of lack of information on how to access the program, massive administration/cumbersome application procedures, long application forms and the stigma associated with receiving food stamps.

Having a food support system is not cheap. It cost the US state on average $80 per person per month in the 2002 financial year to have a food stamp programme. The food stamp programme served an average of 17.2 million people each month during fiscal year 2002, and cost $20.7 billion. However the programme does not only have the obvious benefits of saving people from destitution (investing in human capital) but it is estimated that “each $5 of federally funded benefits generates approximately $10 in economic activity” (Economic Research Service of the USDA.). The additional demand creates jobs, increases household income, and thus stimulates the domestic economy.

According to government statistics, there are 2,2 million households in South Africa that spend less than R600 a month on food. Supposing each family would receive a food package monthly, it would cost about R7.92bn/year (excluding transportation and delivery costs).

Food stamps require an efficiently functioning distribution system without any shrinkage or losses. The Committee argues that these problems can be overcome through the implementation of a shortened supply chain where the commodity does not change hands too many times.

3.3.2 A means tested income grant

The debate in South Africa on means to alleviate poverty has focussed recently on the recommendations of the Taylor Committee to implement a Basic Income Grant of not less than R100 per month to all persons living legally in South Africa. This would enable South Africa to meet its constitutional mandate on the bill of rights (Section 27).

There is no means test for the BIG, which will minimise the administrative burden and opportunities for corruption that are often associated with means-tested grants. The lack of a means test would also ensure that individuals would not be penalised by the loss of benefits if they work to improve their own situation. This would encourage take up of the grant.

It has been estimated that the cost of the BIG would be R43.8bn per annum. This high cost has created some reservations to the implementation of the BIG. Consequently the Committee feels that a means tested income or poverty alleviation grant should be introduced for targeted households to enable them to afford at least the basic foods. This should address the immediate problem facing many poor households in the aftermath of the rising food prices.

3.3.3 Recommendation

Although food stamps and the BIG have merit as potential mechanisms to address household food security, there are aspects related to the logistics and management of the food stamps and the cost of the BIG that argue against the implementation of these initiatives. It is for this reason that the Committee recommends that the government investigate a poverty alleviation grant based on a means test, which will enable households to access food. This will deal with problems of food security at a household level as well as with other income poverty issues, thus allowing families to take risks and acquire assets.

If the implementation of such a grant were to be accompanied by a deliberate effort to increase agricultural output in areas where the poor reside, households receiving these grants can buy their food from local farmers, which will also promote local economic growth. This implies that small-scale agricultural production should be made a central strategy for production at local level for the various social development initiatives such as the school feeding programmes and any form of income grant.

The Committee confirms that a long-term strategy for household food security is required and that government interventions such as the provision of food parcels cannot be a sustained long-term intervention strategy for all vulnerable groups. An organised and systematic increase in small-scale production must be integrated into the broader poverty alleviation interventions. Manageable technologies in small scale farming which can be utilised in rural and urban settings must be explored and production of food for family consumption must be encouraged and enhanced. Agriculture and social development can form a powerful coalition for the promotion of food security and development.

CHAPTER 4

IMPROVING INFORMATION SYSTEMS IN THE AGRICULTURAL AND FOOD SECTOR

4.1 Introduction

One aspect of the Committee's terms of reference was to look into the effectiveness of current government research and information systems on agricultural and food prices and how this can be improved. On the other hand the investigations into the various supply chains and the futures market clearly highlighted the problem with information in general. It became evident that market information and information about food processing costs is not readily available and not evenly distributed, creating the potential for opportunistic behaviour by role players in the food supply chain.

In this Chapter we assess the current government systems in place to monitor food prices and the distribution costs of food in South Africa. We start by firstly identifying the government departments that are responsible for the monitoring of food, food prices and food manufacturing and distribution costs. After identifying the responsible departments, the current output of these departments or sections is analysed. Finally we discuss recommendations on how to improve the shortcomings of the current systems.

4.2. Agricultural Information Sources

Statistics South Africa and the Department of Agriculture are the two main providers of statistics on aspects related to the agricultural and food sector. In addition the South African Grain Information Service (SAGIS) provides timely information on all grain markets.

Statistics South Africa (StatsSA)

StatsSA is a national government department accountable to the Minister of Finance. The activities of the department are regulated by the Statistics Act (6 of 1999), which ensures independence from political interference in the production and dissemination of official statistics. In the Statistics Act, the role of the department is defined as informing organs of state, businesses, other organisations and the general public in planning, decision-making, monitoring and assessment of policies.

Further roles of StatsSA are to:

- Promote coordination among producers of statistics in South Africa in order to advance the quality, consistency, comparability and optimum use of official statistics and thereby avoid unnecessary duplication;
- Provide statistical advice to government departments; and
- Liase with the statistical agencies of other countries, and other international agencies.

Therefore, its task is to coordinate, collect, and process, analyse and disseminate official statistics in support of economic growth, socio-economic development and the promotion of democracy and good governance.

StatsSA publishes approximately three hundred different releases each year. Statistics on food prices are mostly grouped in the CPI or the production price index. StatsSA produces over 155 different CPI indices on food in South Africa. The CPI indices are available for different expenditure groups and according to metropolitan, metropolitan & urban, and rural areas. CPI indices are also calculated for specific food groups, including meat, milk products, grain products, and processed and unprocessed foods.

Food price information is also available for producer prices. The producer price index (PPI) has over 116 different indices on food and food products. These PPI indices are available for food as well as major food groups. The PPI indices are further divided into production price indices for the manufacturing of food products as well as for the major food groups.

Apart from CPI and PPI indices, StatsSA also provides information on the volume of retail trade in food and processed food products on a monthly basis. The information does, however, require subscription and registration before it can be downloaded from the StatsSA website.

Although it seems that there is a lot of information available on food prices, there are a few shortcomings:

- There does not seem to be any information on actual food prices readily available to the public for specific food products (this is usually only available at a fee and the Committee's own experience leads it to doubt the reliability of the data);
- All the available information is in indices and not in actual prices, making calculations difficult, especially when calculating the farm-to-retail price spread;
- Although information is available for producer prices as well as consumer prices of food, there does not seem to be any information available on the distribution or marketing costs of food;
- The producer price index does include indices on manufacturing prices of food and food groups, but there is no breakdown of processing and distribution costs. Information on the cost of energy, labour, packaging, advertising, depreciation, rent, interest, repairs and corporate taxes is only available on an aggregate level. These costs are not published for specific product groups such as food.

In light of these shortcomings the Committee recommends that StatsSA should join forces with the national Department of Agriculture to find ways to make detailed information on average monthly food retail prices and margins more readily available to the public and to all government departments.

The Department of Agriculture

The Department of Agriculture is responsible for the dissemination of statistics on agriculture and agricultural output through its Directorate: Agricultural Statistics. The Directorate, through the Crop Estimates Committee (CEC), provides information on all major grain crops in South Africa. The CEC meets on a monthly basis during which current conditions and developments are assessed and adjustments to yields and the area planted are made.

The Directorate is organised into three divisions: market information, economic trends, and food security and farm profiles. The following list of information on the agricultural sector is available from the Directorate: Agricultural Statistics:

Private consumption expenditure
Private consumption expenditure on major food items, tobacco and beverages are available on a quarterly basis.

Producer price index
Prices received by farmers for all major agricultural commodities are available in the form of indices on a quarterly as well as annual basis. In addition an index for farm requisites is also published.

Agricultural imports and exports
Statistics on the imports and exports of all major agricultural commodities as well as food items are available on a monthly basis. These statistics include the volume as well as the value of agricultural imports and exports.

Food basket of farm products
Statistics on the food basket of farm products are available on a monthly basis. These statistics measure the farmer's share in the consumer Rand paid for final farm products.

Sales of fresh produce sold on markets
Market information on the volume, value and average prices of fresh produce are available on a monthly basis.

Intake of agricultural products for processing
Information on the trends in processing of fruit and vegetables are available on a national level and are compiled on a quarterly basis. The information is produced per product and includes the main processing activities per product.

All the above information is available from the Directorate: Agricultural Statistics upon request and its available free of charge. Apart from these statistics, the Directorate also publishes a number of publications that contain information on producer prices and production volumes. These include the following:

Abstract of Agricultural Statistics
This annual publication contains (annual) data series on all main agricultural commodities. The publication is available from the Department's website.

Crops and Markets
Crops and Markets is a quarterly publication on fresh produce and market information. It also reviews the latest price trends of major agricultural commodities. The publication is available from the Department's website.

Statistics on Fresh Produce Markets
This annual publication is a comprehensive data set of monthly sales and prices on all fresh produce markets. It is also available on the Department's website.

The information produced by the Directorate: Agricultural Statistics is mainly focused on the producer price level. Very little if any information on the cost of processing, distribution and marketing of food products is available. It is therefore difficult to estimate what proportion of the consumer Rand spent on food will go to various role players and activities in the food value chain. The food basket of agricultural products that the Directorate provides is only based on weights and it only expresses the farmers' share of the total consumer Rand.

South African Grain Information Service (SAGIS)

The stakeholders in the grain industry have through a collective effort established a Section 21 Company, the South African Grain Information Service (SAGIS), which operates a well developed and co-ordinated market information system on all the grain markets. Information on deliveries at silos, export and import parity prices, tariffs, etc is provided through the web and through regular market bulletins. One major shortcoming is that actual export and import figures on all grains are not available on a weekly basis. This is crucial information for the market because it is such information that can prevent opportunistic behaviour on the commodity markets.

4.3 Recommendations

An aspect that was common throughout the investigations was the lack of in-time, reliable information on prices, crop size, stocks, and trades. It is in this respect that the state can provide a useful input to improve information dissemination, awareness and monitoring. The Committee is confident that despite the difficulties inherent in monitoring food prices and in finding evidence of collusive behaviour and unjust profiteering, one good thing about its own existence is that 'there was monitoring of food prices'. In this sense the Committee recommends that a permanent system of review and monitoring of food prices and food processing costs needs to be instituted. In addition it is important to improve current information systems of the government such as the Crop Estimates. These are discussed next.

4.3.1 Establishing a permanent food price monitoring system

The output of the Committee provides an important and useful foundation upon which the state can introduce a permanent mechanism to monitor trends in food prices, food processing costs and farm to retail price spreads. The effect of a public watchdog such as the Committee has been quite dramatic. Despite the limited legal powers of such a mechanism, the fact that trends can be reported and that industries and food products showing extraordinary trends can be 'exposed' does have some impact. The power of 'name and shame' should not be underestimated.

Such a mechanisms should not take the form of *ad hoc* arrangements, but should rather be incorporated in normal government structures, either within the Department of Agriculture or the National Agricultural Marketing Council.

What are the requirements and make up of such a monitoring mechanism? The experience of the USA provides useful ideas. The Economic Research Service of the United States Department of Agriculture is responsible for the measurement of food prices at retail level, of food marketing costs and of food price spreads.

The farm-to-retail price spread measures the contributions of food manufacturing, wholesaling and retailers. Recent increases in consumer demand for convenience foods have increased the demand for manufacturing, processing and marketing services, which have increased price spreads and the food sector's overall marketing costs.

Measuring food marketing and price spreads
The current methods applied by the ERS to obtain information on food price spreads and marketing costs are discussed below.

- Collection of retail price data

Data are collected at the point of sale by supermarkets using electronic scanners in checkout lines. Stores can use barcodes attached to the product package or store codes typed into the register to record the product type and product price. The ERS defines supermarkets as retail grocery stores with dairy, fresh produce, fresh meat, packaged food and non-food departments and annual sales of $2 million or more. Although the process is not based on a random sample, the raw data underlying the database are from supermarkets across the US that account for approximately 20% of US supermarket sales.

Supermarkets using electronic scanners may provide the information to commercial data firms (i.e., syndicated data suppliers). These firms combine point-of-sale transaction data from supermarkets. They process and categorise the data and sell information to both supermarket chains and manufacturers for inventory, revenue control, and general marketing purposes.

The ERS makes use of a third-party co-operator who obtains and processes the retail scanner data and provides ERS with summary statistics. This ensures that the retail scanner data is completely confidential. Store- and chain-level data are therefore not provided to ERS in raw form nor can it be constructed from the data published on the ERS website. No data related to individual store- and/or chain-level sales are obtained or maintained by ERS. The summary data are delivered to ERS every month by the third-party co-operator, reviewed by ERS staff for consistency and quality, and posted to the ERS website.

Food prices are included in the information that the Bureau of Labor Statistics (BLS) collects for development of the CPI. BLS has classified expenditure items into more than 200 categories, arranged into eight major groups. Food and beverages—items

such as breakfast cereal, milk, coffee, chicken, wine, full-service meals, and snacks—are in one major group.

For each of the more than 200 categories, BLS has chosen samples of items to represent the thousands of varieties available in the marketplace. For example, in a given supermarket, the Bureau may choose a plastic bag of golden delicious apples, US extra fancy grade, weighing 4.4 pounds to represent the "apples" category.

Each month, BLS data collectors visit or call thousands of retail stores all over the United States to obtain price information on thousands of items used to track and measure price changes in the CPI. These prices represent a scientifically selected sample of the prices paid by consumers for goods and services purchased.

The ERS retail scanner data supplements BLS data in three ways. First, the ERS database contains an index of volume sold (with the average monthly volume for 2001 equalling 100). BLS does not collect information on the volume of meat sold. Second, it provides additional specie coverage for lamb and veal. Third, BLS collects a "snapshot" of prices from sample stores once a month. This may not capture the full amount of featuring done by the store. Since featuring influences the volume sold and the ERS scanner database reflects featuring for the entire month, it is hypothesized that the ERS data may report lower prices.

- Using retail data for market and policy analysis

Retail prices are used to develop farm-to-retail price spread information that measure the relative contributions of farm production, food manufacturing, wholesalers and retailers.

Sources of information for the calculation of price spreads and marketing costs

The ERS uses several sources of information to calculate the farm-to-retail-price spread and marketing costs. The Census Bureau provides data on food processing establishments in their Economic Census. The census is conducted every 5 years and provides information on establishment numbers, value added, materials usage and value of shipments by detailed industry and geographic region. The data on shipments, value added and employment by industry is obtained through the Annual Survey of Manufactures. The annual County Business Patterns survey provides information on plant location and employment. Financial information is obtained through the Quarterly Financial Report and Annual Capital Expenditures Survey. Monthly production and inventory data for selected industries are obtained through the Current Industrial Reports programme. The Bureau of Labour Statistics provides consumer price indices, hourly earnings and the number of employees in the food industry. The USDA National Agricultural Statistics Service provides prices received by farmers for a wide variety of farm commodities.

Implementing such a system in South Africa

The Committee is of the opinion that South Africa has all the machinery and systems in place to copy the system of the USDA to the letter. The Committee experienced

good collaboration from AC Nielsen, which is a typical commercial data firm providing retail price data. This company processes all till-point data of all the major supermarkets and should be able to provide aggregate data on sales volumes and retail prices per month. With all systems moving increasingly to scanners, they should soon have a database in place that is free of enumerator or respondent bias, and thus provides value-free and unbiased information. Forming an alliance with this company will provide the first step to ensuring sufficient data for the start of such a monitoring mechanism. Government should, however, assess the cost of purchasing the data, as well as getting the approval from the Consumer Goods Council whose members supply the data to AC Nielsen.

4.3.2 Investments to improve crop estimates and agricultural information

The problems in the commodity market in 2002 were largely influenced by perceptions about the size of the harvest. This was caused by some confusion in the market between the actual deliveries recorded by SAGIS and the estimated final crop size issued by the Crop Estimates Committee. When it was finally confirmed that the total crop including retained stocks (on farms) was 1 million tons more than anticipated, the market corrected very quickly. This information only became known 6 months after the harvest, resulting in the sharp drop in prices in December/January 2003. Had this information been known earlier, and had the crop estimates not been so far off target the market might have behaved differently during the period June to December 2002.

The Committee therefore concurs with the general sentiment in agricultural circles that a substantial investment in the system of crop estimates is required to avoid any similar problems in future. Specific issues related to crop estimates that needs to be addressed include:

- The sample of farmers should be increased to approximately 3500 farmers that provide monthly inputs;
- Improving the analytical and modelling capacity to determine the impact of weather variables and trends (as well as soil moisture levels) on the size of the local crop;
- More objective inputs from experts in the industry such as traders, importers and exporters, seed and fertilizer sales should be obtained on a monthly basis;
- Although the crop estimation methodology has been improved through the appointment of the ARC Consortium, the continued funding and future continuation of the project is not guaranteed. As a result the project is increasingly treated from season to season and not as a long-term statistical process. This is of major concern to the Committee, and it is recommended that the government ensures long term commitment for this process to avoid the problems of 2002;
- A shortage of expertise on the new methodology of crop estimation also poses a problem. More investment in trained staff is needed, especially for enumerators collecting field data;
- The only “cross check” data for crop estimates is SAGIS’s delivery figures (obtained from the Grain Silo industry) and, although very helpful with the reconciliation of production data, it remains deficient for the purpose of calculating area of production. An end of season survey remains necessary to

determine the actual area harvested as opposed to area planted. Funding is currently insufficient to enable such a survey. Investment in the latest satellite technology could also help in obtaining accurate area data.

Through its various investigations, it became evident to the Committee that there is a despite the recent investments through the DoA budget to improve crop estimates still lack of a comprehensive, statistically correct and reliable agricultural production statistics in South Africa. It is the view of the Committee that the development of a complete and accurate statistical system for agricultural production is crucial in the long term. All these recommendations will imply that the Department of Agriculture should increase its budgetary allocation for agricultural information and statistics.

Although SAGIS provides an important, accurate and reliable information service to the grain industry, there are a number of ways in which information delivery can be improved. It is important for Government to see how they can support this organisation, which ultimately provides the key statistics on which many commodity brokers trade and which ultimately influenced commodity prices and thus also food retail prices.

Information on retentions on farms. The Committee received reports that there are currently roughly 600 000 tons of grain storage capacity on farms. Without proper knowledge of how much is stored on farms it will always be difficult to determine the true size of the crop. This is a difficult aspect but it is recommended that the Department of Agriculture should investigate whether accurate information on on-farm storage is necessary and whether it can be obtained in a comprehensive but cost effective manner.

Information on grain imports and exports. The Committee's investigations into the grain market highlighted concerns about the lack of accurate and real-time information about actual trade in whole grain and grain products at any specific point in time. Only the big role players know what quantity of grain is being exported, imported, or planned for export or import. This situation of asymmetric information is not healthy and can create opportunities to corner the market. Inaccurate information (rumours) create instability in the commodity market and it can be argued that it is government's duty to ensure that more accurate and timely information is available to prevent this from happening.

It is therefore recommended that the government introduce a statutory measure complying all grain traders to report on a weekly basis on realised and planned (i.e. a finalised contract) imports and exports of whole grain and grain products. The information can effectively be managed by the current SAGIS structures and disseminated every week. The Committee is of the opinion that such a system, in combination with an accurate crop estimate, can do a lot in avoiding unnecessary volatility in the agricultural commodity markets.

Information about cross border movements of grain (at border posts and at the harbours) seemed to be a general problem, since SARS was, for a variety of reasons, not able to provide information to the Department of Agriculture or SAGIS. In addition to the statutory measure listed above, the Committee also recommends that

the government ensures that the following government agencies provide monthly information on cross border trade in grain:

- Portnet
- SARS
- CBRTA (Cross Border Road Transport Agency).

Summary

The purpose of the recommendations in this Chapter is to ensure a system that will provide unbiased, reliable and timely information on market fundamentals such as supply and demand factors, regional market information, and trade deals. Information on retail prices and the cost of food processing should be released at least every six months to act as an 'early warning' system. It is proposed that an annual publication, to be known as the '*South African Food Cost Review*" be published to disseminate information on food costs and trends in retail prices and farm-retail price spreads as widely as possible. Such a publication can also be used to inform the public about food safety issues, food regulations and minimum specifications for food items.

All these recommended interventions by government should ensure a more level playing field and a more competitive environment in agricultural commodity markets.

CHAPTER 5

INCREASING COMPETITION AND REDUCING BARRIERS TO ENTRY

Oligopolistic structure in the food sector

The analyses of the Committee presented in Parts 4 and 5 of this Report provide substantial evidence of oligopolistic behaviour and monopolistic competition in the food sector. Increasing concentration in the food value chain is a worldwide trend, caused by increasingly demanding consumers, concerns about food safety, etc. The competition is fierce, with everything based on economies of scale, small margins but high volumes, and turnover. This structure makes it very difficult for smaller players to enter this market, either as retailers, or as food processors and distributors. Smaller players do not have the scale of operation to compete in the game. Volatility in commodity prices and in the exchange rate also has a clear impact on smaller suppliers and manufacturers, who find it very difficult to absorb such shocks. This has the potential to bring about further concentration in manufacturing and retailing.

The oligopolistic structure and monopolistic competition in the food business is a reality that is amply illustrated by the behaviour of individual firms in the sector. Some firms are able to maintain prices that are higher than would otherwise pertain in a competitive market through branding, product differentiation, price discrimination, market segmentation and advertising. Barriers to entry like high capital costs enable the existing firms to continue to earn above-normal profits, as they have the power to determine the price for the goods/services they produce or sell. Consumers do not have full information so it is possible for the seller to charge different prices for the same product. The consumer many not know how much the rival seller is charging, and may not have all the information on all the 'specials' and other alternative deals, since this involves high search and negotiating costs for the consumer.

Economists such as the Nobel laureate Joseph Stiglitz take the issue further to suggest that retail prices are relatively constant because retailers "co-operate and fix prices". This they do not have to do formally. Because of their proximity to each other, they could conceivably read each other's adverts, and they in any case negotiate with the same suppliers, etc. Research shows that retail produce buyers, if they are able to tacitly co-operate with each other, do so by co-operating when market prices are clearly in their favour. During co-operative periods, prices are bound between a competitive level and a monopolistic one depending upon the extent to which rivals are able to effectively agree on a common price.

Monitoring the competitive environment

In this environment government seems to have its work cut out to ensure effective policing of the competitive environment through the Competition Commission. It would therefore by appropriate to request the Competition Commission to conduct a thorough investigation into the market structure of the food industry as well as the agricultural input industry. The findings of the Committee reported here should

provide a useful basis from which to start such an investigation, and such an investigation will put the Competition Commission in a position to monitor competitive behaviour in the food industry on a continuous basis.

Increased competition/participation

A more important intervention by the state would be to increase participation and increase competition in the market by reducing barriers to entry for smaller suppliers, manufacturers and retailers. Innovative programmes under the Black Economic Empowerment programme (BEE), such as preferential procurement systems, can be used effectively to promote increased participation. Government will however have to look at programmes to assist such new entrants with start-up capital.

Though the farming sector is perfectly competitive, there are barriers to entry for previously disadvantaged farmers, which are currently being addressed by the state in partnership with the private sector through a range of strategic programmes. Accelerating land reform and improving government support structures are important to stimulate local production of food. This should enhance the availability of food in remote rural areas and thereby create the potential for cheaper food for poor rural communities.

Food fortification legislation: creating barriers to entry

In the post deregulation era a large number of small-scale millers entered the maize meal market, creating substantial competition for the five large milling groups. There are, however, recently announced regulations on the fortification of basic foodstuffs, which, while noble in intention, will have the unintended consequence of reducing competition in the milling industry. By diminishing competition, created by the small millers, the price of maize meal will inevitably increase over time.

The new regulations on food fortification have potentially large negative consequences for the smaller operators who:

- Cannot afford the mixing equipment, which costs as much as the mill itself;
- Do not have the administrative or technical expertise to administer the fortification;
- Will be running illegal operations due to the regulations, making it possible to close them down whenever they interfere in competing markets.

It should be noted that small mills generally do not remove the germ from the maize meal, therefore dramatically improve the health qualities of the final product. Most vitamins, with the exception of vitamin A, are fat-soluble and are therefore concentrated in the germ. The highly refined super white maize meal was used as a benchmark to calculate the amount of fortification needed, with no consideration given to the much healthier product produced by smaller mills.

The Committee notes this with concern and recommends that small-scale millers be exempt from the food fortification legislation. This should ensure that healthy competition, which the Committee argues is necessary to keep retail prices at bay, remains in place.

Providing some order in the agricultural futures market

The Committee's investigation into the agricultural derivatives market of the JSE (SAFEX) also pointed to the need for rules to prevent opportunistic behaviour by commodity traders. The potential for manipulation of this market lies in the large open positions of traders, which makes it possible for larger traders to corner the market and to lead the market (especially inexperienced traders) into a particular direction. As a result the Committee was of the opinion that rules to manage open positions of traders were necessary. Fortunately, the JSE has also recognised this shortcoming and has, since the start of the Committee's investigation, announced the introduction of 'position limits'. The Committee welcomes this pro-active move. It is hoped that this ruling, plus much stronger monitoring of the ethical conduct of traders, will ensure that competition is brought within bounds so that the 'wild west' character of this market will disappear.

Transport infrastructure: a key constraint to participation

Efficient functioning transport networks are important to any competitive economy, and are key to a successful food security strategy. The gradual movement to road transport of most grains due to poor efficiency (slow turn around time, limited number of trucks) on the rail network has contributed to increased costs of raw material at mill door or factory gate. These costs are eventually recuperated from the consumer, implying higher food prices. A recapitalisation of Spoornet in terms of rolling stock and locomotives, as well as the revitalisation of rural rail sidings could improve this situation. The reopening of rail sidings in rural areas will also form an important component of increasing market participation by small farmers in disadvantaged communities. In this respect one can argue that improving the rail network represents a national asset for economic development in the rural areas, which should not be subjected to the same standards of profitability as purely commercial ventures.

At the same time strong enforcement of load per axle regulations will also help to stem the large shift to relatively more expensive road transport. The social and economic costs of increased road transport in terms of accidents and damage to the road network are astronomical, making it even more important for Spoornet to be revitalised. The Committee therefore supports the government's plans in this regard and argues that it should have positive food security as well as economic development impacts. An improved transport network can thus make an important contribution to a more competitive environment, increased market participation and perhaps lower food distribution costs.

CHAPTER 6

SUMMARY OF RECOMMENDATIONS

The Committee has been aware since its appointment that its terms of reference represent but one initial step in a long-term process that is aimed at the maintenance of fair competition in the food and agricultural sectors of the South African economy. In this respect, the Committee's recommendations will focus in the first instance on the institutionalisation of the key functions required to establish such a food pricing monitoring system.

6.1 A food price monitoring system

The Committee found that the monitoring process was a useful exercise in fostering the understanding of price trends for specific food items, and price determination at the different levels of the food supply chain. This promotes the protection of consumer rights; it provides valuable information for policy analysis and leads to better understanding of the causes of price variation for similar products in rural and urban settings. The advantage of this system of monitoring price trends is that it also allows qualitative observations of other factors that influence food prices in different social environments.

Recommendation 1
The Committee is of the opinion that the National Agricultural Marketing Council in collaboration with the Department of Agriculture should implement a reliable and consistent price monitoring network throughout the country, as this affords policy makers the opportunity to gain first hand qualitative and quantitative information on price trends, and will enable the Department to make better informed decisions regarding food policy in this country.

In light of shortcomings in the provision of data required for the monitoring of food prices, the Committee recommends that:

Recommendation 2
StatsSA join forces with the Department of Agriculture to find ways to make detailed information on average monthly food retail prices and margins more readily available to the public and to all government departments. An alliance with AC Nielsen and the Consumer Goods Council should also be considered to supply scanner data on retail food prices and volumes.

The Committee also concurs with the general sentiment in agricultural circles that a substantial investment in the system of crop estimates is required to avoid any similar problems in future. Although the government has already started to address this during 2002 there are still specific issues related to crop estimates that need to be addressed. This include:

Recommendation 3

- Increasing the sample of farmers should to approximately 3500 farmers that provide monthly inputs;
- Improving the analytical and modelling capacity to determine the impact of weather variables and trends (as well as soil moisture levels) on the size of the local crop needs to be improved.
- More objective inputs from experts in the industry such as traders, importers and exporters, seed and fertilizer sales should be obtained on a monthly basis.
- Although the crop estimation methodology has been improved through the appointment of the ARC Consortium, the continued funding and future continuation of the project is not guaranteed. As a result the project is increasingly treated from season to season and not as a long-term statistical process. This is of major concern to the Committee, and it is recommended that the Government ensure long-term commitment for this process to avoid the problems of 2002.
- The shortage of expertise on the new methodology of crop estimation also poses a problem. More investment in trained staff is needed, especially for enumerators collecting field data.
- The only "cross check" data for crop estimates is SAGIS's delivery figures (obtained from the Grain Silo Industry, millers, processors, traders and exporters) and, although very helpful with the reconciliation of production data, these data remain insufficient for the purpose of calculating areas of production. An end of season survey remains necessary to determine the actual area harvested as opposed to area planted. Funding is currently insufficient to enable such a survey. Investment in the latest satellite technology could also help in obtaining accurate area data.

Apart from the positive moves to improve crop estimates through increased budgetary funding under the MTEF it is of concern to the Committee that there is still a lack of comprehensive and statistically correct data on general production statistics and prices for the agricultural sector in its totality. It is the view of the Committee that the development of a complete and accurate statistical system for the agricultural sector in general is crucial in the long term. It is therefore recommended that:

Recommendation 4

The Department of Agriculture should increase its budgetary allocation for agricultural information and statistics.

Although SAGIS provides an important, accurate and reliable information service to the grain industry, there are a number of ways in which information delivery can be improved. It is recommended that:

Recommendation 5

The State investigate ways to support SAGIS, which ultimately provides the key statistics on which many commodity brokers trade, and which ultimately influences commodity prices and so food retail prices.

The Committee received reports that there is currently roughly 600 000 tonnes of grain storage capacity on farms. Without proper knowledge of how much is actually

stored on farms, it will be difficult to determine the true size of the crop. It is recommended that:

Recommendation 6
The Department of Agriculture investigates whether accurate information on on-farm storage is necessary and whether it can be obtained in a comprehensive but cost effective manner.

The Committee's investigations into the grain market highlighted concerns re the lack of accurate and real-time information on actual trade in whole grain and grain products at any specific point in time. Only the big role players know what quantity of grain is being exported, imported, or planned for export or import. This situation of asymmetric information is not healthy and can create opportunities to corner the market. Inaccurate information (rumours) create instability in the commodity market and it can be argued that it is Government's duty to ensure that more accurate and up-to-date information is available to prevent this from happening. It is therefore recommended that:

Recommendation 7
The State introduce a statutory measure compelling all grain traders to report on a weekly basis on realised and planned (i.e. a finalised contract) imports and exports of whole grain and grain products. The information can effectively be managed by the current SAGIS structures and disseminated on a weekly basis. The Committee is of the opinion that such a system, in combination with an accurate crop estimate, will contribute much to avoid unnecessary volatility in the agricultural commodity markets.

Although approached, SARS has not been able, for a variety of reasons, to provide up to date information to the Department of Agriculture or SAGIS. From this it is gleaned that information about cross border movements of grain (at border posts and via the harbours) is a general problem. In addition to the statutory measure listed above, the Committee also recommends that:

Recommendation 8
The State ensure that the following government agencies provide monthly information on cross border trade in grain:
- Portnet
- South African Revenue Services (SARS)
- Cross Border Road Transport Agency (CBRTA).

The purpose of these eight recommendations is to guarantee a system that will provide unbiased, reliable and up-to-date information on market fundamentals such as supply and demand factors, regional market information, and trade deals. Information on retail prices and the cost of food processing should be released at least every six months to act as an 'early warning' system. To this end, the Committee recommends that:

Recommendation 9
An annual publication, to be known as the '*South African Food Cost Review*" is published by the National Department of Agriculture to disseminate information on food costs and trends in retail prices and farm-retail price spreads, and distributed as widely as possible. Such a publication can also be used to inform the public about food safety issues, food regulations and minimum specifications for food items.

6.2 Poverty alleviation

The Committee has debated at length the establishment of a strategic grain reserve, but is, on balance, not convinced that this is necessary for the South African economy and that the funding for such an approach could more wisely be spend on direct interventions at household level. In this respect, the Committee debated the relative merits of direct State intervention to reduce poverty and improve food security, such as school feeding schemes, a food stamp programme, etc., and has the following three recommendations:

Recommendation 10
The Committee favours the expansion of school feeding programmes, and argues that:

- School feeding programmes should be targeted at areas with the highest poverty gap;
- Best Practice requires that all children in a school should be provided with food once the school has been targeted;
- School feeding should begin at the level of Early Childhood Learning Centres and should continue up to Grade 12;
- Responsibility for school feeding programmes should be transferred to the Department of Education;
- The financial resources for the school feeding programmes should be provided to the school governing body on a monthly basis, and should be based on enrolment numbers and feeding days per month; and
- Only those schools with the necessary infrastructure (kitchens, fenced land, water, secure storage etc.) should attempt to augment the feeding programme through food gardens.

Although food stamps and the basic income grant scheme have merit as potential mechanisms to address household food security, there are aspects related to the logistics and management of such programmes that argue against the implementation of these initiatives. It is for this reason that the Committee recommends that:

Recommendation 11
The State investigates a poverty alleviation grant based on a means test, which will enable households to access food. Such a grant will deal with problems of food security at a household level as well as with other income poverty issues, thus allowing families to take risks and acquire assets.

Recommendation 12
The implementation of such a grant should be accompanied by a deliberate effort to increase agricultural output in areas where the poor reside. Thus, households receiving these grants can buy food from local farmers, which will also promote local economic growth. This implies that small-scale agricultural production should be made a central strategy for production at local level for the various social development initiatives such as the school feeding programmes and any form of income grant.

6.3 Monitoring the competitive environment

The State seems to have 'its work cut out' to ensure effective policing of the competitive environment through the Competition Commission. Therefore, the Committee recommends that:

Recommendation 13
The Competition Commission is requested to annually conduct a thorough investigation into the market structure of one or two food value chains (including the agricultural input industry). The findings of the Committee reported here should provide a useful basis from which to start such an investigation. The results of these annual investigations, done in collaboration with the Department of Agriculture, should be published as part of the annual "South African Food Cost Review". This arrangement will put the Competition Commission in a position to monitor competitive behaviour in the food industry on a continuous basis.

An important intervention by the State would be to increase participation and competition in the market by reducing barriers to entry for smaller suppliers, manufacturers and retailers. Innovative programmes under the Black Economic Empowerment programme (BEE), such as preferential procurement systems, can be used effectively to promote increased participation. Government will, however, have to look at programmes to assist such new entrants with start-up capital.

Although the farming sector is exposed to market competition, there are entry barriers for previously disadvantaged farmers. Currently these are addressed by the State in partnership with the private sector through a range of strategic programmes. Accelerating land reform and improving government support structures are important to stimulate local production of food. This should enhance the availability of food in remote rural areas and so create the potential for cheaper food for poor rural communities.

In the post-deregulation era, a large number of small-scale millers has entered the maize meal market, creating substantial competition for the five large milling groups. Recently, however, regulations on the fortification of basic foodstuffs have been announced, which, while noble in intention, will have the unintended consequence of reducing competition in the milling industry. When the competition created by the small millers is reduced, the price of maize meal will inevitably increase over time.

The new regulations on food fortification have potentially large negative consequences for the smaller operators who:

- Cannot afford the mixing equipment, which costs as much as the mill itself;
- Do not have the administrative or technical expertise to administer the fortification ingredients;
- Will be running illegal operations due to the regulations, which will make it possible to close them down when they interfere in competing markets.

It should be noted that small mills generally do not remove the germ from the maize meal, in so doing they dramatically improve the wholesomeness of the final product. Most vitamins, with the exception of vitamin A, are fat-soluble and are therefore concentrated in the germ. Highly refined super white maize meal was used as a benchmark to calculate the amount of fortification needed, and no consideration given to the much healthier product produced by smaller mills.

The Committee notes this with concern and recommends that:

Recommendation 14
The Government investigate whether the survival of small-scale millers are affected by the food fortification legislation. If this is the case it could negatively affect healthy competition, which the Committee argues is necessary to keep retail prices at bay. Government will thus have to consider measures to accommodate these millers.

The Committee's investigation into the agricultural derivatives market of the JSE (SAFEX) also pointed to the need for rules to prevent opportunistic behaviour by commodity traders. The potential for manipulation of this market lies in the large open positions of traders, which makes it possible for larger traders to corner the market and to lead the market (especially inexperienced traders) into a particular direction. As a result,

Recommendation 15
The Committee is of the opinion that rules to manage open positions of traders are needed. Fortunately, the JSE has also recognised this shortcoming and has, since the start of the Committee's investigation, announced the introduction of 'position limits'. The Committee welcomes this pro-active move.

It is hoped that this ruling, plus much stronger monitoring of the ethical conduct of traders, will ensure that competition is brought within bounds so that the 'wild west' character of this market will disappear.

Efficiently functioning transport networks are important to any competitive economy, and are the key to a successful food security strategy. The gradual movement to road transport of most grains because of poor efficiency (slow turn around time, limited number of trucks) of the rail network has contributed to increased costs of raw material at the mill door or factory gate. These costs are eventually recuperated from the consumer, implying higher food prices. It is in this context that the Committee recommends that:

Recommendation 16
The process to recapitalise Spoornet in terms of rolling stock and locomotives, as well as the revitalisation of rural rail sidings should get urgent attention and needs to gain momentum. The reopening of rail sidings in rural areas will also form an important component of increasing market participation by small farmers in disadvantaged communities. In this respect, the Committee argues that improving the rail network represents a national asset for economic development in the rural areas, which should not be subjected to the same standards of profitability as purely commercial ventures.

At the same time, strong enforcement of load per axle regulations will help to stem the large shift to relatively more expensive road transport. The social and economic costs of increased road transport in terms of accidents and damage to the road network are very high, which makes it even more important for Spoornet to be revitalised.

The Committee therefore supports the Government's plans in this regard and argues that improvement of the railroad infrastructure should have positive food security as well as economic development impacts. An improved transport network can, thus, make an important contribution to more competitive environment, increased market participation by emerging farmers, and, perhaps, lower food distribution costs.