

FOOD SECURITY IN SOUTH AFRICA

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Abstract

South Africa's agricultural policy has had food self-sufficiency as a major objective until recently. This is still the case for a number of the homelands. South Africa has to a large extent achieved this goal by producing a surplus in most of the agricultural commodities. Despite this efficiency, large inequities, inefficient food distribution networks and high levels of malnutrition are experienced. South Africa is therefore characterised by surpluses and exports amidst food shortages - a situation of "hunger and malnutrition next to the granary" is therefore typical. These conditions necessitate a review of the current agricultural policy goals. This paper strongly argues in favour of a policy of food security aimed at both national and household level. The paper initially reviews the issues and terminology of food security as a matter of clarification. The dimensions of the food security problem in South Africa at national and household level are subsequently quantified showing that 21 % of the urban population and 63 % of the rural population in South Africa live below the minimum subsistence level. The evidence necessitates an evaluation of policies and programmes to address food security in South Africa. The paper looks at a range of policy alternatives and concludes that, on the one hand, production orientated policies implying technological change and commercialization of production by rural households will provide a long term impact in terms of all the food security risks. Given South Africa's inequitable distribution of infrastructure, this will have to be accompanied by infrastructural development and an improved food distribution network. On the other hand, the increasing number of urban households necessitates a reconsideration of pricing and distributional issues. Specific issues which will have to be addressed are controlled marketing, marketing margins and the influence of concentration in the food processing sectors on the price and affordability of basic foodstuffs. Attention should also be paid to the "food price dilemma" which should be taken into consideration in agricultural price policy. Finally it is important to note that food security requires economic development and large scale public commitment which is not achievable with a few cheap short term interventions.

1. Introduction

South Africa's agricultural policy has had food self-sufficiency as a major objective until recently. This goal has largely been achieved; a surplus is produced in most of the agricultural commodities. Despite this efficiency, large inequities, inefficient food distribution networks and high levels of malnutrition are experienced. South Africa is therefore characterised by surpluses and exports amidst food shortages - a situation of "hunger and malnutrition next to the granary" is therefore typical. This situation requires a review of the policy of self-sufficiency.

This paper strongly argues in favour of a policy of food security aimed at both national and household level. The paper initially reviews the issues and terminology of food security as a matter of clarification. The dimensions of the food security problem in South Africa at national and household level are subsequently quantified. Specific attention is also paid to food pricing and distribution policy, including the issues of price margins and concentration in the food industry as factors which influence food security. South African food policy is discussed next. It is argued that the policy of self-sufficiency contributed to the present situation. Finally, policy options are discussed and motivated in the context of the dimensions of the food security problem in South Africa.

2. Conceptual issues on food security

The term "food security" originated from the World Food Conference held during 1974 in Rome. Experts

from various disciplines gathered at this occasion to discuss the deteriorating food situation in the world. Delegates at the conference feared that the world was entering a period of chronic food shortages and most discussions focused on the simple core issue of how global food production could be increased (Gittinger *et al.*, 1987). Increasing world grain prices as well as declining production in many low-income countries in Asia and Africa increased the possibility of mass starvation. Proposals to improve food security focused mainly on increased food production in those countries which experienced food shortages. According to Eicher and Staatz (1985), the food security proposals of the conference paid little attention to demand issues, such as ensuring that nutritionally vulnerable groups had the resources necessary to gain access to an adequate diet.

During 1976, Reutlinger and Selowsky (1976) published an influential monograph on the interrelationship between malnutrition and poverty, which argued that high economic growth rates, increased food production and the working of market forces will not necessarily mean an improved nutritional position in Third World countries. Sen (1977) argues that poverty or what he calls a lack of food entitlement, e.g. access to land, credit, income and support services, is an important cause of hunger and starvation. Famine or starvation is therefore not primarily viewed as caused by a decline in agricultural production in a particular area.

The changing ideas and definitions on food security was summarised by Falcon *et al.* (1987) as: "... experts no longer perceive the hunger problem as one of starvation

or protein deficiency, but rather of chronic undernutrition, affecting a range of vulnerable groups whose common bond is their poverty". With the focus placed by Falcon *et al* (1987) on the dichotomy of the world hunger problem and the world food problem, increasing consensus was achieved that the hunger problem is centred on natural or other disasters, as well as on the chronic problem of food availability for vulnerable groups. It can be stated that the emphasis on the links between hunger and poverty is the most important change in thinking about world food policy since the World Food Conference (Gittinger *et al*, 1987).

Over the past number of years, there has been growing empirical and policy support for two fundamental premises about the linkages between food availability, poverty and the access to food (Eicher, 1988). These premises can be described as the two sides of the hunger equation, namely supply and demand for food. The first premise is that increasing food production, storage and trade can assure food availability, but this will not automatically ensure that all people have enough to eat and end hunger. The second premise is that, because poverty is a central cause of hunger and malnutrition, special efforts are needed to help increase the access and entitlement to food.

Food security is defined for the purpose of this paper as "the ability of a country or region to see that existing food systems provide access to a timely, stable and nutritional rich supply of food to the total population over the long term". This definition, based on the work of Eicher and Staatz (1985), has the following implications:

- (i) The food security situation in a country should be determined through analysing the accessibility of individuals or households to a sufficient diet. It is not sufficient to calculate the average availability of food on a per capita basis for a specific region or country. Also of importance is the distribution of consumption.
- (ii) To ensure the accessibility of a nutritional sufficient diet it is necessary to have sufficient food available so that the individual would be able to obtain this food. Access to food is possible via production or via the earning of income which could be exchanged for food. It is therefore clear that increased self-sufficiency will not guarantee food security.
- (iii) The majority of the poor in Africa is involved in subsistence agriculture. An increase in productivity of the production of staple crops would be one direct way of increasing income of these households as well as increasing the per capita availability of staples. The increased availability of staples could also release resources that could be used to purchase other foodstuffs for a better balanced diet and thereby contributing to the improvement of the nutritional status of the household.
- (iv) Food insecurity has a short term and chronic dimension. Short term food insecurity refers to temporary decline in the households access to sufficient food. This could occur due to instability in food prices, household income, household production. In the most severe circumstances it leads to famine. Chronic food insecurity refers to a continued insufficient diet

caused by the inability of the household to obtain sufficient food.

- (v) The improvement of a country's food security situation necessitates both long and short term measures. Short term measures include food rations and subsidised distribution of food, while long term solutions include the creation of food production and distribution systems which will provide adequate access to food to the poor. The improved access can be obtained through increased income and supply of food.

Food security thus involves assuring both an adequate supply of food and access of the population to that supply, usually through generating effective demand via income growth or transfers. Food security is therefore influenced by both micro- and macro-factors, ranging from the technology and support institutions available to small farmers and merchants, to monetary, fiscal and trade policies that affect the overall rate of growth and distribution of income.

As stated earlier, increasing food production and therefore a policy of food self-sufficiency, will not automatically ensure that people have enough to eat. The South African Government for many years pursued an agricultural policy with a major objective being food self-sufficiency. The dimensions of the food security problem in South Africa are subsequently discussed in terms of the national supply of and demand for food, the number of people living under circumstances of food insecurity, pricing policy and the food distribution system.

3. Dimensions of the food security problem in South Africa

Introduction

3.1 Food security is becoming an increasingly important concept in South Africa, specially in the light of the periodical droughts experienced on the sub-continent. In this section the national supply of and demand for food in South Africa are summarised and projected for the years 2000 and 2010. The discussion is based on the recent report of the Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990). This is followed by an analysis of the number of people living under circumstances of food insecurity, pricing policy and the food distribution system.

In the development of a food and nutrition strategy not only the sufficient supply of food is important, but also ready access to it at all times. In such a strategy sufficient food availability and food accessibility (at affordable prices) therefore go hand in hand. This implies, on the one hand, that agriculture and the food-processing industry should produce optimally over the long term. On the other hand, the population should be able to obtain sufficient food of the right quality and nutritional value to maintain a decent livelihood.

3.2 The supply of and demand for agricultural products

3.2.1 Introduction

South African agriculture can be typified as highly diversified, with a predominantly commercial agricultural sector which represents mainly White agriculture. It is estimated that 20% of the White farmers produce almost 80% of the total agricultural output (Louw, 1990). In

the developing agricultural sector concentrated in the Bantustans, almost 95% of the land area has been allocated for agricultural purposes. Here farming is directed mainly at subsistence production. However, in later years corporative agricultural projects in these areas have resulted in a significant increase in production which in certain respects contributed to the commercialisation of that agricultural sector (Brand *et al.*, 1991).

It is well-known that there is a dualism in South African agriculture with a significant difference in cost and infrastructure and in the level of production. The total area under commercial agriculture is about five times more than that of Black small farmer agriculture and the gross value of production of the former is almost 10 times higher than that of the latter. The indication is that production differences between the two sectors are increasing with the result that the Black rural areas are becoming more dependent on external food sources (Louw, 1990).

At present many of the commercial farmers, particularly in the crop producing summer rainfall area of South Africa, are experiencing serious problems caused by, among other things, the severe droughts of the 1980s and early 1990s, the high debt burden and rising production costs.

Small farmer agriculture in the developing Black areas operates under totally different conditions from those in the commercial agricultural sector. An important difference is that Black farmers to a large degree function outside the institutional support structures, for example in respect of finance, marketing and technical extension services.

3.2.2 Land use and agricultural potential

It is common knowledge that South Africa is not richly endowed with natural agricultural resources. Apart from the fact that ownership of land is skewly distributed with 104,1 million hectares (or 84,8%) situated in the developed area (white commercial agricultural sector) and 18,7 million hectares (or 15,2%) comprising the Bantustans, it is also true that high potential arable land is also limited and mostly in the hands of white commercial farmers (Louw, 1990).

The current area of arable land in the developed areas consists of 14,6 million hectares and its land potential is as follows: high = 3,2 million hectares (21,9%); medium = 7,2 million hectares (48,6%); and low = 4,2 million hectares (29,5%).

Of the 18,7 million hectares in the TBVC and self-governing territories 95,2% is used for agriculture and forestry. A large part of this is used for residential purposes and is situated outside the recognised town and urban areas. Only 2 million hectares (12,5%) of this agricultural and forestry land is regarded as arable. This should be compared with the 14,6 million hectares (17,3%) arable land in the developed areas (Louw, 1990).

There is relatively little unused arable land in both the commercial and developing farming areas. The arable land which is not used for crop production at present is used for intensive grazing in both cases. In certain districts in the commercial farming sector crop production is practised on land that, technically speaking, can be regarded as non-arable. In this sector there is little room for horizontal expansion.

Notwithstanding legislation which specifically regulates the use of agricultural land, high potential agricultural land is still used for non-agricultural purposes. Such land should be reserved for the agricultural sector on a strict basis, except where this is not justified in the interests of the community.

Although parts of the potential arable land are under-utilised agriculturally in the developing areas, a recent investigation shows that a great deal of the agricultural land in these areas is essentially non-arable or at least marginal land. Land deterioration as a result of, among other things, overgrazing has reduced the quality of large parts of this arable land to such an extent that it is no longer suitable for crop production. Other reasons for the under-utilisation of land appear to be, among other things, insufficient access to farming support services, alternative income outside agriculture; and the high risk that goes with agricultural production (Louw, 1990).

Growth or expansion of the agricultural sector can be divided into several components. Broadly speaking, it includes (i) horizontal expansion, that is, an increase in the gross area used (the so-called traditional input); (ii) yield increase (vertical expansion), which gives an indication of the importance of the so-called non-traditional inputs; (iii) location effects, which indicate a shift of production between high and low potential regions; and (iv) a shift in production between high and low value products. As previously mentioned, there is limited opportunity in South Africa for the horizontal expansion of crop production and any further expansion will have to occur by means of one or more of the other three factors.

Future demand could lead to crop production being introduced as a substitute for stock production. Several areas with marginal crop production potential are, however, used for that purposes at present. A probable cause of this is commodity prices that are administered under the Marketing Act and a distorted subsidy and taxation structure.

Given the movement towards freer markets, the land use pattern in the marginal areas should shift to those agricultural branches in which they have a natural comparative advantage. Although the long-term trend in these areas should be away from crop production, it could be different for the short and medium-term situations. In these terms reduced real income as a result of lower prices, lower subsidies and less government support in general may force farmers to increase their crop production in an attempt to maintain the current level of farming income (Louw, 1990). Research results indicate that in developing areas small farmers are more capital-efficient than large-scale project farming, but an important limiting factor in effective small farmer support programmes, particularly with regard to crop production, is a lack of good arable land.

The critical shortage of suitable agricultural land will place pressure on the current institutional land tenure measures, particularly if the profitability of small farmers is increased by farmer support programmes. This should act as an incentive to change the traditional land tenure system in the developing areas.

3.2.3 Agricultural production and self-sufficiency

The provision of enough food at affordable prices remains the most essential role that the agricultural sector has to play.

Commodity	Imports	Exports	Production	Consumption		SSI***
				Total*	Human**	
(1 000 ton)						
Wheat	94	449	2 612	2 262	2 119	115,5
Maize (white & yellow)	484	1 689	7 422	6 127	2 615	121,1
Potatoes	5	8	1 042	1 039	872	100,3
Vegetables	4	27	1 739	1 717	1 545	101,3
Sugar	63	863	2 044	1 258	1 258	162,5
Beef	81	16	579	644	639	89,9
Mutton, goat's meat & lamb	14	1	182	195	193	93,3
Pork	1	2	110	109	108	100,9
Chicken	3	0	521	524	519	99,4
Eggs	0	3	181	178	169	101,7
Deciduous & subtropical fruit	0	466	1366	897	808	152,3
Dairy products	35	58	2 344	2 321	2 321	101,0
Sunflower seed oil	14	1	84	96	85	87,5
Citrus fruits (fresh & processed)	0	426	706	278	278	254,0

* Available for use = Opening stock + Production - Closing stock + Imports - Exports

** Net human consumption = Available for use - Other uses - Losses, and further adjusted for extraction rate

*** SSI (self-sufficiency index) = Total production / Total consumption x 100

Source: Food balance sheets of the Directorate of Agricultural Economic Trends of the Department of Agriculture (as processed)

However, the supply of food involves more than merely agricultural production. The food distribution system should also be taken into account, and the processing of food products, their movement through the marketing channels, collection, storage and transport must also be managed effectively. The purpose of an efficient food provision system will therefore be to provide the right food at the right time at the right price and at the right place (Brand *et al.*, 1991).

In Table 1 an analysis is made of the production and consumption of the most important agricultural commodities produced in South Africa during the period 1985 to 1990 in order to establish what the situation is regarding total production, surplus production for the export market and the degree of self-sufficiency. Table 1 shows that, in spite of the periodic droughts experienced during the 1980s, South African agriculture still succeeded in producing surpluses. This is confirmed by the self-sufficiency index (SSI) which indicates that South Africa is self-sufficient in all the important staples. Crop production can therefore drop (in total) before South Africa becomes a net importer of these products on a regular basis. Some individual commodities in this group are, however, imported, on a net basis (eg. oilseeds).

Table 1 also gives an indication that in horticultural production, particularly fruit, South Africa is not only self-sufficient, but to a large degree dependant on the export market. The situation in respect of horticultural products is therefore even more favourable than that of crop production. In contrast to crop and horticultural products, red meat has a self-sufficiency index of lower than 100. This implies that South Africa did not produce enough red meat during the years 1985 to 1990 to meet domestic requirements. These shortages were supplemented by imports from, among others, Namibia, Botswana and some European countries.

Red meat, coffee, rice, vegetables, animal fats and vegetable oils are the most important food products imported. The total gross value of agricultural produc-

tion in South Africa was almost R15 000 million in 1987, whereas that of food imports amounted to about R1200 million. Food exports in the corresponding period amounted to about R2400 million. However, it is important to note that food self-sufficiency does not imply food security. Macro availability of food is only one aspect of the supply of food. Demand factors also play an important role (Louw, 1990).

3.2.4 The future

In recent years sufficient quantities of wheat and maize have been produced (on average), with between 15 % and 25% of the current consumption available for export, respectively. Citrus fruit (154%), deciduous and subtropical fruit (52%) and sugar (62%) are also exported. In the case of potatoes, vegetables, eggs, pork, chicken and dairy products the consumption was almost equal to the domestic production. Oilseed products, beef and mutton were, however, imported on a net basis.

In order to obtain an indication as to how the current situation may change in future, Louw and Van Zyl (1991) combined potential quantities supplied and the future demand for commodities under different scenarios (as provided by Nieuwoudt, 1990) in 2000 and 2010. According to Louw and Van Zyl (1991), it appears that the products with a relatively elastic supply in the long term, *viz* potatoes, vegetables, fruit, sugar and pork, show self-sufficiency indices of greater than one. This implies that it can be expected that there will not be shortages of these products. By contrast, products with a relatively inelastic supply in the long term, *viz* wheat, maize, oilseeds, beef and mutton, show shortages in terms of production under certain scenarios. These shortages are particularly evident for maize and wheat in times of low economic growth rates and for oilseeds, beef and mutton in all circumstances, but mainly in times of relatively high economic growth rates. The latter can be linked directly to the various income elasticities of the commodities.

However, in practice, food of which there is a shortage, will not necessarily be imported, but relative price shifts will result in changes in the quantity demanded and also supplied. In this way, for example, beef and mutton may become more expensive relative to chicken, which will result in less beef relative to chicken being demanded. This could mean a decrease in the quantity of beef demanded, or an increase in the quantity of chicken demanded, or both. In such a case the self-sufficiency index will improve in respect of beef. It is also necessary to note that in practice the actual self-sufficiency index will be close to one for those products with a relatively elastic supply, specifically in the absence of profitable export markets. The same arguments in respect of the quantity demanded also apply for the quantity supplied. The elasticity of supply of the most important commodities, and also the price elasticity of demand provide important indications of how changes in relative prices affect the quantity of a specific commodity supplied and demanded, and are important in forecasts (Louw & Van Zyl, 1991).

The conclusion can therefore be drawn that although relative prices will largely determine the quantities supplied and demanded in the long term, production will generally keep up with expected expansion in demand. This will result in relative shifts in the quantities supplied and demanded, particularly in the direction of those products with a relatively elastic supply in the long term. Droughts and other natural disasters may also necessitate imports of staples over the short term. However, some products will still have to be imported regularly over the longer term, particularly beef, mutton, fish and oilseed products. Imports of these commodities will be greater in times of higher economic growth rates than in periods with lower growth rates.

In this regard, however, it should be emphasised again that food security is not necessarily implied by food self-sufficiency. It may, for example, be better to export products in which there is a comparative advantage in respect of production and to import other products. According to this it appears that South Africa will still remain a net exporter of agricultural products, particularly of products such as citrus, deciduous and subtropical fruit and sugar. Seen as a whole, the conclusion can therefore be made that South African agriculture, as structured at present, will at least potentially be able to fulfil the food and nutritional requirements of the country's growing population in the medium to longer term.

3.3 The number of people living under circumstances of food insecurity

The fact that overall food production has kept up with the population increase (and will in all probability still do so in the next two decades), does not say anything about the nutrition status of the population. Although a food and nutrition strategy relates to the whole population, there are individuals and groups in which malnutrition should receive special attention for various reasons. Nutrition planning starts with the identification of the nutrition problem in terms of who is malnourished, in what ways, in what circumstances, and why. It is necessary that, should immediate intervention programmes be decided upon, most nutritional needy will be reached in order to make the programmes as cost-effective as possible. However, to deal merely with the occurrence and related facets is not sufficient. Investigations on nutrition status should go further than merely the identifying of the nutritional needy.

The Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990) made an effort to identify the nutritional deficient. Two norms were used, *viz* income and nutritional status. In the latter case it was done only for three identified groups, *viz*: (i) children of six months to five years (pre-school children); (ii) children of six to twelve years (primary school children); and (iii) pregnant and lactating women. Table 2 shows that in 1989 there were around 11,8 million people in South Africa and 4,5 million in the TBVC countries with an income lower than the minimum subsistence level (MSL), thus a total number of 16,3 million in South Africa and the TBVC countries as a whole, with 15,3 million or 93,5% of them being Blacks. According to Simkins (1991) there is substantial poverty among rural coloureds and all black people: 33 per cent of urban blacks, 54 per cent of homeland urban blacks, 58 per cent of rural coloureds, 72 per cent of rural blacks in "white" areas and 84 per cent of homeland rural blacks live under the poverty line. This implies that 47 per cent of black people live under the poverty line.

However, it was indicated that the nutritional needy should be selected according to anthropometric rather than income criteria. Table 3 shows the estimated number of nutritional needy per population and target group in South African and the TBVC countries, determined according to anthropometric criteria.

Estimates according to these norms show that there are 2,3 million people in South Africa and the TBVC countries who can be considered for nutritional assistance, as against the 16,3 million according to income criteria. About 2 million or 86,7% of the 2,3 million people are Blacks. Table 3 also shows that 829 000 (35,9%) are children of six months to five years, 1,3 million (55,8%) are children of six to twelve years and 192 000 (8,3%) are pregnant and lactating women.

According to the Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990), an estimated 1,5 million people received State aid in South Africa in 1989. Of these, 580 000 or 50,3% were Blacks. More than half of them received old age pensions and 26,4% drew disability pensions. However, it cannot simply be accepted that all people who receive social pensions are nutritionally deficient.

The levying of VAT on all food items in 1991/92 had a negative effect and increased the percentage of nutritionally deficient people. Furthermore, the large number of Blacks and the deficit in the welfare budget for social pensions and allowances means that provincial administrations are already unable to grant a social pension or allowance to all applicants who qualify for this form of State aid. It can also be stated that in the case of Blacks, service centres for the aged, where, among other things, an inexpensive meal is offered for five days of the week, are still in the developing stages and that only a small percentage of the Black aged are reached.

The conclusion is that a certain percentage (indeterminable) of the recipients of social pensions and other aged persons who do not receive them can be classified as a nutritionally deficient target group (Committee for the Development of a Food and Nutrition Strategy for Southern Africa, 1990).

Table 2: Population in South Africa and the TBVC countries below the minimum subsistence level according to population group and area, 1989

Group / Area	Urban	Rural	Total
Whites			
Metropolitan areas	38 639		38 639
Rest of South Africa	29 748	10 284	40 032
Total	68 387	10 284	78 671
Blacks			
Metropolitan areas	1 317 355		1 317 355
Self-governing territories	680 586	4 967 260	5 647 846
Rest of South Africa	803 476	3 002 669	3 806 145
Total	2 801 417	7 969 929	10 771 346
Coloureds			
Metropolitan areas	268 812		268 812
Rest of South Africa	301 684	318 482	610 166
Total	570 496	318 482	888 978
Indians			
Metropolitan areas	67 602		67 602
Rest of South Africa	6 659	28 181	34 840
Total	74 261	28 181	102 442
Total RSA			
Metropolitan areas	1 692 408		1 692 408
Self-governing territories	680 586	4 967 260	5 647 846
Rest of South Africa	1 141 567	3 359 616	4 501 183
Total	3 514 561	8 326 876	11 841 437
TBVC countries			4 517 678
TOTAL RSA AND TBVC COUNTRIES			16 359 115

Source: Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990)

Table 3: Number of nutritional needy in South Africa and the TBVC countries according to anthropometric criteria, 1989

Target groups	RSA					TBVC countries	Total RSA/TBVC
	Whites	Coloureds	Indians	Blacks	Total		
Children six months to five years:							
Urban	15 874	52 214	15 323	211 150	294 561	25 269	319 830
Rural	1 617	33 108	2 366	268 064	305 155	204 453	509 608
Total	17 491	85 322	77 689	479 214	599 716	229 722	829 438
Children 6 to 12 years	20 318	123 467	24 530	801 971	970 286	321 124	1 291 410
Pregnant and lactating women	2 061	16 492	1 260	122 773	142 586	49 215	191 801
TOTAL	39 870	225 281	43 479	1 403 958	1 712 588	600 061	2 313 649

Source: Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990)

3.4 Food pricing and distribution policy in South Africa

3.4.1 Introduction

South Africa's agricultural marketing system and specifically the marketing of staple foods is characterised by statutory control and one channel marketing. Producer and selling prices of maize and wheat for example are fixed annually by the respective marketing boards with the approval of the Minister of Agriculture.

There is, however, a trend for agricultural prices in South Africa to be more market related. This trend of more market related pricing was especially noticeable since the changes in the single-channel marketing schemes in 1987. Supply and demand factors were also increasingly being considered in the determination of prices of other agricultural commodities.

The possible liberalisation of international trade through the latest round of GATT negotiations also having a significant influence on agricultural trade policy in South Africa. The Government has already accepted the policy of tariffication whereby quantitative controls are to be replaced by tariffs. This is in line with GATT and will result in less protection to domestically produced products. This will therefore also enhance the trend towards more market related prices. The liberalisation of international trade through the GATT could also have a positive effect on the export earnings of South Africa's major agricultural export industries.

In view of the trend of market liberalisation in commercial agriculture this section of the paper will address some issues on food pricing policy. To ensure clarity it will be necessary to distinguish between the commercial and emerging farming sectors. The food price dilemma, which is at the root of the problem of formulating a future agricultural pricing policy, is discussed first.

3.4.2 The food price dilemma

Food prices play a dual role in the South African economy when considering the dual nature of agricultural production and the skew distribution of income and wealth throughout the economy: they act as incentives to agricultural producers and as major determinants of the real income of consumers. Higher prices may be necessary, at least in the short run, to induce increased food production especially in the developing areas, yet this imposes a heavy cost on low-income consumers. Timmer et al (1983) termed this "the food price dilemma". Food prices thus play a central role in the hunger or food equation in the developing areas.

Two empirical issues are critical in dealing with this dilemma (Weber et al., 1988). First, who are the net producers and consumers of food? A policy to raise the relative price of food, benefits net sellers of food and hurts net purchasers, at least in the short run. A second key empirical question regarding the food price dilemma is the magnitude of supply response to higher food prices. If the supply elasticities for food staples are relatively high, higher food prices will not only increase the income of subsistence farmers substantially, but will also increase the supply of food. Both the demand and the supply side of the food equation are thus influenced positively. Although there is evidence to the contrary in some Sub-Saharan countries (Scandizzo & Bruce, 1980), the

Zimbabwean case is often used to illustrate a relatively elastic supply of maize (Eicher, 1986; Van Rooyen *et al*, 1987a).

Producers and consumers of food

Recent empirical evidence in South Africa questions the assumptions that the majority of rural Africans are net sellers of food and that access to land is relatively egalitarian (Fenyés *et al*, 1988). The dominance of the commercial white agricultural production sector of South Africa (Van Rooyen *et al*, 1987a) implies that the food price dilemma has a different meaning in this region. In practice, the debate is not about whether to raise maize or other food prices in the developing areas of South Africa; higher food prices are often a given because of what happens in the developed sector of South Africa. Thus agricultural and maize policy in South Africa frequently does not take realities in developing areas into account (Van Zyl, 1989). Separate marketing acts for individual developing areas are sometimes the reasons for not doing so.

However, due to the interrelationships of maize markets in South Africa, what happens in the developed sector has a profound effect on maize production and marketing in the developing areas. This is illustrated adequately by maize prices: higher maize prices to help mainly white commercial farmers also influence the mainly subsistence small black farmers in the developing areas of South Africa. As has been shown by Weber *et al* (1988), the influence depends on who the producers and consumers of food are and on the supply response of small farmers.

Table 4 shows the market participation profile of rural households for selected products in some of the homelands. Although the data cover only some of the homelands in South Africa, indications are that the situation is confirmed in other areas of Bophuthatswana (Stacey, 1989) and Lebowa (Vink & Van Zyl, 1989) and for other regions (Graaff, 1986; Fenyés *et al*, 1988). This clearly illustrates that production is highly concentrated and skewly distributed. A high percentage of rural households are net consumers of especially staples even though many of them are engaged in food-crop agriculture. Sales are also highly concentrated with a small minority of households accounting for more than 80 percent of the sector's sales.

The data show that the food price dilemma is also relevant in the subsistence areas of South Africa. In this regard the situation differs little from what is experienced in the rest of Sub-Saharan Africa. This suggests that policy-makers in South Africa need to pay more attention to non-price as well as price constraints to increase non-farm income, particularly among food-deficit rural households.

Supply response

Reliable econometric evidence on shorter-term supply response for staples is not available for the developing areas of South Africa. A recent simulation model of labour, land, food and capital flows between households in rural KwaZulu by Lyne & Ortmann (1989) does, however, shed some light on the problem of supply response. A relative increase of 10 percent in the sugar-cane price was estimated to increase income per household by 6,2 percent. However, only sugar-cane growers (high potential region) would benefit from such a measure. Subsidisation of farm inputs, on the other

Table 4: Market participation profile for rural households in South Africa

Crop	Market involvement			Percent of total production marketed	Sales concentration		
	indicator				indicator		
	Net buyers	No net sales or purchases	Net sellers	Percent of total market sales			
				50%	70%	80%	
(% of households)			(%)	(% of households)			
KaNgwane(N=394)a							
Maize	68.7	7.4	23.9	62	2.8	7.4	11.2
Ground nuts	81.7	4.6	13.7	52	3.0	6.1	8.6
Dry beans	96,1	0,3	3,6	-	0,1	1,3	1,5
Yuco bean	95,9	0,0	4,1	66	1,0	1,8	2,5
KwaZulu(N = 193)b							
Maize	95.2	0.1	4.7	49	0.5	1.3	2.4
Beans	84.0	6.2	9.8	54	3.0	6.0	9.2
Potatoes	93.6	3.3	3.1	40	1.6	2.6	3.6
Venda(N=54)c							
Maize	51.7	48.3	0	*	*	*	*
Lebowa (N =66) c							
Maize	72.0	28.0	0	*	*	*	*
KaNgwane(N = 176)d							
Maize	33.7	32.0	34.3	60	60.6	62.6	63.9
Potatoes	83.5	10.3	6.2	78	15.3	15.8	15.9

Sources: (a) - Coetzee (1988); (b) - calculated from data gathered by D.A. Stewart and M.C. Lyne (1989); (c) - Dankwa (1992); (d) - Kirsten and Sartorius von Bach (1992); * Not available

hand, would benefit farmers in all regions. This is consistent with the household economic theory (Low, 1986). Although developed from a limited data base, Lyne & Ortmann's (1989) model does behave according to expectations. This model shows that a policy package is needed to increase food production and income, especially with respect to staples. In addition to changes in price, input subsidies and increasing employment play an important part in food self-sufficiency. The message is the same as that emerging from Zimbabwe's maize revolution, namely identifying and focusing on the prime movers as a policy package (Rohrbach, 1988). This is adequately illustrated by Nieuwoudt's (1988) study of farm household economics and increased earnings from agriculture in KwaZulu. According to Nieuwoudt (1988), an increase in price of staple foods will have a negative income effect on deficit producers. The ordinary total demand elasticities for food deficit and surplus producers are estimated as -0,53 and -0,14 respectively when allowance is made for income effects. As the majority of producers are deficit farmers, increased prices for staples are expected to reduce consumption significantly. Policies that affect agricultural earnings through resource market interventions such as input subsidies and promoting renting arrangements, are thus superior to product price supports on equity grounds.

3.4.3 Retail prices and the widening of the producer-retail price gap.

An important issue that should be addressed in view of the sharp rise in retail food prices is the increase in marketing margins in the food industry; i.e. the difference between the producer price (farm gate price) and retail prices. This also means a declining producer's share of the consumer's Rand spent on food. Trends in marketing margins can therefore be analyzed by determining the producer's share of consumer value. Table

5 provides data on the producers' share of consumer value for grain, meat, fats and oils, dairy products and eggs vegetables, fruit, sugar and agriculture as a whole.

From Table 5 it is evident that there has been a sharp increase in marketing margins over the last two to three years. This has resulted in higher increases in food prices than in all consumer prices, notwithstanding the relatively lower increase in produce prices of farm products. It is thus relevant to study the composition of the marketing margin, as well as reasons for the rapid increase in marketing margins. Figure 1 gives the composition of the consumer Rand in 1990.

Although a recent study on the reasons for the rapidly increasing marketing margins concludes that there is no reason for alarm (Board on Tariffs and Trade, 1992), concentration in the food chain seems to be a major or contributing problem. It can also be stated that the introduction of VAT on food which was excluded from sales tax in the period 1 October 1991 - 1 April 1992 also contributed towards the widening of producer and retail prices (Groenewald, 1992). Issues that are relevant in this case include whether VAT should be levied on all food products and providing food programmes directed at specific groups, or whether food products should be exempted from VAT. These issues should be thoroughly researched and considered prior to formulating a food price policy.

3.4.4 Concentration in the food industry

The issue of structure and concentration in the food industry is a further aspect that influences the price and therefore the affordability of basic foodstuffs. A number

Table 5: Producers' share of consumer value, 1980-1991 (%)

Year	Total	Grain	Meat	Fats and oils	Dairy and eggs	Vegetables	Fruit	Sugar
1980	53,0	41,6	59,3	39,7	66,2	34,1	35,9	45,0
1981	52,6	40,7	59,1	37,5	56,6	30,5	37,2	41,0
1982	51,3	38,0	55,5	38,0	67,3	30,7	36,8	38,5
1983	49,0	36,1	52,0	36,2	65,3	31,8	34,6	44,5
1984	48,1	33,7	52,7	33,6	64,6	26,6	35,5	38,3
1985	48,8	33,8	54,5	32,3	63,5	29,2	36,8	32,5
1986	47,5	33,1	51,6	33,0	62,3	31,1	36,7	33,2
1987	48,3	31,0	54,7	38,8	61,7	32,7	35,8	27,5
1988	46,4	28,5	51,5	39,4	61,5	31,5	33,0	25,5
1989	46,4	24,7	51,2	35,9	65,5	27,5	35,0	27,9
1990	43,1	25,2	48,3	36,0	56,4	29,4	31,5	28,2
1991	39,4	24,2	46,5	13,2	47,5	26,3	30,9	23,9

Source: Directorate of Agricultural Economic Trends (1992)

of considerations are important in this respect and are subsequently briefly discussed: Concentration varies considerably among different food industries and in the trade of different types of food. In the dry bean industry, for example, the concentration of dry bean sales is such that 15 out of a total of 329 registered traders are responsible for 60 % of the total sales of dry beans in South Africa (Van Zyl and Kirsten, 1992). The same applies to the red meat industry with the three major role players having 84,04 per cent and 94,41 per cent of the market share in the cattle and pig markets respectively (Lubbe, 1991).

Conduct and performance will likewise vary among concentration cadres of different food industries.

Geographical differences are in vogue as well as spreads between urban and rural areas (including the "homelands").

Evidence in at least two industries (red meat and dry beans) shows a possibility of collusion/leadership which renders behaviour more monopolistic than would be suggested by mere concentration ratios. Evidence from the same industries gives the impression that many "others" in fact act as agents for the big ones. Then, vertical integration may cause competition at some levels to be more imagined than real. It would be surprising if such phenomena would occur in some food lines, particularly since many of the large conglomerates have subsidiaries acting in a variety of food products.

Another important aspect is the extent to which regulations by control boards, but also other governmental agencies (in agriculture, trade, industry, etc.) have engendered not only concentration, but monopolistic conduct (Lubbe, 1992).

Areas where concentration may cause widening food margins are wider than those mentioned in the document. These may include, for example, agricultural input industries, packaging, transportation agencies, etc (Groenewald, 1985; Van Zyl and Groenewald, 1988).

The possibilities of conflict of interests should also be considered in this context. How possible is it, for example, for a protected concern to be an agent for producers (with whom its own subsidiary competes), and simultaneously a major buyer (perhaps through a subsidiary competes), and simultaneously

a major buyer (perhaps through a subsidiary)? Such possibilities appear to be real in South Africa, e.g. in the meat industry (Lubbe, 1992). This may influence business behaviour and, eventually, food prices considerably.

In this regard, a thorough analysis of the impact of control boards and their actions (eg restrictive registration, issues of quotas/permits, fixation of margins, etc) is also needed. A considerable Volume of literature already exists concerning some of these aspects (e.g. Van Zyl, 1990).

Government regulation of agriculture has worldwide resulted in distorted commodity markets and trade distortions. Prices have ceased to be at market-clearing levels; artificial surpluses and shortages have been the result. In South Africa for example maize prices have for a number of years exceeded realisations on export markets. The losses thus incurred have partially been covered by increased margins between the local selling and purchase prices of the Maize Board. The effect was a form of cross subsidisation with local buyers effectively subsidising foreign purchasers (Groenewald, 1991).

The stage has been reached in South Africa where the inflationary effects and also some public resistance to market distortions have caused politicians to embark on a policy of deregulation and privatisation. This policy was also applied to agricultural control boards in South Africa e.g. the Government and Wheat Board lifted the control on the bread price during 1991. It was generally expected that this deregulation measure and the working of market forces would result in a drop in the price of bread. However, exactly the opposite occurred and a rise in the price of bread was generally experienced. The rise in the price of bread could be attributed to the excessive power of a number of big companies in the South Africa baking industry. Thus, the relinquishing of the Wheat Board's powers resulted in a rise in prices enforced by the oligopolistic structure of the baking industry.

The Wheat Board's past practice of restrictive registration of bakers probably contributed to the fact that only a few big companies could afford (or were allowed) to enter the industry. This then resulted in the formation of a so-called power base in the baking industry to counteract the Wheat Board's control over the wheat and baking industry. A classic example of Galbraith's "countervailing power". The same applies to the maize, meat and dairy industries.

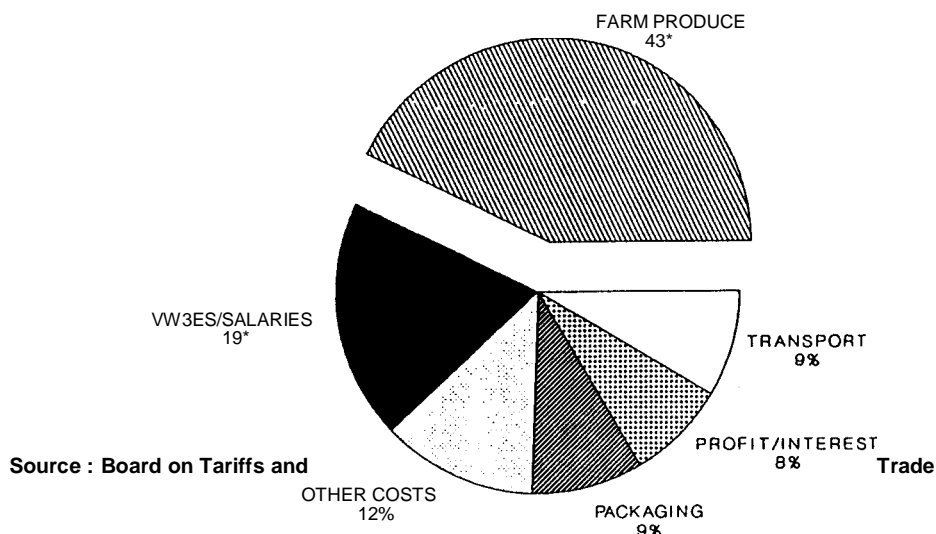


Figure 1: Composition of the consumer Rand spent on food, 1990.

The concentration in the food manufacturing industry could therefore lead to price rises of some commodities and foodstuffs if control boards are deregulated and no effort is made to dissolve the concentration in some of these industries. Previous experience clearly emphasises the fact that a food price policy should favour the *deregulation* and/or privatisation of control boards but that it should be accompanied by a simultaneous *deconcentration* exercise in the manufacturing, distribution and retail industries. This would in some way avoid further price increases and a further increase in the producer-retail price gap. It is therefore necessary to introduce more stricter anti-trust and monopoly legislation.

4. South African food and agricultural policy

One of the major aims of agricultural policy in South Africa is "self-sufficiency in respect of food, fibre and beverages and the supply of raw materials to local industries at reasonable prices" (RSA, 1984). The 1984 White Paper on Agricultural Policy (RSA, 1984 : 8-9) motivates this policy aim as follows: "*For any country, the provision of sufficient food for its people is a vital priority and for this reason it is regarded as one of the primary objectives of agricultural policy. Adequate provision in this basic need of man not only promotes, but is also an essential prerequisite for an acceptable economic, political and social order and for stability.*"

In order to achieve this aim, the South African agricultural bureaucracy was geared in a biased manner to support the white commercial farmer. Farmers were protected from foreign competition, received various forms of subsidies, received producer prices at a pre-

mium to world prices and had access to the latest and most productive mechanical and biological technology through an impressive research and extension network. Through these measures South Africa maintained its position as a surplus agricultural producer and achieved the aim of self-sufficiency in the majority of commodities. Although these favourable circumstances encouraged farmers to produce and thereby contributed positively to the aim of self-sufficiency, it also encouraged some environmentally and economically unsound and unsustainable farming practices. These measures for example made the cultivation of maize so profitable that large stretches of marginal land in South Africa was planted to maize (Brand *et al*, 1991).

It should, however, be said that the policy of food self-sufficiency was apparently justifiable at the time. This policy was followed by many countries in the world, especially in the post World War II period. The South African policy was to some extent based on the world experience during the 1960's and 1970's. Surplus agricultural production was also seen as a way to earn foreign exchange in a world plagued by "Malthusian views" of chronic food shortages. This policy was also necessary in order for South Africa not to rely for its basic foodstuffs on an increasingly antagonistic and hostile world. With the threat of sanctions becoming a reality in the 1970s and 1980s the policy of food self-sufficiency fitted well into the total strategy to build the apartheid based "fortress of South Africa". The apparent initial success of the policy, from the beneficiaries' viewpoint, also strengthened the government's hand in telling the world : "Do your damnedest!".

The policy of self-sufficiency benefitted producers considerably at the expense of consumers. The strong agricultural lobby at that time, through parliamentary representation and indirect interest in agriculture, ensured that agriculture for some time received beneficial treatment. It can therefore be said that many producers benefitted largely from the agricultural policy of the past four decades. The policy however was at the cost of the consumers and also a total welfare loss to the country as a whole (Van Zyl, 1989).

Because the policy encouraged unsound farming practices (Brand *et al.*, 1991), it can be argued that the policy of self-sufficiency contributed to the present detrimental position of white commercial agriculture. Apart from the problems faced by producers, the policy was also to the detriment of the consumers. Food prices kept on rising and despite the exports of surpluses more than 2 million people are still hungry in South Africa every day. It can therefore be concluded that the policy of food self-sufficiency served its purpose and should be replaced by a policy that to a greater extent addresses the needs of the consumers and the needy. Such a policy change need not be radical and should not overlook the basic and very important role of agriculture in the economic growth of the country. A new policy should in a very balanced way serve the needs of the consumer as well as the producer, but should specifically address the problems and the needs of the food insecure.

Finally, it should be said that some change in policy direction has been noted. The more market-oriented approach of the various marketing boards as well as the current investigation by the Kassier Committee into the Marketing Act and the various marketing schemes are clear examples of this change in approach. Especially since 1987 agricultural policy in South Africa was characterised by a movement towards freer markets, starting with the maize pricing system. The move away from self-sufficiency towards a policy of food security has also been confirmed by the Minister of Agriculture, Dr Kraai van Niekerk, and other office bearers on various occasions during the past two years, e.g. at the 1991 AGROCON. Several policy papers also bear witness to this (Blignaut, 1992). However, this change in policy still has to be implemented more purposefully.

5. Future policy options

5.1 Introduction

In order to design policies and to review options on how to deal with the problems of the food insecure, it is necessary to once again look at who the food-insecure are. Food-insecure households can be members of different socio-economic and demographic groups in different areas. Nevertheless, poverty remains one common characteristic. According to Von Braun *et al.* (1992), other socio-demographic characteristics are: food-insecure households tend to be larger with a higher number of dependents; food insecurity is higher among the landless and quasi-landless households; women's income has an important influence on the food security situation; and food-insecure people spend a large share of their income on staple food consumption or allocate a large share of their resources to subsistence food production.

The food-insecure in South Africa stems from unemployment, inequitable distribution of access to resources, inputs and markets in agriculture, drought, low wage income, large number of dependents, etc.

5.2 Policies and programmes for improving household food security

A wide range of alternative policies can be pursued for improving household food security. Characteristics of the food security problem and institutional capabilities need to be considered when making policy choices. A short overview of possible policies to address this problem is herewith provided. This section draws heavily on the work of Von Braun *et al.* (1992).

5.2.1 Macroeconomic policies

Macroeconomic policies and development strategy play important roles in influencing food security. For example, the correct macroeconomic policies can promote economic growth which could lead to a greater general affluence and thus higher private incomes which could mean a better food security situation. Policies for improving food security must therefore go beyond direct food- and agriculture-related policies and encompass non-agricultural and economywide policies that have implications for prices, income, and employment of the poor and thus for food security.

5.2.2 Storage and trade-oriented policies for stabilisation

There is a continued strong feeling among policymakers that storage under public control is essential for food security. Storage for the purpose of price stabilisation is frequently beyond the administrative and financial reach of many low-income countries. Price stabilisation can reduce short term adjustment stress on households.

5.2.3 Production-oriented policies and programmes

Policies and programmes for increasing food production and production of crops for sale can improve food security if they increase or stabilize the real incomes of the food-insecure people. Technological innovation and commercialisation in agriculture help to alleviate poverty and improve food security by stimulating growth, improving employment opportunities, and expanding food supplies. Gains in real income lead to improvement in food consumption and nutritional welfare. Agricultural growth further enhances food security by stimulating, through multiplier effects, non agricultural employment and income. The Farmer Support Programme initiated by the Development Bank of Southern Africa and implemented in various areas in South Africa, can be viewed as an example of a programme to increase agricultural growth.

5.2.4 Other income- and employment-generation policies and programmes

Besides policies and programmes oriented toward agricultural production, other programmes for generation and diversification of employment and income can reduce risks for food-insecure households. These other income-generation programmes differ from programmes oriented toward food production in that they stimulate or stabilize the demand for food supply simultaneously. Two examples of such programmes are labour-intensive public works programmes and credit for consumption stabilisation and self-employment.

5.2.5 Targeted distribution and food subsidies

Food income transfers are widely used means of alleviating food insecurity. In recent years they have been attacked for their potential negative effects on markets

and for their high fiscal costs. Three examples of such programmes are (i) targeted feeding programmes - aimed at persons vulnerable to malnutrition; (ii) food stamps - food mediated income transfer to low-income households; and (iii) food price subsidies, rationing and food aid.

5.2.6 Emergency relief programmes

Relief programmes must be invoked to respond to food emergencies that may result in famines, the harshest form of transitory food insecurity. Effective emergency relief response demands food, capital, and institutional capacity; however, national and local constraints on capital and institutions hinder response.

5.3 Considerations for a food security policy in South Africa

5.3.1 Introduction

Throughout this paper it was argued that food security is more important than food self-sufficiency and should therefore be the major aim in the formulation of a new agricultural policy. To be self-sufficient in food is only one minor element of a food security strategy. Self-sufficiency also diminishes in importance as the opportunity cost of attaining it is high. It seems that the production of food would not be major problem in the near future in South Africa in general. It is therefore clear that more emphasis should be placed on the other aspects of food security on the condition that such policies do not seriously restrict agriculture's production capabilities, employment opportunities and linkages with other sectors.

To address the problem of food security, it is necessary to declare food security as a major national policy objective. The extent of food insecurity should be determined and from this a national food and nutritional strategy could follow to improve food security. Such a strategy should not be limited to the increase of production in the commercial agricultural sector, but should be an integrated approach which addresses all aspects of food security. Specific attention should be given to the promotion of integrated rural development and the implementation of support programmes for small farmers (e.g. FSP). Agricultural price and distribution policies, thus factors involved with marketing, plays an important role in food security and the government should see that such a policy does not have a negative influence on food security in the long term. It is important that any policy on food security should specifically take cognizance of the situation with respect to staple foods. Staples play a very important role in the lives of the majority of people in South Africa and need to be treated as such in policy matters.

5.3.2 Farmer Support Programmes (FSP)

Local and international research proved that small and subsistence farmers and other rural people in the developing areas are the most affected by food insecurity. These people are therefore an important target group for the implementation of programmes to counter food insecurity. Farmer support programmes are viewed as the most effective way in stimulating rural development. It is therefore appropriate to develop a comprehensive farmer support programme to be implemented within the context of a broader and umbrella policy framework for agricultural development.

Production constraints facing small farmers could be addressed through the provision of the following six basic elements: (1) The provision and financing of inputs and other production factors to small farmers; (2) the provision of mechanization services; (3) the implementation of effective marketing channels to satisfy the specific needs of the small farmer; (4) the transfer of technology through training and extension services and appropriate research; (5) training of all parties involved and (6) policy formulation to provide the necessary institutional capacity. The success of such a farmer support programme lies in the implementation of the programme as a total package and part of an integrated approach.

The Development Bank of Southern Africa initiated this concept in South Africa (cf. Van Rooyen *et al*, 1987b) and implemented the programme based on this six principles in a number of areas in South Africa. The initial results of the FSP (cf. Van Zyl *et al*, 1991; Lyne and Ortmann, 1991) indicate that the programme contributed to increased household production and household income. The programme enabled households to produce enough staples which could release resources that could be used to purchase other foodstuffs and/or durables. This in many cases resulted in a better balanced diet of households and a higher quality of life. A further expansion of this type of programme to reach more rural households should be considered as one of the aspects to be considered in a food security policy for South Africa.

5.3.3 International aspects

A policy of food security implies that imports and exports, thus factors related to the world market, will play a more important role. In this respect it is important to ensure a level playing field in order that the South African producer can compete in an equitable manner. With regard to the levelling of the playing field it is true to say that South African producers do not receive the same level of input subsidies, price subsidies, etc. that their European, American and Japanese counter parts receive. For this reason it is argued that it is justified to protect South African agricultural producers against the negative effects of such support on their producer prices and sales locally and on the world market. South Africa is a relatively small player in the agricultural export market and can therefore not influence the world prices of commodities like grains, meat and other livestock products. However, agricultural policies of other countries like the USA have an influence on world prices and it is necessary to determine the effect of such policies.

The Uruguay Round of multilateral trade negotiations, which takes place under the auspices of the General Agreements of Tariffs and Trade (GATT), has as one of its aims the liberalisation of agricultural trade. The negotiations have been in a stalemate since December 1990. However, there is hope that an agreement would be signed early in 1993. Such an agreement will ensure that all trade distorting measures, i.e. export subsidies, domestic support levels, tariffs and quantitative import control, be scaled down or phased out. South Africa's agricultural industry will also be affected by such an agreement and some of these control measures will probably have to be adjusted (Van der Merwe & Kirsten, 1992).

The effect of multilateral liberalisation of agricultural trade will, according to Roningen and Dixit (1989) lead to an average increase of 22% in world commodity prices. Prices of staples will increase considerably more. Against this background it is often argued that it is

justified to support and protect the South African farmer against the distortions due to the agricultural support received by farmers in other countries. In this respect the inflation South Africa experiences relative to the major staple food exporters like the US also is important. Inflation causes imports of these staples to become increasingly expensive and less competitive relative to South Africa's own production. Thus, when considering a policy for food security it would be necessary to take stock of the world market for agricultural commodities.

5.3.4 Food price policy

It is important to emphasise that any pricing policy should enhance food security. This implicates that pricing policy should consider the supply, demand, distribution and international trade of each product. Income and the distribution thereof, as well as commodity prices, are also important factors to consider.

South African commercial agricultural production, and thus supply, is said to be price inelastic in the short term (0,38) and elastic in the long term (1,34). Supply is influenced by both product and input prices (Nieuwoudt, 1988). The elasticity of substitution decreased between the periods 1960-1972 and 1973-1985. This will logically result in a decrease in the price elasticity of supply (Van Zyl and Groenewald, 1988). Agricultural production thus became less sensitive to price signals which increases the vulnerability of agricultural production with respect to market changes, especially in periods of increasing turbulence and insecurity in product markets.

The formulation of a future food pricing policy in South Africa should involve a comprehensive analysis on food prices in South Africa. Such an analysis should at least consider the dualistic nature, both of agricultural production and food consumption in South Africa. For example, how has regulation affected food business in the townships and "homelands"? How have certain phytosanitary regulations affected costs of food to lower income consumers? How have for example regulations regarding abattoirs (both control and phytosanitary) affected costs? What is the role of control boards? Are control boards still desirable and if yes, in what form? Did efforts to equate discriminate against the poor? Thus what were the benefits, and how did these compare to costs in terms of food security for the destitute? The analysis should also consider the growing concentration in the food manufacturing industry and the effect thereof on food prices.

Such an analysis should also take into account protection of agricultural input industries which increases the cost of production and renders agricultural production less attractive and profitable (Van Zyl & Groenewald, 1988). The results from such an analysis would be of considerable value in the process of formulating a food pricing policy which will take note of the food price dilemma and which will be conducive to employment, small farmer development, lower consumer price inflation and general economic growth.

5.3.5 Restructuring of agriculture

Food insecurity is higher among the landless and quasi-landless households (Von Braun *et al*, 1992). This is also typical of the situation in South Africa. At present agricultural production in commercial agriculture and developing farming is faced with the challenge of restructuring, both from an economic efficiency and economic sustainability point of view. Ecologically and

politically it is also desirable. It can also be argued that restructuring is necessary to improve the situation of the food security situation of the rural poor.

It is generally accepted that the political reform process will in all likelihood introduce the granting of equal rights to all South African citizens. The provision of equal rights alone will however not lead to an equitable, sustainable and efficient agricultural system. However, simple ensuring an equal opportunity is insufficient, when the ability of many to compete has been constrained by discrimination. The argument is therefore that efficient resource allocation in agriculture can only occur if all prospective participants have fair access to resource, inputs and product markets and to the political market. This in turn requires entitlement and empowerment. This is to say that entitlement through *inter alia* through the scrapping of the 1913 and 1936 Land Acts will have to be supplemented by specific measures aimed at empowering previously disadvantaged farmers to be able to put these rights to use. Such a programme of entitlement and empowerment can be termed an affirmative action approach (Brand *et al*, 1991)

Such a programme of affirmative action should include (Brand *et al*, 1991): (1) a non-discriminatory policy by the state towards representation by commercial, part-time, tenant, emerging and other farmer lobby groups; (2) more equal distribution of physical infrastructure for agriculture; (3) the promotion of special arrangement aimed at facilitating access to land for previously disadvantaged groups; (4) innovative strategies which account for factors such as rural savings mobilization, reducing the transaction costs inherent in rural financial markets, methods of credit extension, group credit schemes and interest rate policy; (5) removing the bias in agricultural extension, research and farmer training (6) marketing and production rights. An affirmative action programme will ensure more opportunities for black small farmers.

A program of affirmative action in South African agriculture could also entail state purchase of commercial land and the settlement of small farmers. This could result in improved food security at household level but could also lead to a reduction in total production which could increase the risk for shortages at national level due to climatic oscillations. It is therefore important to implement an affirmative action programme with great care as it could have detrimental effects on national food security. As imports might become more and more expensive it is important to find a fine balance between imports and the implementation of such a programme which could involve a reduction of the national crop.

The production of staples at household and at national level is a very important aspect of food security in South Africa. Any restructuring of agriculture involving the staple foodstuffs should be handled with great care. The Government in a restructured agriculture should play an increasing important role in the storage of staples. Also important in this respect is the optimum level of carry-over stocks of maize. It can be argued that the level of carry-over stocks of white maize particular should be increased to make provision

Another aspect which need to be considered is a policy of differential prices with small producers receiving higher prices than the larger producers. Agricultural restructuring should be implemented in such away that agriculture could contribute to economic growth. More

emphasis should be placed on labour intensive practices to ensure that agriculture again plays the role of employment creator. It is essential that production techniques and technology in agriculture be adapted to the physical social and economic realities of Southern Africa. Through this and by means of increased domestic demand for agricultural goods and for goods from low-capital intensity processes an agricultural and employment-based strategy of economic growth can be established (Van Zyl and Vink, 1988). This will increase income and provide jobs to the unemployed which will impact positively on the food security situation in especially rural areas.

5.4 Summary

There is a need in South Africa for a comprehensive food policy in order to address the problem of food security. Agricultural policy is only one but very important part of such a food policy. Food security can not be achieved with agricultural policy measures alone, but will depend on the coordination between: (i) production of different commodities; (ii) commercial and subsistence farming; and (iii) other policy aspects, creation of employment opportunities and the expenditure of development funds. The efficiency of any food policy will be determined by the extent in which the comparative advantage of regions, products and farming systems are incorporated in the policy making process. The movement to a freer market is therefore necessary, especially with respect to staples which are of vital importance to the large majority of South Africans.

In this respect policies to enhance household food security in South Africa boil down to a balancing act between different issues: (i) supply: imports versus own production, storage and inventories, etc.; (ii) demand: household income and distribution thereof, and commodity prices, especially for staples, etc; (iii) distribution: marketing margins, regional availability, concentration, etc.; and (iv) specific measures to aid the needy: food programmes, subsidies, etc. These issues have to be addressed simultaneously in order to achieve success.

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