

SPECIAL REPORT
FAOWFP CROP AND FOOD SUPPLY ASSESSMENT
MISSION TO SWAZILAND

9 June 2003

Mission Highlights

- Domestic cereal supply in 2003/04 is estimated at 78 100 tonnes, while total national consumption requirement is estimated at 205 800 tonnes. This results in an import requirement of 127 700 tonnes.
- Commercial imports are estimated at 103 400 tonnes and food aid at 24 300 tonnes.
- Domestic maize production is forecast at about 73 000 tonnes, 6 percent above last year's production but 30 percent below the average of the last five years. Area planted to maize was estimated at around 72 000 hectares, 19 percent more than last year and 16 percent above the average of the last five years.
- Cereal prices are expected to continue to decline over the course of the marketing year due to relatively better domestic production and a good maize harvest in South Africa.
- A combination of better though below average domestic cereal production and improved commercial import capacity suggests that there will be no cereal shortages at the national level. However, economic access to food for certain segments of the population remains very difficult.
- Swaziland is undergoing a serious socio-economic crisis due to the continuing spread of HIV/AIDS that is further exacerbating the already severe impact of high unemployment, income inequality and poverty. Substantial and immediate interventions need to be designed and implemented to control this disease.
- The Mission estimates that 132 250 people require food assistance immediately, increasing to 157 750 for 6 months (July-December), and increasing further to 217 000 during the lean period (January-March). The total amount of food aid required will be about 24 000 tonnes. An extremely targeted approach for food aid is required, focused primarily on mitigating the effect of HIV/AIDS, and also including direct support to households unable to access available food and agricultural inputs.

1. OVERVIEW

The Government of Swaziland, anticipating a third consecutive poor harvest, requested FAO and WFP for assistance in reviewing the country's food situation and outlook for the 2003/04 marketing year. Consequently, an FAO/WFP Crop and Food Supply Assessment Mission visited the country from 1 to 10 May 2003. The Mission was accompanied by an observer from the Southern African Development Community (SADC) Regional Early Warning Unit (REWU).

The Mission received full cooperation from the Deputy Prime Minister's Office, Ministry of Agriculture and Cooperatives, Ministry of Economic Planning, the National Disaster Task Force (NDTF), and the National Early Warning Unit. Discussions were also held with relevant UN agencies, donor representatives, NGOs, the National Maize Corporation, Ngwane Milling, Universal Milling Company, and the National Agricultural Marketing Board.



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, ROME



WORLD FOOD PROGRAMME, ROME

The Mission split into two groups and was able to cover all districts and agro-ecological zones of the country. Ministry of Agriculture officials as well as food aid monitors accompanied each group. Interviews were conducted with district extension officers, village chiefs, health officials, farmers, households and traders. Overall, more than 120 interviews were conducted during the course of the mission.

The Mission forecasts 2002/03 domestic maize production at about 73 000 tonnes. According to Government statistics this is 6 percent above last year's production and 30 percent below the average of the last five years. The Mission estimated that the total area planted to maize was 72 504 hectares, 19 percent more than last year and 16 percent above the average of the last five years. Increase in planted area is partly explained by the extremely high farm gate prices of last year. Production in the dry Middleveld, Lowveld, and the Lobombo Plateau was lower compared with Highveld and moist Middleveld where production was relatively better. Other crops which are important sources of food and cash such as cotton, beans, potatoes, cassava, tobacco and cowpeas were also observed in farmers' fields. However, area planted to cotton had sharply declined as one ginnery in the Lowveld area that used to provide inputs and marketing channels for the farmers decided to close due to financial difficulties. Farmers unsure of marketing prospects for their cotton decided to either leave the lands fallow or plant maize.

The estimated domestic cereal supply of 78 100 tonnes for the marketing year 2003/04 (April/March) falls short of the total national consumption requirement of 205 800 tonnes, resulting in an import requirement of 127 700 tonnes. Commercial imports are estimated at 103 400 tonnes and food aid at 24 300 tonnes. Against this requirement, current Government allocations and WFP stocks and pipeline amount to 15 300 tonnes leaving a deficit of 9 000 tonnes to be covered by additional contributions.

Despite the food shortages of 2002-03 marketing season, the National Maize Corporation (NMC), the sole importer of Maize in Swaziland, imported only 22 000 tonnes of maize compared to 48 000 tonnes in the previous year. This led to excessive local purchases by the milling companies (including NMC) that pushed the price of local maize higher than the SAFEX¹ price. Most farmers with surplus production benefited from this situation and even those farmers who did not produce enough sold their maize at high prices. This resulted in some consumption substitution of rice for maize as rice prices were actually lower than maize prices. At the local level, households that generally relied on maize purchases from surrounding areas had difficulty because farmers preferred to sell to various mills.

Early this year the price of cereals, particularly maize, began to decline as prospects for the current crop improved. It is expected that cereal prices will continue to decline over the course of the marketing year as millers exhaust their stocks bought forward at very high prices last year. Furthermore, a good maize harvest in South Africa will also contribute to the decline in prices. The maize SAFEX prices have declined from a high of R 2045/tonne in April 2002 to R 782/tonne in April 2003.

Swaziland is undergoing a serious socio-economic crisis due continuing spread of HIV/AIDS that is further exacerbating the already severe impact of high unemployment, income inequality, and poverty. The spread of HIV/AIDS in Swaziland has continued unabated over the past decade. Infection among the working-age group in 2001 was estimated at 33.4 percent. Swaziland is the third most affected country in the world following Botswana (38.8 percent) and Zimbabwe (33.7 percent). It is likely that the HIV infection may be higher because the disease remains stigmatised and there is no real economic or medical incentive for people to disclose infection.

The Mission estimates that 132 250 people will require food assistance immediately, increasing to 157 750 for 6 months (July-December), and increasing further to 217 000 for 3 months (January-March), the lean period. The total food aid requirement is estimated at about 24 000 tonnes. A highly targeted approach to food aid will be required, focusing primarily on mitigating the effect of HIV/AIDS, and also including direct support to households unable to access available food.

2. ECONOMY

Swaziland is classified as a lower middle-income country with a per capita income of US\$ 1 360 in 2001. However, per capita income of the poorest 40 percent of the population is only US\$ 230, and 66 percent of the population live below the poverty line. The income distribution is skewed, with about 43 percent of the total income received by only 10 percent of the population.

¹ SAFEX = South Africa Futures Exchange

Swaziland's economic performance has deteriorated since the early 1990s. The average annual real GDP growth rate fell from 7.75 percent during the 1980s to 3.75 percent in the 1990s. During the same time period the per capita GDP growth rate fell from 4.75 percent to 1.25 percent. This decline is partly explained by the emergence of South Africa from economic and political isolation that eroded Swaziland's attractiveness for foreign investment.

Swaziland's output is almost entirely derived from agriculture and manufacturing. In 2001, the primary sector (mostly agriculture) accounted for 14 percent of GDP, secondary sector (manufacturing) for 46 percent, and the tertiary sector (government, wholesale and retail services) for 40 percent. The GDP growth rate for fiscal year 2002-03 is estimated at 1.6 percent compared to 1.8 percent in 2001-02. The real GDP growth is forecast to improve to 2.6 percent during fiscal year 2003-04 due to improvements in the agricultural sector including the completion of 6 500 hectares Komati Basin Irrigation Scheme. More rapid growth in South Africa is also expected to improve Swaziland's exports. The textile industry is also expected to expand under the USA Africa Growth and Opportunity Act (AGOA) and inflows of foreign direct investments are expected to increase, largely for the textile industry.

The budget for fiscal year 2003/04 projects a deficit of Emalangeni 439 million compared with E 564 million in 2002-03. Total revenue including grants is estimated at E 3 947 million, and total expenditures at E 4 386 million. Receipts from the Southern African Customs Union (SACU) account for about 47 percent of total revenue, income taxes 22 percent, sales and fuel tax 17 percent and other revenues 14 percent. Capital expenditures including transport and communication, account for 28 percent, general public services 25 percent, housing and community amenities 15 percent, health 6 percent, and agriculture, forestry and fisheries 6 percent, and other 20 percent.

Employment in Swaziland has not been in line with the growth in labour force during the period 1995-2001. It is estimated that while labour force increased by 20 percent, total employment grew by only 7 percent. Unemployment is estimated to have reached 31 percent in 2001 compared to 22 percent in 1995. In 2002, total employment was estimated at 268 000 people—67 percent of the labour force with the remaining 33 percent unemployed. Formal employment comprised of 95 000 jobs—public and private sector employment accounting for 34 000 jobs and 61 000 jobs, respectively. The growth rate for paid employment in 2002 was 1.3 percent compared to -0.8 percent in 2001.

The average inflation rate in 2002 was 11.7 percent compared with 7.5 percent in 2001. Sharp depreciation of the Lilangeni against major world currencies in December 2001, regional food shortages that resulted in extremely high food prices, and global economic and political uncertainty that sharply raised oil prices, all contributed to increased inflation rates in 2002. However, barring any major incidents, the inflation rate is expected to decline to normal levels of 6-7 percent during the current year because of improved food production and availability in the region, strong recovery of the Rand, and the fact that an oil shortage has been avoided.

Swaziland's currency, the Lilangeni - pegged at par with the South African Rand - which had been declining against major world currencies since 1998-1999 began to appreciate after hitting a low of US\$ 1 = E 11.6 in January 2002. Currently the Lilangeni is trading at US\$ 1 = E 7, a 40 percent recovery since the beginning of the year. Increased global demand for gold and platinum from South Africa, considered a safe investment during times of political and economic uncertainty, has significantly contributed to the appreciation of Rand and therefore the Lilangeni. The depreciation of the US dollar against major currencies also made gold cheaper for the investors. A stronger Lilangeni implies cheaper non-rand imports that may improve the balance of payments. However, the Rand appreciation has also resulted in a decline in the country's foreign reserves due to revaluation losses and may also hurt non-rand export earnings in the local currency terms.

Swaziland has an open economy, characterized by sizeable external trade and transfers in relation to its GDP. The ratio of external trade in non-factor goods and services to GDP in 2001 was 161 percent, which is high by international standards and highest in the South African Customs Union (SACU) member countries. During 1998-2001 trade deficit averaged 17 percent of GDP and was financed by income receipts, transfers, and capital inflow. However, a sharp decline in the overall balance in 2001, along with a steady depreciation of the Rand against the dollar, contributed to a decline in the net international reserves from US\$ 329 million in 1998 to US\$ 228 million in 2001. The gross official reserves for fiscal year 2002-03 are estimated at E 2 472 million (4.1 months of goods and services) compared with E 3 242 million (5.7 months of goods and services) in 2001-02.

South Africa is by far the most important trading partner of Swaziland. Almost 80 percent of all imports and 50 percent of all exports are with South Africa. An additional 15 percent of exports are governed by

preferential trade agreements with other industrialized nations such as Lome Convention and the Generalized System of Preferences (GSP) which governs most of its sugar exports, and AGOA under which most clothing is exported. Furthermore, in addition to its membership in SACU, Swaziland is also a member of Common Market for Eastern and Southern Africa (COMESA). However, despite its access to regional markets, Swaziland's regional trade with countries other than South Africa is less than 1 percent of its total trade. The main merchandise exports are sugar and sugar derivatives, consumer goods and pulpwood. Imports mainly include capital and intermediate goods, manufactured goods, machinery and transport equipment, agricultural and farming goods, and energy.

The spread of HIV/AIDS in Swaziland has continued unabated over the past decade. The infection rate among working-age group in 2001 was estimated at 33.4 percent. Swaziland is the third most affected country in the world following Botswana (38.8 percent) and Zimbabwe (33.7 percent). While infections have declined in some countries (Botswana, Namibia and South Africa), infection rates in Swaziland have risen from 4 percent of the adult population in 1992 to the current levels.

Infection rates are particularly high among young adults who form a large proportion of the economically productive population. In addition to its humanitarian and social consequences, HIV/AIDS has severe economic costs, as it constrains output growth, eliminates work skills and knowledge, shrinks the tax base, raises health-related costs, reduces disposable incomes, and increases financial imbalance in the public pension funds.

It is likely that this pandemic could adversely affect particularly labour-intensive industries and sectors in the region. In Swaziland, the emergence of AGOA-based clothing investments and the closing of more capital intensive businesses such as mining operations, agro-processing and manufacturing of consumer durables, have increased the labour intensity of the economy, making it relatively more vulnerable to the pandemic. Demographic studies incorporating the effects of HIV/AIDS suggest that the population and labour force growth rates will decelerate and may even start to shrink later in the decade. A declining workforce can translate into lower output growth. Output growth per capita can also decrease because of declining skill levels.

3. FOOD PRODUCTION IN 2002-03

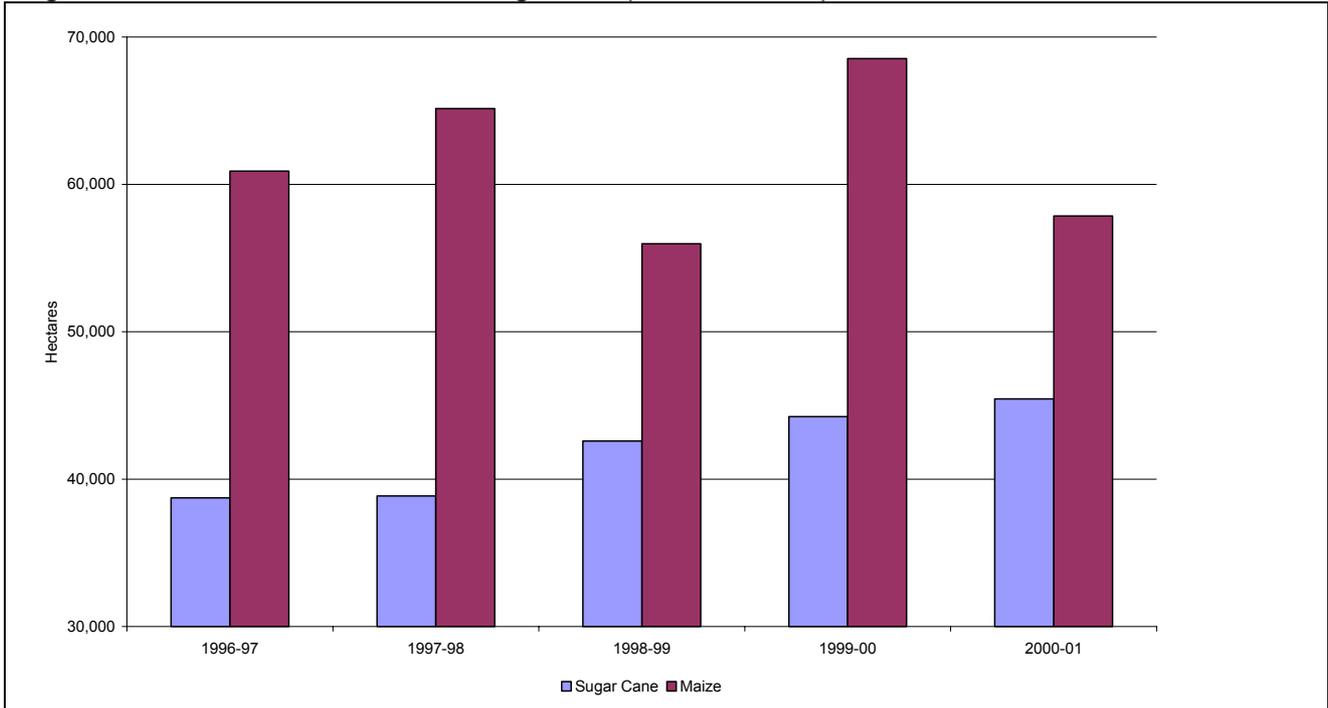
The importance of the agricultural sector to Swaziland's economy is indicated by its contribution to the livelihoods for the majority of the population and provisions of raw materials for the largely agro-based industries. Being a small land-locked country with limited domestic markets, Swaziland relies on exports of agricultural commodities for its economic growth, development and food security.

There are two forms of land tenure, Swazi Nation Land (SNL) which accounts for approximately 60 percent of the total land area and Title Deed Land (TDL) which accounts for the other 40 percent. SNL is held in trust by the king and controlled and allocated by chiefs according to traditional arrangements; it generates about 23 percent of the agricultural contribution to GDP. Because it is dependent on rain-fed cultivation, SNL is highly vulnerable to drought. It produces the national maize crop, and accounts for 80 percent of all cotton growers and 77 percent of the total cattle herd. Cattle on SNL are of mainly social significance and few of them go for commercial slaughter. Only drastic reform of the land tenure system will encourage the transformation of SNL agriculture.

TDL on the other hand is freehold land, which generates about 58 percent of the agricultural contribution to GDP. Large areas are under irrigation and used for commercial production, with company estates and plantations (forestry, sugarcane, citrus and pineapples) and cattle farming. The royal investment fund, Tibiyo Taka Ngwane, has a large shareholding in major companies operating on TDL. Further growth on TDL will result from river basin development schemes. The Komati Basin scheme will provide water for a further 6 000 ha, and 11 500 ha could be irrigated if the Usutu Basin scheme becomes operational.

The Government of Swaziland has continued to encourage sugarcane production on TDL to improve its foreign exchange earnings through exports of sugar based products. Meanwhile, production of maize, the staple crop, is largely relegated to non-irrigated SNL. In fact the land and inputs allocated to sugarcane production have continued to increase, whereas planted area for maize production has been on a decline since 1999 (Figure 1). In normal years this arrangement has worked well and the country has been able to meet its cereal requirements through commercial imports. Given the changes in the weather patterns over the last couple of years that have severely affected grain production on rainfed lands, it may be prudent to allocate some of the irrigated lands to maize production to ensure that the country is food secure.

Figure 1. Area Planted to Maize and Sugarcane (1996/7-2000/01)

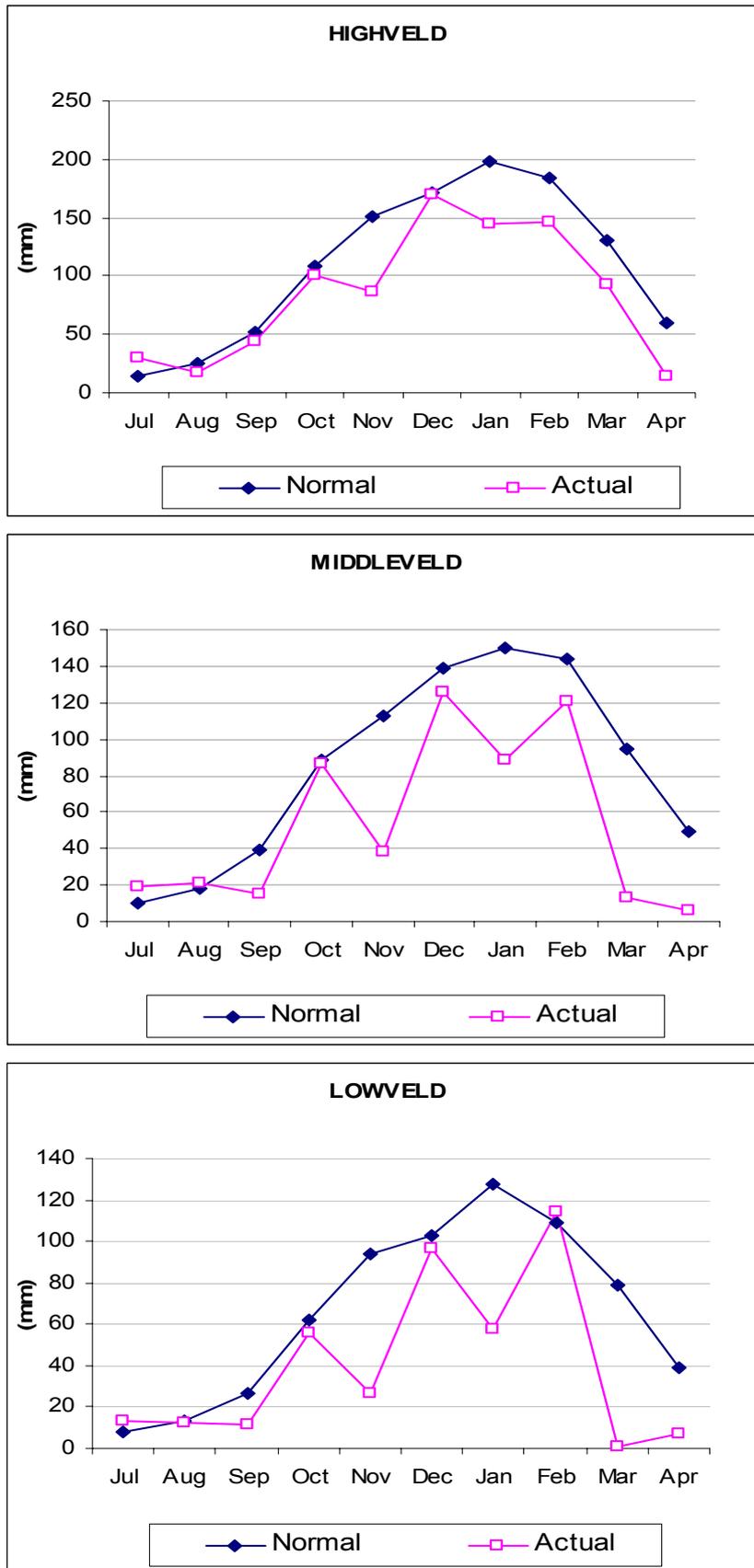


Source: Central Bank of Swaziland Annual Report 2001 and Bureau of Statistics

Agro-meteorological conditions

Following an erratic rainfall season in 2001/02 characterised by prolonged dry spells, Swaziland has experienced another below average season for all agro-ecological zones in 2002-03. Rainfall during November was markedly lower, (between a half and two thirds lower than normal in all zones of the country), which affected the timely planting of crops. There was also a sharp drop in rainfall in January, particularly in the Lowveld and Lubombo Plateau (52 % and 54 % respectively), coupled with a heat wave in the middle of the month. This coincided with the critical flowering stage for later planted maize crops in the Lowveld, Lubombo Plateau and dry Middleveld, with concomitant yield reductions.

Figure 2. Swaziland: Actual vs. Normal Rainfall, by Agro-ecological Zone for the 2002/03 Cropping Season



Supply of agricultural inputs

FAO along with several NGOs (World Vision, Lutheran Development Services, Red Cross and others) provided subsidized maize seed and other inputs for farmers in many areas of the country. NMC and the Chinese project provided credit to farmers to be repaid out of their production.

Fertilizer use for food crop production (excluding commercial farming) ranged between 14 000 tonnes and 17 000 tonnes during the period from 1995/96 to 1998/99, and was 13 500 tonnes in 2001/2002. Fertilizers, which are no longer subsidized, are traded by the private sector and cooperatives through national networks, but farmers are becoming less able to afford it.

Hybrid maize seed use went down from 4 000 tonnes in 1995/96 to 1 183 tonnes in 2000/2001 and 1 153 in 2001/2002. This decline followed a government decision to stop providing free seeds to farmers; seeds are now supplied at market prices by the private sector and cooperatives. In some areas visited by the Mission, up to 70 percent of farmers planted open-pollinated maize varieties and could save their own seed for the following year.

Planted Areas

The Missions' estimates of planted areas of maize for the past growing season are based on data in the Census of Agriculture 2002/03 report of 31st January 2003. The data had been collected by the Extension Service for each agro-ecological region, and were the most reliable at the time of the Mission. The Central Statistical Office (CSO) will provide final estimates during the course of the year. The area planted to maize in each agro-ecological zone is given in Table 1. The Lubombo Plateau estimate appears to be much too high (237 % of the five year average). The total national maize area (excluding TDL land), is estimated at 71 504 hectares, 19 percent higher than last year's mission figure.

Table 1. Total Maize Planted Area (Hectares) in 2002/03 compared to 1997/98-2001/02 Average.

Agro-ecological zones	1997/98	1998/99	1999/00	2000/01	2001/02	5-year average	2002/03	Percent of average
Highveld	21 068	20 025	20 338	20 672	17 620	19 945	17 592	88
Middleveld	25 481	21 241	27 003	19 434	22 905	23 213	23 501	101
Lowveld	14 983	12 096	18 886	14 771	15 820	15 311	23 177	151
Lubombo Plateau	3 617	2 608	2 306	2 974	3 788	3 058	7 234	237
Swaziland	65 149	55 970	68 533	57 851	60 133	61 527	71 504	116

Source: Ministry of Agriculture and Co-operatives; NEWU

The rainfall in October and November was lower than normal in all four agro-ecological zones, making early planting of the maize crop difficult. Only about 30 percent of farmers manage to plough their land during the winter in order to plant early. The better crops in almost all areas were planted early, but as always planting dates varied and the resultant crops were affected to a greater or lesser extent by the dry conditions in January. Poor access to tractors, equipment and purchased inputs in some areas of the Middleveld, the Lubombo Plateau and the Lowveld delayed or restricted planting once again.

The area planted to sorghum has declined to insignificant levels because of labour problems associated with bird scaring, lack of appropriate varieties, lack of interest in the grain for food and a poorly developed market for the crop. Once again the Mission observed the efforts of the Extension Service in promoting cassava, sweet potato and legume production, but the uptake by farmers continues to be slow. It also noted the limited crop diversity in the fields of farmers, particularly in the Lowveld where the demise of the cotton industry has severely affected farmers, causing yet more maize to be planted in a totally unsuitable place. Rice is grown on two irrigation schemes in the country with a total production of about 100 tonnes.

With further irrigation development being planned by the government, the area under maize is also likely to be affected. There is the potential to produce an irrigated maize crop before the sugar cane crop is planted, and this should be part of the irrigation development process, so that maize production in the country is increased. A maize crop can also be included in the cycle, when sugar cane is replanted (Simunye Estate normally replants 1 200 hectares of sugar cane each year). Contrary to last year, at current prices, the gross margin per hectare for maize production is well below that for sugar cane, but that situation may alter when the preferential trade agreements expire. Maplotini Farmers Association near Lavumisa in the Lowveld has 71 farmer members who grow 181 hectares of sugar cane. In February this year they planted 80 hectares of maize under drip irrigation, which will yield 6 to 7 tonnes/ha. Three maize crops a year are possible and they

want to try intercropping with beans. The Mission still feels that there is a plausible case for the Government to grow some 2 to 3 000 hectares of maize on irrigated land to augment the country's reserves by some 10 to 15 000 tonnes.

Yields

The yield forecast for each agro-ecological zone is presented in Table 2. Once the maize production estimates for the year 2001/02 season are released by the CSO, the yield and production figures may need to be revised. The Mission assessed crop yields on randomly selected farms of different sizes and efficiencies in all agro-ecological regions, and their estimates vary somewhat from those made by NEWU. Yields vary with crop management and rainfall even within the same agro-ecological zone. In general, there has been reduced production of maize from west to east across the country, and a trend for lower production in northern parts of agro-ecological zones than in southern.

Table 2. Estimated Area Planted and Production of Maize in 2002/03, by Agro-ecological Zone

Zone	Planted Area (ha)	Yield (t/ha)	Production (tonnes)
Highveld	17 592	2.05	36 063
Middleveld	23 501	0.94	22 091
Lowveld	23 177	0.31	7 185
Lubombo Plateau	7 234	0.52	3 762
Total SNL <u>1/</u>	71 504	0.97	69 101
TDL <u>2/</u>	1 000	3.50	3 500
SWAZILAND	72 504	1.00	72 601

Source: National Early Warning Unit

1/ Swaziland National Land – State Land

2/ Title Deed Land – Commercial farmers' land

The Mission carried out over 100 interviews with farmers, extension workers, district agricultural officers and research personnel during the course of the field trips throughout the country.

Highveld

The mission visited farmers in different areas of this, the best agro-ecological zone for maize production, to accurately assess maize yields, and compare with those of last year. Overall, the rainy season, although below normal, was considered good for maize production, provided the crop was planted early. Generally good crops were seen and several farmers had already harvested. Overall, expected production for this year may be 15 percent higher than in 2001/02.

Middleveld

The mission visited farmers in different parts of this agro-ecological zone, where the maize crop is fully mature and being harvested or is ready for harvesting. There was a big variation in potential maize yield between the moist and the dry Middleveld areas, depending on the severity of the extended dry spell from January. In general, apart from isolated pockets, the moist Middleveld suffered less and yields were better than last year, but in the dry Middleveld yields were reduced. Overall, expected production for this year may be 8 percent lower than 2001/02.

Lowveld

The mission visited many farmers in this, the worst affected of the four agro-ecological zones in the country. The dry conditions have severely affected the maize crop and some 50 percent of farmers will harvest nothing. Maize should not be grown at all in the Lowveld, except under irrigation; instead farmers should be encouraged to farm livestock more commercially and sustainably on the excellent grazing areas available.

Lubombo Plateau

The mission visited a number of farmers in this zone, where the crop is fully mature and harvesting had started. The crop condition was generally poor due to the heat wave in January, although the southern part of the plateau was less affected than the northern.

The Mission came across farmers who had very little harvest and others who had up to five tonnes per hectare, within the same locality. This indicates that husbandry practices (early planting, use of appropriate hybrid seeds, proper use of fertilizer and animal manure, and rotational practices) can make a great difference to the impact of dry conditions and a lower than average total rainfall. There is, however, a noticeable and increasing lack of purchasing power for poorer farmers to purchase the necessary inputs.

Overall Production

In general, maize yields declined compared to the average of the last five years (1997/1998 to 2001/2002). This yield decline was particularly serious in the dry Middleveld, Lowveld and Lubombo Plateau where the December-February dry spell affected the late planted crops at the critical flowering /tasselling stage. The early-planted crops escaped the effects of the dry spell and generally produced good yields.

Based on the mission's investigation and assessments, the national average yield for maize on SNL for 2002/03 is estimated at 0.97 tonnes/ha. Total production at 69 101 tonnes, represents 70 percent of the average for the last five years (Table 3). Maize production is trending downwards, despite price support, mainly due to adverse weather and falling land productivity.

Table 3. Total Maize Production (tonnes) in 2002/03 compared to 1997/98-2001/02 Average.

Agro- ecological Zones	1997/98	1998/99	1999/00	2000/01	2001/02	5 year Average	2002/03	Percent of average
Highveld	44 741	45 486	38 721	33 493	31 404	38 769	36 063	93
Middleveld	50 661	39 939	43 514	28 995	23 921	37 406	22 091	59
Lowveld	24 562	17 358	27 627	16 860	7 223	18 726	7 185	38
Lubombo Plateau	5 240	4 557	2 917	3 187	2 436	3 667	3 762	103
Swaziland	125 204	107 340	112 779	82 535	64 984	98 568	69 101^{1/}	70

Source: Ministry of Agriculture and Co-operatives; NEWU

1/ Does not include 3 500 tonnes of estimated production on TDL

Other crops

Sugar cane is cultivated on 46 500 ha in the country; raw and refined sugar, sugar products and ethanol are now the main agricultural export and an important source of foreign currency. There is continuing development of areas for irrigated sugar cane, which has over the years fetched good export prices, but prices have fallen recently, which may alter the economics and balance of crops. The loss of 15 000 tonnes of Swaziland's share of the Special Preferential Sugar Quota in the EU to least developed countries has worsened the situation.

Cotton, one of the major cash crops, was only planted on approximately 4 000 ha in 2002/03, down from 11 082 ha in 2001/02 (a reduction of 64 percent) and 35 000 ha in 1998/99, because the only ginnery in the Lowveld closed down. It still plays a role in the food security of some households, particularly in the dry Middleveld and Lowveld, but production is on the decline. Prices have improved markedly this season (1st Grade is E 4/kg compared to E 1.9-2/kg last season), but without a ginnery, growers cannot produce.

Grapefruit, orange, soft citrus and lime (1 647 ha) also form an important part of nutrition and are another source of foreign currency. Sorghum, pumpkins, sweet potatoes, beans, peanuts, cowpeas, cassava, bananas, peaches and avocados are also produced, but in limited quantities. Sorghum has real potential for

the drier parts of the country, but requires a national marketing effort because it is not a popular food grain – perhaps farmers can produce sorghum which they can exchange for maize.

The Mission did come across farmers who had small plantings of groundnuts (yields of 900 kg/ha were reported in the one area of the Lowveld), sugar beans, cowpeas, mung and juko beans, pumpkins and yams, most of which were intercropped. Farmers must be encouraged to rotate these crops, (particularly the legumes), on the same land area as their maize and not grown separately. The bean crop was particularly affected this season in a number of areas, because it could not be planted at the optimum time in the middle of January due to the hot dry conditions. Juko beans planted in December were also badly affected by the dry spell in January.

Livestock situation

Livestock production is a major agricultural activity in Swaziland, with small farmers owning about 77 percent of the total cattle population. The number of livestock has been declining in recent years due to contraction of the country's rangelands resulting from the allocation of more land for human settlements. The cattle population which comprises the largest component of the country's livestock industry fell to 505 966 in 2001 from a revised figure of 588 288 in 2000; a drop of 14 percent.

The condition of pastures and livestock in areas other than the Highveld is beginning to deteriorate because of reduced rainfall in the latter stages of the rainy season. As usual, farmers seem reluctant to sell good quality cattle at this end of the dry season unless forced by economic or climatic conditions, and this year particularly in the Lowveld, Lubombo Plateau and dry Middleveld, farmers will have to sell their animals to buy maize for household consumption. Grazing is going to rapidly diminish this year, so farmers would be strongly advised to sell their stock early, when they are still in good condition and the prices are reasonable.

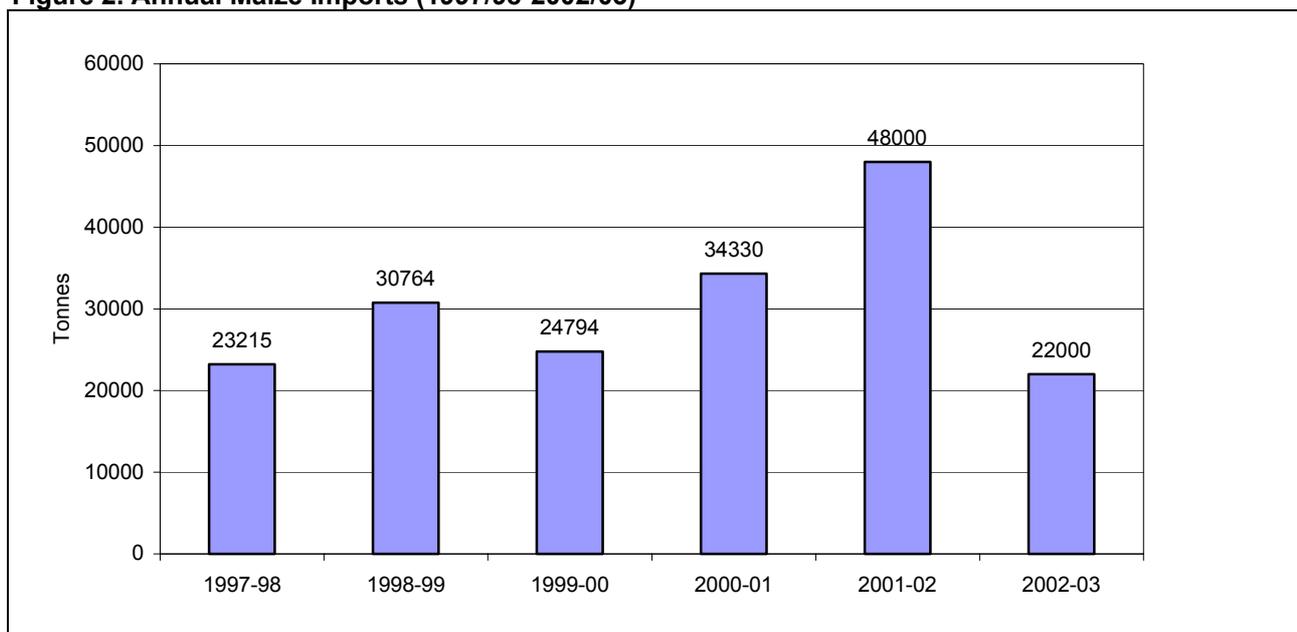
Although Swaziland has a quota to export 3 360 tonnes of beef to the EU, it only manages to export a fraction of this. The outbreak of FMD at the end of 2000, led to a temporary suspension of Swaziland Meat Industries exports to the lucrative European market, for the better part of 2001.

4. FOOD SUPPLY AND DEMAND SITUATION

Prices and access to food

Swaziland is a net importer of maize, wheat, dairy products and other food commodities. In a normal year, roughly 60 percent of the food consumed in the country is imported. For maize, the main staple food, imports averaged about 30 000 tonnes over the last six years (Figure 2). About 10 percent of domestic production is marketed in normal years, mostly through the National Maize Corporation (NMC) and Ngwane Mills. NMC is also the sole importer of maize and is a semi-autonomous non-profit organization. Despite the food shortages of 2002-03 marketing season, NMC only imported 22 000 tonnes of maize. The main reason for the lack of imports was poor financial condition of the NMC and extremely high SAFEX (South Africa Futures Exchange) maize prices.

Figure 2. Annual Maize Imports (1997/98-2002/03)

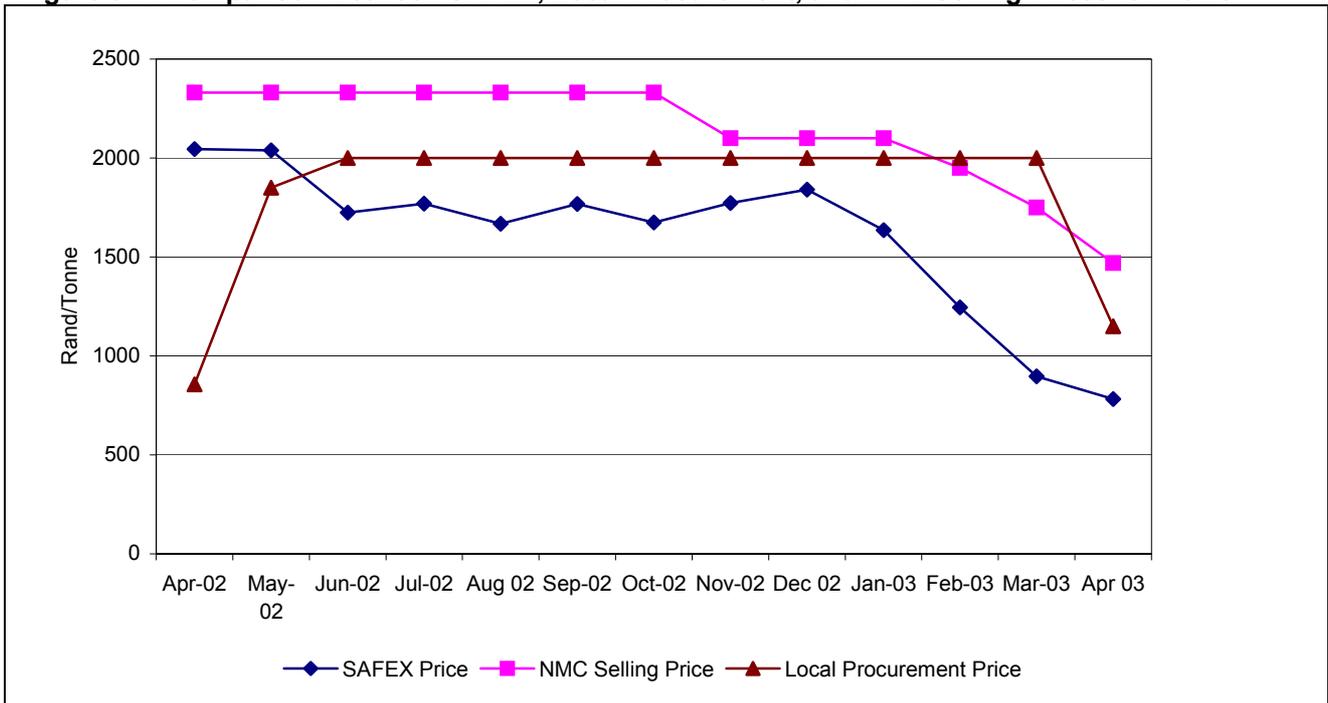


Source: National Maize Corporation

Since NMC is the sole importer of maize, other milling companies like Ngwane Mills were forced to increase their local maize purchases and consequently NMC did the same. This resulted in excessive local purchases that pushed the price of local maize higher than the SAFEX price (Figure 3). This price war also contributed to heavy financial losses for both NMC and Ngwane. Most farmers with surplus production benefited from this episode and even those farmers who did not produce enough sold their maize at the higher prices. This resulted in some consumption substitution of rice for maize and for the first time rice prices were actually lower than maize prices. At the local level, households that generally relied on maize purchases from surrounding areas had difficulty because farmers preferred to sell to various mills because of the high prices.

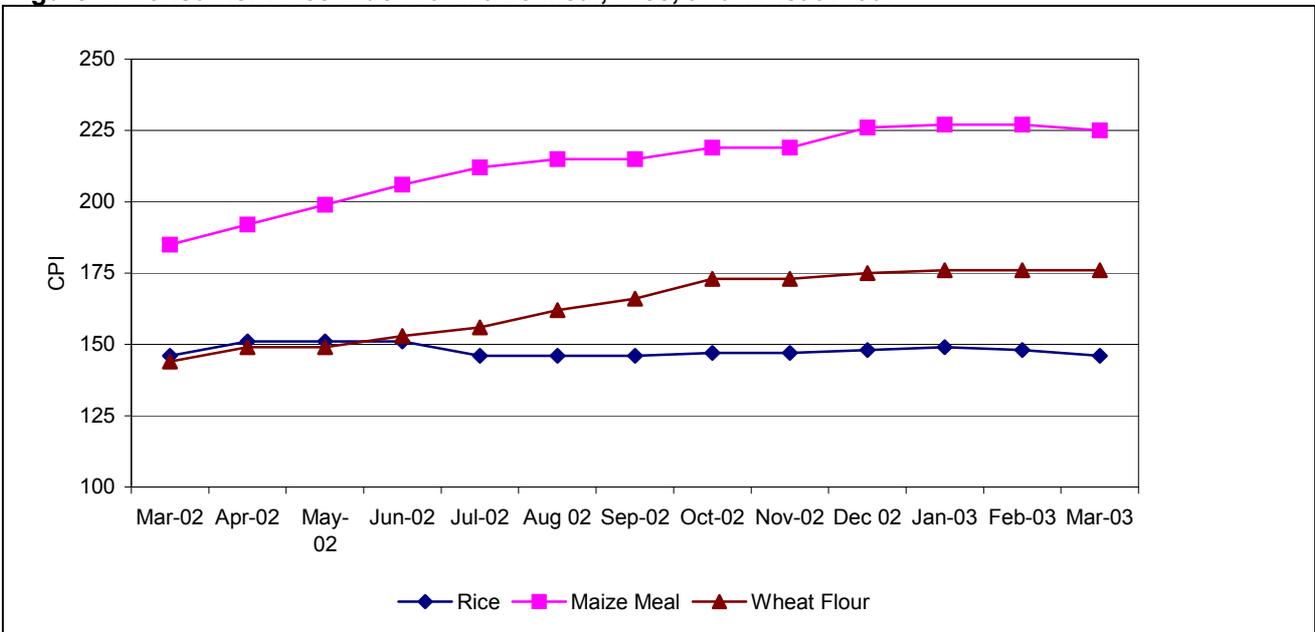
The dual role of NMC as the sole importer as well as a competitor in the domestic market gives it an unfair advantage over its competitors and thus creates market imperfections which distorts producer and consumer incentives. It may be more efficient to liberalise the imports of maize as for other food commodities, while still requiring import permits from the National Agricultural Marketing (NAM) Board. However, the NAM Board itself needs to be restructured to address current problems of under-reporting of imports, issuance of new import permits without accounting for previous activities, and extremely low fines in cases of non-compliance.

Figure 3. A Comparison Between SAFEX, Local Procurement, and MNC Selling Prices for Maize



The Consumer Price Index (CPI) for food commodities for all income groups increased by 17 percent and for cereal products by 20 percent between March 2002 and March 2003. CPI for maize meal, wheat flour, and rice within the cereal products group increased by 22 percent, 23 percent, and one percent respectively. The prices of maize meal rose to as much as E 2 330 per tonne and the wheat price was above E 2 695 per tonne in 2002.

Figure 4. Consumer Price Index for Maize Meal, Rice, and Wheat Flour



Source: Central Statistics Office

During early this year the price of cereals, particularly maize, began to decline as the prospects of relatively better cereal harvest improved. Timely Government initiatives such as the National Disaster Task Force (NTDF) food assistance, assistance from the international community, and better than expected domestic cereal production, all contributed to mitigating the impact of the food shortage last year.

It is expected that cereal prices will continue to decline over the course of the marketing year as the millers exhaust their stocks of cereals bought forward at very high prices last year. Furthermore, improved domestic cereal production as well as a good maize harvest in South Africa will also contribute to the decline in prices. The maize SAFEX prices anticipating an excess supply have declined from a high of R2045/tonne in April 2002 to R782/tonne in April 2003. It is likely that the appreciation of the Rand will contribute to lower demand from other regional countries for South African commodities including cereals as they have become relatively more expensive. Countries that normally import cereals from South Africa may look to international markets elsewhere, which may have now become more competitive. Swaziland and Lesotho are the only regional countries that are not impacted by the appreciation of the Rand as their currencies are pegged at par with it.

Cereal supply/demand balance, 2003/04

The forecast of the cereal supply/demand situation for the marketing year 2003/04 (April/March) in Table 4 below is based on the following assumptions and Mission observations.

- Farmers interviewed by the Mission stated that they had no food stocks due to the poor harvest and over selling last year. Government and millers' opening stock figures were provided by the National Agricultural Marketing Board, National Maize Corporation, Ngwane Mills, and Universal Milling Company. The closing stocks are based on two week food requirement for maize and one month each for rice and wheat.
- The mid-marketing year 2003/04 population is estimated at 1 092 827 and the per capita consumption at 127 kg for maize, 42 kg for wheat and 6 kg for rice.
- "Other uses" cover essentially post harvest losses and seed use, estimated at 6 percent for maize.

Table 4. Swaziland: Cereal Supply/Demand Balance for 2003/04 ('000 tonnes)

	Maize	Wheat	Rice	Total
Domestic availability	73.0	3.9	1.2	78.1
Opening stock	0.4	3.5	1.0	4.9
Domestic production	72.6	0.4	0.2	73.2
Total utilisation	148.9	49.7	7.2	205.8
Food use	138.8	45.9	6.6	191.3
Feed and seed use and losses	4.4	0.0	0.0	4.4
Closing stock	5.7	3.8	0.6	10.1
Import Requirements	75.9	45.8	6.0	127.7
Anticipated commercial imports	51.6	45.8	6.0	103.4
Food aid requirements	24.3	0.0	0.0	24.3
NTDF stock and pipeline	6.0	0.0	0.0	6.0
WFP stock and pipeline	9.3	0.0	0.0	9.3
Uncovered deficit	9.0	0.0	0.0	9.0

Table 4 shows a cereal import requirement of 127 700 tonnes. Commercial imports are forecast at 103 400 tonnes and food aid requirement at 24 300 tonnes. Taking into account the current National Disaster Task Force (NTDF) of 6 000 tonnes and WFP stock and pipeline of 9 300 tonnes, there is still a deficit of 9 000 tonnes to be covered by additional Donors' contributions..

The combination of better (though below normal) domestic cereal production and improved commercial import capacity suggests that there will be no cereal shortages at the national level in the marketing year 2003-04. However, economic access to food for certain segments of the population remains difficult. High unemployment and inflation rates, coupled with the impact of HIV/AIDS, imply that certain segments of the population do not have the purchasing power to access food on the market.

5. FOOD SECURITY AND VULNERABILITY ASSESSMENT

5.1 Main factors affecting food security

Availability vs access

The Mission found that the national food availability in Swaziland has improved for the 2003-04 marketing year compared to 2002-03. As indicated in the previous sections, maize production is expected to be better than last year, due to improved harvests in Highveld and the wet Middleveld areas where timely and sufficient rains were realised. Significantly higher farm-gate price last year also encouraged farmers to plant more area to maize this year. In addition, large regional maize surpluses are available for purchase at low prices, and a strong Swazi currency has effectively increased the country's capacity to import.

An improved food availability situation overall for Swaziland, however, masks important regional differences in food availability and people's access to food. Improved Highveld and wet Middleveld harvests are offset by near-total crop failures elsewhere. It is considered the Lowveld is most affected followed by parts of the dry Middleveld and the Lubombo Plateau. Improved availability nationally will not help many poor Lowveld residents, whose already low purchasing power has been reduced this year by loss of seasonal employment. The decline in cotton production this year has also had significant impacts on the purchasing power of many families. Previous assessments show that people in Swaziland's most affected areas are only able to off-set about a quarter to a third of their food deficit, through utilisation of food stocks, relying more on casual labour, sales of livestock, and non-food production. Therefore, despite improved food availability, access for households in areas affected by low harvests and drops in disposable income remains difficult, for the coming year and most likely longer.

Recognising that the principal cause of the current situation is HIV/AIDS, vulnerability is therefore determined by how families and communities are able to deal with this socio-economic shock. From an agricultural perspective the Highveld and wet Middleveld zone are in a better position due to better harvest. In addition, food sources and incomes are more diversified, proximity to markets makes it easier to physically access food, and employment opportunities are greater. In contrast, the dry Middleveld, the Lowveld and the Lebombo Plateau are more vulnerable. These areas have suffered consecutive poor harvests and food economy studies show they have fewer economic alternatives.

Food and income sources

There are three main sources of food and income for the rural population: crop production, wage labour and livestock. Even within these three categories there is limited scope for diversification. Only the wealthy own livestock, and cash crop production such as cotton, is also carried out by the better off farmers. For the poorer socio economic groups, wage labour is the most important component. The heavy dependence on wage labour for the poor makes them more vulnerable to changes in employment opportunities as well as changes in the demographics of the productive workforce.

The reduction in employment opportunities was evident in several rural areas. Many of those interviewed mentioned recently losing a job or had been without work for an extended period. Cotton production is down markedly, and as a result this has led to less casual labour requirement for crop husbandry and picking. This work is usually done by the poorer households, and therefore any reduction in seasonal employment contributes to their increased vulnerability.

While it is difficult to quantify the changes in the number of people employed, there were many reports that at the household level, many productive workers had become sick, or had died in recent months or years. The direct link to HIV/AIDS is difficult, but the indication is that this must be a significant factor in the reduction of employment and the resulting decreased income. The team heard examples of homesteads of neighbours who had lost both parents and the children were absorbed into other homesteads, or continued to occupy their parents' house, without being able to cultivate land or with no income source.

Food prices

Market prices began to fall since January 2003 and are likely to fall even further due to the reasons mentioned in the earlier sections. This will provide some relief to consumers, at least for those who have the purchasing power and access to markets. High prices in the last 6 – 9 months were not mentioned as frequently as the team would have expected, and this in part could be the affect of free food distributions.

Coping mechanisms

Some respondents indicated that they could not afford school fees for all the school age children and as a result had to keep children out of school. The second half of the year is likely to show an increased drop out rate when the second instalment of school fees is due.

In a few isolated cases people were complaining of not eating normal quantities of food, either through decreasing rations or decreasing the number of meals. In the Lowveld, where the food aid is focussed, regular distributions have taken place and at this time most families appear to be eating regularly.

While not directly witnessed by the team, examples were given of negative coping mechanisms such as prostitution, selling of assets and resorting to environmentally damaging sources of income.

5.2 Review of emergency food aid in 2002/2003

With the exception of the Government assistance in early 2002, WFP and its implementing partners /NGOs have been the only substantial pipeline of food aid. The programme is part of the six country regional Emergency Operation (EMOP) in Southern Africa which began in July, but it was not until late August or early September that distributions began in Swaziland.

The EMOP has an extension that will carry the distributions through until the end of June 2003. Approximately 20 000 tonnes of cereals as well as other commodities has been distributed through a targeted food distribution. The focus of this distribution has been in the Lowveld, Midveld and Lebombo Plateau and addresses the needs of up to 265 000 people at the peak of the lean period.

Currently WFP is in the process of preparing a second EMOP to cover the period July 03 to June 04. The intention of the second EMOP is to act as a transitional period, where interventions can be developed that are more focused and targeted.

5.3 Household Food Security Outlook

HIV AIDS

While natural disaster was the reason for assistance during the past year, the HIV/AIDS epidemic is quickly emerging as the most significant aspect of and reason for the crisis in the country. Swaziland has the second highest HIV/AIDS rate in the Africa, a small margin behind Botswana and South Africa. HIV/AIDS is eroding human and social capital and threatening to reverse the development gains of the past two decades. The September 2002 yearly sero-prevalence study showed 38.6% of women attending pre-natal clinics to be HIV-positive. While this is generally considered a reliable proxy indicator for the population overall, there is some concern that even this figure may be low compared to overall prevalence rates in the population. The result is that life expectancy has decreased by 21 years; the World Bank in April 2001 estimated life expectancy at 38.3 years for the year 2001, compared to the 59.7 years it would have been in the absence of AIDS. The sero-prevalence study projects that if current trends in HIV infection continue, life expectancy in Swaziland will fall below 30 years by 2010. Other studies indicate a drop in farm production of 50% for households affected by HIV.

Many indicators are pointing to HIV as the most significant factor contributing to food insecurity, but still more information is needed to understand the complexities and to be able to respond appropriately. Statistically valid sub-national information does not show significant variation between regions and it is felt that the prevalence rates are much the same throughout. This maybe due to the small geographic area of the country and the fact that there are no major corridors or transport routes and the absence of very isolated districts compared, for instance, to Mozambique where there are clear sub-national differences. While the impact has been partially masked in the past, it is now hard to avoid noticing the devastating effect it is having in all sectors of the community. These include distorted household demographics, school rolls with abnormally high numbers of orphans and over burdened hospitals.

The Mission concurs with other stakeholders that the impact of HIV is the over-riding factor which has contributed to the current crisis and will continue to be the cause for vulnerability of the affected households in the future. For this reason the situation is no longer acute, but chronic and the Mission acknowledges that there will be individuals, households and whole communities which will need a range of interventions including food aid, if the impact of HIV is going to be lessened.

While more study needs to be made of impact of HIV/AIDS infection on food security in the Swazi context, and is planned, there are clear linkages. The vulnerability of households and smallholder farms to the impact of AIDS centres on the dependence of production on labour inputs, and many households' dependence on remittances by economically productive members for survival. An August 2002 study found significant loss of remittances in households that had experienced an AIDS-related death, increased sale of livestock, reduction in areas cultivated, and increases in numbers of children dropping out of school. A March 2003 study noted that HIV prevalence is highly correlated with falling calorie consumption, falling protein consumption, and unequal distribution of income. Also, the overall cultivated area and therefore production of the country may be diminishing as a result of HIV/AIDS, with the result that Swaziland may be becoming less and less able to feed itself.

Social factors driving the AIDS epidemic include women's status. Women's vulnerability to HIV/AIDS infection has been found to be increased by economic, social and cultural factors and by different forms of violence (particularly sexual) that place them at a disadvantage within relationships, the family, the economy, and society at large. High levels of poverty and lack of access to opportunities and resources contribute to women's vulnerability to HIV/AIDS.

The impact of HIV/AIDS and food insecurity on children can not be overstated. There is a large and growing number of children orphaned by AIDS (15 percent of children under the age of 15 are orphaned, and this number is expected to rise to 24 percent by 2005). The resulting child-headed households are among the most vulnerable to malnutrition and are in need of support. Further, hunger in school and having to drop out of school are taking a toll on the future development possibilities for the majority of children in the worst-affected areas. Government and other organizations working to support orphans and vulnerable children agree that communities should be mobilised and strengthened to respond to children's needs, that families and communities must be supported to strengthen their capacity to deal with the problems they face, and that children themselves should be supported to meet their own needs.

Orphans, vulnerable children, and targeted affected families will continue to need assistance to meet their immediate food needs and to build a basis for longer-term community-level support. There is no prospect for this situation to improve by June 2004 without assistance.

5.3 Relief food aid requirements 2003/4

While at the macro level there are indicators that show an improvement in the overall food situation (prices and import capacity), the team recognises that the access of food for significant numbers of the population will be difficult.

The fact that previous analysis carried out by the VAC and a food economy modelling exercise and analysis by WFP has highlighted needs in the period April – June, supports the view that the number of chronically food insecure is increasing.

The table below summarises the population and tonnes of cereal per quarter for the marketing year (April 03 – March 04). It should be noted that these figures may well change as further analysis and information are gathered through ongoing assessments and studies.

Compared to the previous FAO/WFP Crop and Food Supply Assessment (CFSAM) that estimated food aid needs for 6 months, the team identified an immediate need of assistance covering a full 12 month period. This reflects the issues associated with HIV. In contrast the total number during the lean period (Jan – March) is slightly less than was estimated by the 2002 CFSAM. The overall cereal food aid requirement is about 24 000 tonnes, almost double compared to the previous CFSAM estimate. Any interventions should therefore be focussed to address the needs of those affected by HIV/AIDS. The NERCHA approach is a good example of how this can be done, however this will not cover all sectors of the community. An extremely targeted approach for food aid is required, focused primarily on mitigating the effect of HIV/AIDS, and also including direct support to households unable to access available food.

Table 5. Number of People Requiring Food Assistance (2003-04)

Agro-ecological Zone	No. of Beneficiaries 3 Months	No. of Beneficiaries 6 Months	No. of Beneficiaries 3 Months
	April – June 2003	July – Dec 2003	Jan – March 2004
Highveld	--	--	--
Middleveld	25 500	51 000	51 000
Lowveld	95 000	95 000	142 500
Plateau	11 750	11 750	23 500
TOTAL	132 250	157 750	217 000
Tonnes	4 761	11 358	7 812

It should be noted that these figures are estimated based upon best available information at the time of the mission. As the team was departing, the next VAC assessment was about to get underway. This will provide more detailed and precise information. The above mentioned nutritional work and the demographic study being undertaken by the CSO will also provide information to facilitate the targeting of assistance.

Targeting Recommendations

Stakeholders must develop interventions to ensure target populations are reached. While the geographic focus continues to be in the Lowveld, within this zone and other zones, the Mission strongly urges attempts to address those affected by HIV/AIDS. The process will require a coordinated and sustained response that encompasses non-food interventions and the promotion of alternative farming systems and crops as outlined in the agricultural section of this report.

In addition to the above the mission strongly supports any initiative that would more directly target HIV/AIDS affected families and communities. These could include school feeding, MCH and community based support to orphans.

Given the improved conditions for government food imports to meet the gap in cereal supply this year, any intervention needs to be carefully designed not to impact on the market or to create dependency at either household or national level.

6. LONG-TERM STRATEGY FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT

Agriculture in Swaziland is at a crossroads. Crop yields have been falling year after year and will continue to do so unless steps are taken to reverse soil erosion, soil degradation and the decline in soil fertility. The physical soil conservation structures throughout the country originally designed and established when the soils were stable and of good quality, have deteriorated alarmingly and erosion has escalated as soils have become more leached, less structured and unable to hold moisture and support crop production.

Declining cereal and other crop yields are the result of a combination of factors including the continued, unsustainable use of land resources in the country, unfavourable climatic factors and worsening crop husbandry practices. Crop yields are in general very low because most of the cultivated soils have low levels of fertility, high acidity, low organic matter content and poor moisture retention capacities. As soil fertility has declined, yield levels have also decreased. Soil tests are free for farmers, and this facility should be taken advantage of.

Maize cannot continue to be mono-cropped year after year nor can it continue to be grown in the Lowveld. Rotations, fallows and mixed, relay and inter-cropping practices with leguminous (particularly) and other alternative drought-tolerant crops must become part of the farming system. The concept of an enriched fallow (containing legumes) in the crop rotation cannot be overemphasised. Farmers should be encouraged to produce a good grain crop each year on a portion of their land, utilising the best crop husbandry techniques available. After harvest, a suitable fallow/forage or grain legume crop should be established to help improve soil fertility, soil structure and soil moisture retention capacity, whilst the next food grain crop is grown on another portion of land in the same rotation.

As FAO recommends in many countries, what is needed is a comprehensive integrated and participatory approach that takes advantage of synergies of practices at field level, offering production, economic and conservation benefits. This approach would emphasise building of soil organic matter levels through proper use of inorganic fertilizers, manure and ash, coupled with intercropping of improved cereals and legumes,

conservation farming and agro-forestry practices. The overall benefits are the improvement of soil structure and fertility, food security, cash incomes, dietary diversity and protection of the environment. The improved soil structure and fertility result in increased efficiency in plant nutrients uptake and water storage, thus enhancing the profitability of crop production as well as enabling crops to withstand dry periods and drought.

Possible future FAO technical assistance to develop agriculture in Swaziland

The following interventions could be considered:

Education/training (dissemination of information)

Farmers all around the country cannot improve their crop husbandry practices because they are isolated and marginalised within the system. Extension workers attached to District Agricultural Offices are poorly informed about alternative crops, crop rotations and the latest technologies and crop husbandry practices and cannot advise farmers correctly. Demonstration farms (3-5 ha) should be developed in each of the four agro-ecological zones in Swaziland, with demonstration plots (0.5 ha) in as many areas as possible within each zone. These units should be used to introduce sustainable farming practices (rotations with grain and forage legumes, inter-cropping, mulching, manuring) for improved crop, soil and rainwater management to farmers and extension workers. Visual impact is all-important; farmers need to see the benefits and advantages for themselves and extension workers need to have concrete and proven technologies to present to their farmers. Once the soil, the deteriorating and finite resource for agriculture in Swaziland is returned to health, farmers will be able to produce more maize from a smaller area, rotate with other crops, include livestock and have a sustainable system for the future.

An incentive scheme to encourage farmers to grow alternative crops to maize/grain crops

Introduce suitable incentives to encourage farmers to grow crops other than maize in their farming systems. Farmers should be encouraged with these incentives, to plant a third of their arable area to a suitable grain/forage legume each year. In this way a regular rotation of crops will be introduced, and it will become abundantly clear that the same quantity of maize can be produced with a higher yield from a much smaller area. This crop diversification will broaden their farming base and open new marketing outlets for their produce, as well as allowing an integrated system for livestock production to develop.

Improved market outlets and the development of agricultural processing industries

The GOS should encourage farmers to move away from their largely subsistence farming approach, and into the production of saleable products to generate a cash income. The development of agricultural processing industries will be an important part of this strategy, for instance.

Potatoes grow extremely well in areas of the Highveld, but marketing is a huge problem. If a potato chip factory were established in a strategic position with GOS assistance, a useful industry could be started. Employment opportunities would be created in the area and a dynamic integrated system for groups of farmers would develop.

Sunflower and soya beans both grow well in Swaziland, but have no market in the country. If a factory were built for extracting vegetable oil from these two crops, farmers would be encouraged to grow them. Employment opportunities would be created, and apart from the vegetable oil, useful protein-rich cakes for livestock feed would be produced.

Establishment of a network of cassava and sweet potato nurseries throughout the country

Farmers visited by the Mission commented that they had difficulty sourcing good quality planting material for these two crops. They badly need other crop alternatives and this is one way in which it can be achieved. The FAO Emergency Office is initiating a project to establish cassava nurseries in the Lowveld.

Establishment of a maize growers/producers association in Swaziland

It is abundantly clear how powerful and successful the Swaziland Sugar Association is for its members. Maize growers, millers, wholesalers and consumers should get together to form a similar association for their industry, so that they can be heard by the Government. A strong united voice will enable their maize industry to move forward in a cohesive fashion and be able to fashion its own destiny.

This report is prepared on the responsibility of the FAO and WFP Secretariats with information from official and unofficial sources. Since conditions may change rapidly, please contact the undersigned for further information if required.

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