# THE INFLUENCE OF LAND REFORM ON FOOD SECURITY AND FOOD SELF-SUFFICIENCY IN SOUTH AFRICA

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## INTRODUCTION

The basic premise of this paper is that the majority of South Africans, especially in the rural areas, are food insecure in spite of high levels of national food self-sufficiency. In this context, national food self-sufficiency has little policy relevance. Appropriate policy should rather address the real and most pressing problem in rural South Africa, namely that of crushing poverty and resultant food insecurity. Land reform is one important and powerful tool in alleviating these problems, while at the same time addressing some of the inequities brought about by the racial policies of the past. The argument thus is that land reform, if done correctly, will increase food security in South Africa. In this respect the paper does nor argue the case of land reform from an ethical or efficiency point of view (although a strong case for land reform can be made based on either of these), but from a food security (or poverty alleviation) point of view as dictated by the topic. With this in mind, the paper is about food-security and food self-sufficiency, and the effects of land reform there-on.

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 implication that both an adequate supply of food and access of the population to that supply, usually through generating effective demand via income growth or transfers, are important.

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. In this respect all factors that impact on either supply or demand for food, be it at the national, local or household levels, are important when discussing food security. South Africa, with its dualistic agricultural sector (Louw and Van Zyl, 1991), is particularly vulnerable in this respect.

Although increasing food production, and therefore a policy of food self-sufficiency, will not automatically ensure that people are food secure and have enough to eat, the South African Government for many years pursued an agricultural policy which had food self-sufficiency as a major objective. Although this objective was to a large extent realised, many people in South Africa are still food insecure (Van Zyl and Kirsten, 1992).

With the above as background, this paper discusses food security in South Africa: the dimensions of the food security problem is analyzed first in terms of the national supply of and de-

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mand for food, and the number of people living under circumstances of food insecurity. This is followed by an analyses of the living conditions of rural households in South Africa which tend to be the most vulnerable and food insecure. In this regard specific attention is payed to improving the food security position of these rural households (especially resource-poor farmers) through increasing access to land and the productivity of staple food and cash crop production.

## DIMENSIONS OF THE FOOD SECURITY PROBLEM IN SOUTH AFRICA

### Introduction

Food security is becoming an increasingly important concept in South Africa, specially in the light of the periodical droughts experienced on the sub-continent and the greater emphasis being put on the plight of the poor by the new democratically elected government. 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 a fairly 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.

### The supply of and demand for agricultural products

### 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.

### 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 former "homelands", it is also true that high potential arable land is also limited and mostly in the hands of white commercial farmers (Louw, 1990)[2].

[2]The use of the terms "white", "black" and "homelands" is unfortunate, but should be seen within a particular political context. A discussion and analysis of food security in South Africa necessitates reference to race, colour and gender in light of the legacy of apartheid.

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 former independent and self-governing "homelands" 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 previously white-owned 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.

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).

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 (Van Zyl *et al*, 1987).

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 and Van Zyl, 1991).

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 (Piesse *et al*, 1994). 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 (Kirsten, 1994). This should act as an incentive to change the traditional land tenure system in the developing areas.

## 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. 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).

Table 1 provides an analysis of the production and consumption of the most important agricultural commodities produced in South Africa during the period 1985 to 1993 in order to establish what the situation is regarding total production and consumption, surpluses available for export and the degree of self-sufficiency.

Table 1 shows that, in spite of the periodic droughts, 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. In horticultural production, particularly fruit, South Africa is not only self-sufficient, but to a large

degree dependent 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 1993 to meet domestic requirements. These shortages were supplemented by imports from, e.g. 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 production in South Africa was roughly ten times more than that of food imports (from 1985 to 1993), while the value of food exports in the corresponding period amounted to about twice that of food imports.

## 4. The future

In recent years sufficient quantities of wheat and maize have been produced (on average and despite several severe droughts). Citrus fruit, deciduous and subtropical fruit and sugar 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

**Table 1: Average production and consumption of selected agricultural commodities in South Africa, 1985 – 1993**

| Commodity | Imports | Exports | Production | Consumption | | SSI*** |
|---|---|---|---|---|---|---|
| | | | | Total* | Human** | |
| | (1 000 ton) | | | | | |
| Wheat | 368 | 370 | 2 242 | 2 400 | 1 865 | 100,4 |
| Maize (white & yellow) | 515 | 2 106 | 8 019 | 7 012 | 2 839 | 114,4 |
| Potatoes | 4 | 11 | 1 161 | 1 142 | 942 | 101,7 |
| Vegetables | 5 | 27 | 1 776 | 1 755 | 1 580 | 101,2 |
| Sugar | 41 | 892 | 1 956 | 1 107 | 1 174 | 176,7 |
| Beef | 72 | 23 | 618 | 666 | 660 | 92,8 |
| Mutton, goat's meat & lamb | 17 | 0 | 176 | 193 | 191 | 91,2 |
| Pork | 2 | 2 | 117 | 117 | 116 | 100,0 |
| Chicken | 7 | 2 | 656 | 661 | 654 | 99,2 |
| Eggs | 0 | 3 | 199 | 196 | 186 | 101,5 |
| Deciduous & subtropical fruit | 0 | 511 | 1 484 | 974 | 876 | 152,3 |
| Fresh Milk | 0 | 0 | 2 435 | 2 435 | 1 118 | 100,0 |
| Dairy products | 35 | 58 | 2 344 | 2 321 | 2 321 | 101,0 |
| Sunflower seed oil | 54 | 1 | 121 | 175 | 159 | 69,1 |
| Citrus fruits (fresh & processed) | 0 | 435 | 802 | 369 | 366 | 217,3 |

* 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 × 100

*Source:* Adapted from the annual food balance sheets of the Directorate of Agricultural Economic Trends of the Department of Agriculture

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 and 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. The democratisation of the South African society and the removal of sanctions have also cleared the way for greater regional cooperation and trade. There are several opportunities for increased trade in food commodities in this respect (Van Rooyen *et al*, 1994).

## The number of people living under circumstances of food insecurity

Apartheid policies over the past few decades have resulted in a crisis in the political, economic and social domains of the South African society. The poverty and inequality problem is manifested in the enormous difference between black and white in terms of political power, economic affluence and social access. This is also reflected in the racial bias in spending on education, health, welfare, infrastructure and water supplies. There are enormous differences between formal urban space, the informally built urban periphery and the true rural areas (Lund, 1993: 2). South Africa's economic crisis is characterised by economic stagnation, declining investment, falling real per capita incomes, growing unemployment and extremely large income disparities. This is reflected in a gross domestic product (GDP) growth rate, that has been declining for the past thirty years. The economy has been in a deepening recession since 1989, with GDP growth at -0,6% during 1990 and 1991. The impact of the drought contributed to the negative growth rate during 1992 (World Bank, 1993: 5). This reflects the many sources of instability and vulnerability. Uncertain climate (especially rainfall), the relatively open economy and a large degree of policy and political instability, is exacerbated in the short run by the transition process.

South Africa's population numbers approximately 38 million, consisting of 5 million whites, 3,3 mil-

lion coloured, 1 million asians and 28 million blacks (DBSA, 1993: 3). Of fundamental importance, is the fact that economically disadvantaged communities form the overwhelming majority of people.

During the past two years the absolute level of formal employment has dropped by 266 000, while 774 000 additional people have entered the labour market. As a result, only 4,8 million (41%) of the potential labour force is employed in the formal economy. The position of the remaining seven million is estimated as follows: 3,7 million in the informal sector; 1,2 million in the subsistence agricultural sector, and 2,1 million without any form of employment (DBSA, 1993: 6).

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. Table 2 shows that in 1989 there were around 16,3 million people (43%) in South Africa (15,3 million or 93,5% of them being blacks) with an income lower than the minimum subsistence level (MSL). This minimum household subsistence level varied from R577 to R736 per month for a five member household.

Other sources (DBSA, 1993) estimate that 50% of the population (19 million people) live below the poverty line. According to Simkins (1991) there is substantial poverty among rural coloureds and all black people: 33% of urban blacks, 54% of homeland urban blacks, 58% of rural coloureds, 72% of rural blacks in "white" areas and 84% of homeland rural blacks live under the poverty line. This implies that 47% of black people live under the poverty line.

If the nutritional needy are selected according to anthropometric rather than income criteria, the estimates according to these norms show that there are 2,3 million people in South Africa 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, while 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 (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

**Table 2: Population in South Africa below the minimum subsistence level according to area, 1989**

| Group / Area | Urban | Rural | Total |
|---|---|---|---|
| Metropolitan areas | 1 692 408 | | 1 692 408 |
| Former self-governing territories | 1 700 586 | 8 464 938 | 10 165 524 |
| Rest of South Africa | 1 141 567 | 3 359 616 | 4 501 183 |
| TOTAL | 4 534 561 | 11 824 554 | 16 359 115 |

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

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 (Van Zyl and Kirsten, 1992).

Several other indicators may be used to further illustrate the extreme level of vulnerability to which a very large proportion of the population is exposed. Life expectancy for whites is 72, while that for blacks is fifty nine. Infant mortality per 1000 is 12 for whites, and averages from 94 to 124 for blacks (ranging from 40 in major urban areas, to 135 in rural areas, to 200 in some homeland areas). This should be compared to an average 76 for all developing countries and 120 for least developed countries. Malnutrition is more widespread than elsewhere in the SADC region, although not as severe. Of the black adult population, 30% are illiterate, with a further 30% functionally illiterate (OXFAM, 1992: 8).

The population's access to safe water and sanitation is a major determinant of health. It is estimated that 55% of the urban population have good water and sanitation provision, 20% have only a minimal water supply and 35% only minimal sanitation. Rough estimates show that only 30 and 40% of the rural population have access to adequate water supplies. Less than 10% have any sanitation provision (DBSA, 1993: 8).

It is also important to emphasise the unique nature of the rural areas in South Africa. Here one can usefully make the distinction between the rural areas of the ten homelands and the rural areas in the rest of South Africa. The differences and areas of commonality between these two rural worlds are discussed in more detail in Section 3.

## FOOD SECURITY OF RURAL HOUSEHOLDS

From Table 2 it follows that a large group of vulnerable households reside in the deep rural areas (mostly the former homelands) of South Africa. This section begins by providing an overview of the conditions prevailing in the rural areas of the former "homelands". Several important coping mechanisms employed by poor people are then examined. The section concludes with a discussion on a number of aspects that should be considered when designing appropriate interventions for the rural poor.

### Overview

Drought is not the major determinant of the level of vulnerability and food insecurity in rural areas. In its broadest context, drought is only one element of an income problem. Drought does, however, exacerbate the income problem (Hobson, 1994). In the short-term it acts as an exogenous shock that decreases income. In the longer term it depletes assets and reduces the capacity and incentive for investment. This translates into decreased levels of employment, income, food, nutrition and health. Two general statements can be made about the rural areas of the South African homelands: first, that there is practically no viable rural economy; and second, that most rural households depend, either directly or indirectly, on the urban areas and State support for their livelihoods.

Homeland agriculture has experienced many interventions over the past decade, with very few examples of success. These interventions have varied from betterment schemes, through large centrally managed State and parastatal projects, through smaller farmer settlement schemes, to the current emphasis on farmer support schemes (Kirsten, 1994). These interventions will not be discussed in any depth here. Of importance is that rural dwellers in the homeland areas are still almost entirely dependent on income from urban sources and welfare. It is recognised that subsistence agriculture plays a vital role in the entitlement package of rural households. It is, however, considered more of an emergency backup than a reliable source of income.

These rural homeland communities share the following demographic and socio-economic features (Bekker and Cross, 1992: 45): (i) fertility rates far higher than those in the urban areas; (ii) significantly low male to female ratios; (iii) average population densities four times higher than rural areas outside of the homelands; (iv) household incomes almost entirely dependent on exported labour, State pensions and salaries of civil servants; and (iv) agriculture makes only a minor contribution to household incomes.

While the rural component of these areas may well show a relative decrease in future, the absolute population numbers are certain to increase (Simkins, 1991). This, together with the years of neglect, inadequate investment and lack of maintenance, has made rural people particularly vulnerable to a drought or other outside induced shock.

It is, within the above rural milieu, necessary to improve understanding of the way in which poor people plan for, and react to, their environment. Interventions should complement the existing coping mechanisms and strategies used by the rural poor. This necessitates a participatory approach and a willingness to learn from the poor.

## Coping strategies

Evidence from Africa and Asia suggests that common patterns can be identified in coping strategies (see Cutler, 1986; Downing, 1988; Longhurst, 1986; Malambo, 1987). The type of coping strategies employed by households not only indicate the household's vulnerability, but also correspond to the different types of donor responses (Hutchinson, 1991). The overriding purpose of coping strategies is to protect the long-term viability of the household. Becoming malnourished may, for example, be a calculated part of the coping strategy if the avoidance of destitution, rather than starvation, is the goal. Coping strategies are in reality a logical extension of everyday survival strategies. The coping strategies employed tend to follow a fairly predictable pattern.

Walker (1989 : 39-52) describes the pattern in the following manner. **First**, strategies are employed to overcome normal seasonal stresses. These include altering cropping and pasture practices, food rationing, temporary migration and the sale of non-essential possessions and assets that are reasonably liquid and represent a store of value. These include personal possessions and small stock. Of importance is that none of these strategies affect the underlying basis of the person's potential future activities. **Second**, strategies are employed that trade short-term gains for long-term losses. These strategies include selling essential income generating assets such as draught animals and agricultural tools, borrowing money from outside parties and selling land. These strategies directly undermine the basis of the person's means of survival. **Third**, people resort to outside charity. This includes forced migration and reliance on food aid. Finally, if all the above mechanisms fail, starvation and death may occur.

## Production activities

The aggregate drought production losses in terms of crops and livestock are often not as large as those of the commercial sector. They do, however, form a vital part of the rural households entitlement or ability to command food. The impact of this loss in terms of survival is therefore crucial. In the words of an old Swahili proverb, "Give a fat man less food and he will grow thin; give a thin man less food and he will die" (Green, 1992 : 21). The severe impact of production losses on rural people is precisely because they also have the lowest income, their vulnerability is further worsened by a rain failure and they have the least assets with which the lesson the impact of income variations.

Crop production forms a vital part of rural entitlements and livelihood. The poorest households, who do not receive income from alternative sources, are almost totally dependent on food production for own consumption. It is, for example, estimated that 25% of households in Venda are normally dependent on food production for own consumption (Jones, 1992 : 6). Livestock is not only held as capital to generate economic growth, but also to satisfy a complex set of socio-cultural needs. Rural households who depend on their livestock for survival are affected in terms of both decreased direct consumption of the produce, as well as the decreased income derived from sales.

Livestock farmers who rely on selling their animals to purchase grain are dealt a double blow. When crops fail and grazing deteriorates, the price of grain rises while that of cattle drops. If livestock is the main source of income, the farmers have no further source of income once they have sold all their animals. The above goes some way in explaining the apparent unwillingness of livestock farmers to sell their animals during times of crisis. The impact of drought on livestock farmers also continues long after the drought has broken. If drought eliminates or delays a generation of animals from entering production, the productivity of the herd will be adversely affected for the entire lifespan of that generation of animals (Blackburn *et al.*, 1992 : 272).

In contrast to most other African countries, the

bulk of rural household income in South Africa does not derive directly from smallholder agriculture. It is often mistakenly assumed that the self provision of food equates to security of food supply. People in these so-called rural areas cannot support themselves by subsistence farming alone. Research shows that a high percentage of rural households are in fact net consumers of food, even though many of them are engaged in food-crop agriculture. Sales of food are also highly skewed with a small minority of households accounting for more than 80% of the sales (Van Zyl and Coetzee, 1990: 112).

### Remittances, pensions, salaries and wages

Remittances, pensions, salaries and wages are generally the dominant sources of livelihood in rural areas. While pensions are claimed by individuals, they are largely consumed as a household in the three-generational families in which most rural African pensioners live (Lund, 1993 : 7). The pension pays for the household food and other consumable items, for education and health expenditures and so forth. The reliability of pensions and the associated access to sources of credit that this brings, further emphasises its importance.

### Nutrition, health and water

While millions of South Africans face hunger, no clear indication of the exact numbers or, more importantly, their location exists. This is largely due to the lack of a systematic system of evaluation to measure hunger and poverty through, for example, regular child nutrition surveys.

Apart from nutrition, direct drought related health problems include diseases such as diarrhoea, that are caused by lack of cleanliness, as well as more serious diseases such as typhoid and cholera, which are transmitted in the absence of safe water. Health standards deteriorate sharply in areas where people are hungry and have inadequate water supplies. Severe shortages of potable water are a major problem for rural communities. This is especially so for communities who rely on borehole sources, shallow wells, springs and rivers.

### Population, women and children

Rapid population growth exacerbates the vulnerability of poor people. It is now recognised that the increase in population growth rate will only be slowed through factors such as falling infant mortality, better education, improved food security and old age security. The burden of coping with food security rests most heavily on women. A larger proportion of food insecure adults are women, since most large single adult households are female-headed and also because women earn less than men. Women also have a special responsibility for food, water and fuel. In relation to food alone, it has been estimated that woman in Africa account for 70% of all time spent on food production, 100% of time on food processing, 50% on food storage and animal husbandry, 60% on marketing, 90% on brewing beer, 90% on securing water and 80% on obtaining fuel (Clones, 1991: 5). Children are the most vulnerable of groups, as they are less able to survive protracted hunger without permanent physical or mental damage.

## POLICIES TO IMPROVE FOOD SECURITY OF RURAL HOUSEHOLDS: THE NEED FOR LAND REFORM

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. Maxwell (1992) argues that the most food-insecure are concentrated among the landless, female headed households, those in marginal areas and the urban poor.

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. Von Braun *et al* (1992) provide an overview of possible policies to address this problem. These policies are: (i) macroeconomic policies; (ii) storage and trade-oriented policies for stabilisation; (iii) production-oriented

policies and programmes; (iv) other income and employment-generation policies and programmes; (iv) targeted distribution and food subsidies; and (v) emergency relief programmes. In the South African context, land reform should also be included as a strong and desirable policy.

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.

Accepting that the majority of households in the rural areas are resource-poor people (households) with only limited or often no access to agricultural resources, the first issue is how to use the available resources so as to alleviate the related problems of poverty and resultant food-insecurity. The important point here is that very little can be done to help rural people if they have no land. The issue thus is to give people access to land. However, in itself, **land reform and increased access to land is a necessary but not sufficient condition for alleviating rural poverty and food-insecurity**. A comprehensive set of support services to facilitate the efficient use of the land is also critical in the process. The rest of the discussion will focus on strategies to improve the food security position of existing small farmers and potential beneficiaries of land reform.

Local and international research proved that resource-poor and subsistence farmers and other rural people in the developing areas are the most affected by food insecurity. Small farmers and their families comprise the largest groups among the food insecure (Maxwell, 1992 : 7). These people are therefore an important target group for the implementation of programmes to counter food insecurity. In addressing rural hunger, the starting point, according to Eicher (1992), is examining what can be done to help resource-poor and subsistence farmers who produce much of what they consume. In these households, food availability and food access are fused in practice. Since the majority of the poor in rural Africa (and South Africa) are engaged in producing at least some of their own food, it follows that in most food-deficit African countries, there is justification for improving the productivity of the staple food system of resource-poor farmers. In theory one of the most direct ways of increasing the real incomes of resource-poor farmers is to develop improved technology to increase the productivity of their main enterprise, staple food production. Increased staple food production may increase the per capita availability of home-produced foods, raise cash incomes by generating a marketable surplus of grain, or allow subsistence food needs to be produced with fewer resources, thus freeing land and labour to produce export crops like cotton and coffee. It also allows scarce funds to be used for purchasing other food, which could lead to improved dietary intake.

But improving the productivity of staple foods is not promising in dry areas, where there is a paucity of irrigation, a lack of profitable technology for the staple foods maize, sorghum and millet in order to broaden the food base for resource-poor farmers. More-over even if improved technical packages are available for resource-poor farmers in dry areas, complementary investments are also necessary in farm and village processing, roads, transport and marketing. Resource-poor farmers are also understandably reluctant to try to increase their income through specialization if there is not a reliable market for food (Eicher, 1992). These arguments provide ample support for a farmer support approach as one way in addressing food security of rural households, of which the majority are resource-poor and subsistence farmers.

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*, 1987) and implemented the programme based on these six principles in a number of areas in South Africa. Initial results of the FSP (cf. Van Zyl *et al*, 1991; Lyne and Ortmann, 1991; Kirsten *et al*, 1993) 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.

The basic conclusion from the above is that rural restructuring and specifically land reform is necessary (but not sufficient) to improve the food security situation of the rural poor, which constitutes the majority of the rural population. Even if this negatively affects food production, there is enough "surplus capacity" to ensure that the food needs of the urban population is not placed at risk.

## SOUTH AFRICAN FOOD AND AGRICULTURAL POLICY

One of the major aims of agricultural policy in South Africa up till recently was "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 premium 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 1960s and 1970s. 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 policy of self-sufficiency benefitted producers considerably at the expense of consumers. The strong agricultural lobby at that time, through parliamentarian 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 and several policy papers bear witness to this (Sartorius von Bach *et al*, 1994). However, this change in policy still has to be implemented more purposefully.

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 cannot 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.; (iv) specific measures to aid the needy: food programmes, subsidies, etc.; and (v) a comprehensive land reform process.

This paper also showed how support programmes to farmers could improve the productivity of the staple food system of rural households which would make these households more food secure. Evidence obtained from recent surveys support this notion and also show that agricultural production could play a very important role in alleviating food insecurity.

The basic conclusion from the above is that rural restructuring and specifically land reform is necessary (but not sufficient) to improve the food security situation of the rural poor, which constitutes the majority of the rural population. Even if this negatively affects food production, there is enough "surplus capacity" to ensure that the food needs of the urban population is not placed at risk.

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