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MARKETING GRAINS, PULSES AND VEGETABLES IN LESOTHO.

Ray F. Brokken, Brent M. Swallow, 'Mabaitsi M. Motsamai and 'Malijeng Mpemi

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PREFACE

The five major crops of Lesotho, in order of their importance, are the staple food grains, maize, sorghum and wheat, and the major pulses, dry beans and peas. The main vegetable crops include cabbages, potatoes, tomatoes and onions, again in order of their importance. The focus of this paper is on the marketing systems for those major food grains, pulses and vegetables in Lesotho. The paper is primarily descriptive, and is intended for a broad audience of people interested in obtaining an overview of food marketing in Lesotho.

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INTRODUCTION

The five major crops of Lesotho, in order of their importance, are the staple food grains, maize, sorghum and wheat, and the major pulses, dry beans and peas. The main vegetable crops include cabbages, potatoes, tomatoes and onions, again in order of their importance. The focus of this paper is on the marketing systems for those major food grains, pulses and vegetables in Lesotho. The paper is primarily descriptive, and is intended for a broad audience of people interested in obtaining an overview of food marketing in Lesotho. Readers interested in learning more about the marketing of specific crops are referred to: Marketing Sections, Divisions of Research and Planning (1983), Monitoring and Evaluation Team (1985), Reed (1983), Swallow and Mpempe (1986), Tarbox (1979), Thabane (1985), Wyeth and Moletsane (1983), Wyeth and Moletsane (1984), Savage (1985), and Savage, Kraidy and Mannion (1985).

From the devastation left after the lifaqane wars (1818-c.1824), Lesotho rapidly emerged as a major political and economic force under the guidance of Moshoeshe I. Basotho rapidly increased their cultivation of the fertile lowland region and used the increased food supplies to meet the subsistence requirements of their growing numbers and to trade with neighbouring black nations and white settlers in the Orange Free State. Demand for Lesotho produce heightened with the discovery of diamonds in the Orange Free State (1867) and later with the opening of the gold mines in the Transvaal (1885). Lesotho's food grain exports reached a maximum in the decade 1910-1920. After this time exports declined as: (1) South Africa imposed trade restrictions; (2) increased supplies of imported and South African produce came on the market; (3) the Lesotho subsistence requirement expanded; (4) soil fertility gradually declined; (5) technology remained stagnant; and (6) more Basotho labour was siphoned into the South African workforce. By 1930 Lesotho was a net importer of maize (Murray 1981 and Kimble 1979).

Since independence in 1966, food demand in Lesotho has continued to increase in response to growth in both population and per capita income (primarily migrant income). Far from keeping pace with this increasing demand, food production has actually declined since the late 1970's because of the decreased area planted and perhaps, most importantly, persistent drought. Consequently, Lesotho has had to rely increasingly on food imports, most of which have been in the form of commercial imports from the Republic of South Africa (RSA). Concern over the increasing dependence on the RSA is reflected in the recent policies of the Government of Lesotho (Government). The Food Self Sufficiency Programme is focused on expanding food grain production, while a number of Government initiatives and donor projects are focused on vegetable production.

The development of food marketing systems is a dynamic process. In Lesotho the marketing systems for the major food commodities have undergone considerable change since the early 1970s. The marketing systems have

evolved in response to changes in production, demand, government policies, transportation and communications infrastructure, credit availability, private entrepreneurship and donor projects. Thus to understand the present marketing systems, it is necessary to trace through some of the major changes that have occurred in the marketing systems. This is the approach taken in this report. Current estimates of the quantities of the various commodities moving through alternative marketing channels are also presented.

BACKGROUND

Lesotho's population is 1.557 million (1986 Census), of which about 85 percent is rural. Overall population growth rate is 2.4 percent per year with urban growth rates somewhat higher, indicating a movement of population from the rural to urban areas. Over half of Lesotho's male population between the ages of 20 and 45 is employed in mining in South Africa, the majority from rural households. This system of oscillating labour migration and the future prospects for continued employment in South Africa have tremendous effects on, and implications for, agricultural development in Lesotho.

Lesotho is a member of both the Rand Monetary Area and the Southern African Customs Union, from which it generates 75 percent of its recurrent revenue. While giving Lesotho access to relatively stable markets in South Africa, Customs Union regulations restrict Lesotho's use of import and export regulations as well as pricing policies.

The area of Lesotho is approximately 30,300 km² of which only 13 percent is arable. Much of the soil is poorly suited to cropping and is badly eroded. Drought, hail and frost are major risk factors in crop production. Long term average precipitation varies from 682 to 819mm in the lowland areas and from 586 to 900mm in the highland areas, with 75 to 80 percent of precipitation occurring in the six summer months (October to March). Annual precipitation at some stations varies as much as 50 percent above and below the mean. Monthly variation is even higher. The number of frost free days between average first frost and average last frost dates varies from 281 (at Leribe, in the northern lowlands) to 187 (at Mokhotlong, in the mountains). However, January is the only month without a recorded frost (Eckert 1983).

Between 1970/71 and 1978/79, agriculture's percentage contribution to Gross National Product (GNP) varied from a high of 24.7 percent in 1973/74 to a low of 14.7 percent in 1975/76. There has been a steady decline in agriculture's share of GNP since 1978/79 to only 7.1 percent in 1983/84 (table 1).

The main source of growth in Lesotho's economy has been the increase in migrant remittances and mine wages. In 1970/71 there were 87,384 Basotho employed in South African mines and perhaps 30,000 Basotho employed in other sectors of the economy. Mine wages and remittances accounted for 20.8 percent of GNP while agriculture accounted for 22.4 percent. Employment in the mines grew steadily until 1977 with 128,941 workers employed and has since declined to 114,071 workers in 1984. Despite this decrease in mine employment, income from mine wages and remittances continued to grow indicating a steady increase in wages and remittances per worker. This reflects both higher wage rates and perhaps increased hours per worker per year. In 1970 annual earnings per mine worker averaged M136. By

Table 1. Sector Percentage Distribution of GNP at Factor Costs & Market Prices*

Year	Remittances & Mine Wages	Agri- culture	Manufac- turing	Trade Construct'n & Mining	Private & Gov't Services	Other	Total GNP M000	GNP,% of Prev. Year	GNP Price Deflator
percent									
1970/71	20.8	22.4	2.8	16.7	22.2	15.1	74772	-	1.00
1971/72	22.5	15.7	3.2	17.2	24.4	17.0	76285	102.0	1.061
1972/73	23.2	21.9	2.9	14.0	22.3	15.7	95883	125.7	1.134
1973/74	24.7	24.7	2.9	11.7	18.4	17.6	132342	138.0	1.323
1974/75	30.5	20.1	3.0	12.0	17.6	16.8	158127	119.5	1.325
1975/76	41.4	14.7	2.6	10.7	17.9	12.7	211981	134.1	1.582
1976/77	40.7	18.4	2.3	10.1	16.7	11.8	269135	127.0	1.755
1977/78	39.1	16.4	2.1	12.8	16.3	13.3	331362	123.1	1.944
1978/79	35.5	17.0	2.5	13.3	17.1	14.6	405951	122.5	2.173
1979/80	37.3	14.7	2.6	13.3	18.1	14.0	448100	110.4	2.508
1980/81	40.3	11.5	2.7	13.5	21.2	10.9	539217	120.3	.NA
1981/82	45.2	10.5	2.8	11.9	20.7	8.9	636158	118.0	.NA
1982/83	52.3	9.0	3.1	11.1	16.9	7.6	779541	122.5	.NA
1983/84	54.2	7.1	2.8	9.0	16.3	10.6	903523	115.9	.NA

*Source: Lesotho Agricultural Situation Report, 1974/75-1983/84, 1985 Edition.

NA = Not available.

1984, annual earnings per worker had increased to M4250 (Lesotho Agricultural Situation Report, 1985 edition).

Domestic Production and Imports of Crops

While the total area harvested of the five major crops shows large year-to-year variation over the period 1974/5 to 1982/83, it generally declined throughout the period. However, in 1983/84 and again in 1984/85 (except for peas) crop area has increased substantially (table 2).

Table 2. Area Harvested, Five Major Crops, 1974/75 to 1984/85 (ha.)

CROP YEAR	MAIZE	SORGHUM	WHEAT	BEANS	PEAS	TOTAL FIVE CROPS	TOTAL LAND UNDER CULTIVATION
1974/75	107844	54774	55118	26313	9982	254031	
1975/76	84827	44239	55872	29656	10134	224728	
1976/77	80336	42485	41676	14642	7099	186238	
1977/78	101683	59280	42610	11066	4348	218987	289,200 ¹
1978/79	112263	51255	35307	10151	5702	214678	
1979/80	110357	61333	28952	6919	5882	213443	
1980/81	124812	60016	19932	7375	4682	216817	298,100 ¹
1981/82	107730	47808	23894	6764	9180	195376	
1982/83	103529	46537	29004	4691	8691	192452	
1983/84	116739	54682	29513	8202	7900	217036	296900 ¹
1984/85	118061	75559	36270	7280	7527	244697	

Source: Lesotho Agricultural Situation Report, 1985 Edition.

¹ Census years

Production of the five major crops is shown in table 3. It should be noted that these figures are for total production and do not represent that available for consumption. To obtain estimates of the amounts available for consumption, adjustments must be made for harvest, transport and storage losses and the amounts used for seed, which together might amount to some 20 percent of production (Eckert et. al. 1981).

Except for peas, production in the early 1980's was well below that of the late 1970's. Production declined steadily following the 1978/79 crop year until 1983/84 when a modest recovery was reported. The 1984/85 crop year showed substantial gains in production owing to a break in the drought conditions of the previous six years and as 1986 approaches prospects appear even better for 1985/86 crop year. ¹

It has been suggested that the decline in acreage and production of the five major crops from the mid 1970's and into the early 1980's is owing to the rapid increases in mine employment and income. (Eckert et. al. 1981 and Marketing Sections 1983). Many of the mine workers are from the rural areas. Their absence results in reduced labour inputs on many fields and in some cases, fallow fields.

Families benefiting from mine employment are less dependant on farming as a means of subsistence and so have less incentive to produce. The recent recovery in acreage may be partly due to the reduction in migrant

¹Over the six years, 1978/79 to 1983/84, annual precipitation averaged 651 mm, compared to the previous four year average of 856 mm.

employment as well as the increased emphasis on the Food Self Sufficiency Programme and other programmes designed to encourage production.

Table 3. Crop Production 1971/72 to 1984/85 (1000 tonnes)

<u>CROP YEAR</u>	<u>MAIZE</u>	<u>SORGHUM</u>	<u>WHEAT</u>	<u>BEANS</u>	<u>PEAS</u>
1971/72	59.0	20.0	24.0		
1972/73	70.0	43.0	36.0		
1973/74	122.5	84.0	57.0		
1974/75	70.3	37.4	45.3	13.4	5.8
1975/76	49.1	24.5	44.6	8.7	5.8
1976/77	125.9	62.3	61.4	20.9	7.0
1977/78	143.2	85.8	57.9	10.8	4.4
1978/79	124.9	69.0	33.6	8.4	6.9
1979/80	105.6	59.3	28.2	3.6	4.6
1980/81	105.7	47.7	17.0	3.5	3.2
1981/82	79.8	26.0	14.5	2.6	4.5
1982/83	76.2	30.7	14.8	1.6	3.4
1983/84	79.4	33.8	17.1	1.3	3.6
1984/85	92.4	54.8	18.4	2.5	3.3

Source: Lesotho Agricultural Situation Report, 1985 Edition

Imports of the food grains and pulses from both commercial and donor sources are reported in Table 4. While commercial imports of all products have remained relatively constant since 1977/78, total imports have increased, indicating an increased reliance on donated food.

Very little data are available on exports. However, according to Wyeth and Moletsane(1984), there is no evidence that maize has been exported at least since 1948. In some years of the late 1940's and the 1950's Lesotho exported considerable amounts of sorghum (including malt). Over 6,000 tonnes of sorghum were exported in both 1948 and 1952, but since the 1960's sorghum exports have ceased.

Table 4. Imports of Major Crops (1000 tonnes) - Lesotho, 1974/75 to 1983/84*

<u>CROP YEAR</u>	<u>COMMERCIAL IMPORTS</u>				<u>TOTAL IMPORTS**</u>			
	<u>MAIZE</u>	<u>SORGHUM</u>	<u>WHEAT</u>	<u>PULSES</u>	<u>MAIZE</u>	<u>SORGHUM</u>	<u>WHEAT</u>	<u>PULSES</u>
1974/75	62.7	3.1	32.0	0.3	74.5	3.1	33.8	0.9
1975/76	76.4	5.1	31.2	0.1	83.1	5.1	32.7	0.3
1976/77	86.5	5.8	32.8	0.6	96.3	5.8	33.9	0.8
1977/78	109.2	2.1	31.7	0.5	115.0	2.1	33.0	0.9
1978/79	122.4	1.9	35.7	0.6	130.7	1.9	42.6	1.6
1979/80	108.8	1.8	30.8	0.5	118.3	1.8	38.2	1.0
1980/81	121.9	1.4	31.5	0.2	136.8	1.4	37.9	0.9
1981/82	128.5	1.0	30.3	0.5	140.2	1.0	42.1	1.2
1982/83	107.4	1.7	23.9	0.5	116.6	1.7	44.5	1.6
1983/84	117.5	3.3	22.0	0.6	126.6	3.3	48.6	1.7

Source: Lesotho Agricultural Situation Report, 1985 Edition.

* All figures in whole grain equivalent.

**Includes donated plus total commercial imports.

From 1949/50 to 1973/74 Lesotho exported an average of 4,749 tonnes of wheat per year, with a high of 13,616 tonnes in 1969 and a low of 514 tonnes in 1966. Since 1973 wheat exports have been negligible. Beans and peas have been exported in varying amounts since at least the Second World War. From 1969 to 1978 an average of M447,300 of beans and M49,000 of peas were exported each year (Wyeth and Moletsane 1984).

Grain and pulse donations and self sufficiency percentages are shown in table 5. The percent self sufficiency figures are calculated by dividing domestic production by the total imports plus domestic production. This procedure is appropriate for grains as there are virtually no grain exports. However, this calculation is inappropriate for peas and beans as Lesotho has been a net exporter of these pulses. Donations of maize were 8.1 percent of total supply in 1974/75, 2.2 percent in 1977/78, 6.1 percent in 1980/81, and 4.4 percent in 1983/84. Since 1980/81, donations of wheat and pulses have increased substantially. There have been no donations of sorghum. Percent self sufficiency in the 1980's is considerably lower than in the late 1970's.

Table 5. Percent Donated and Percent Self Sufficiency For Five Major Crops, 1974/75 to 1983/84

CROP YEAR	PERCENT DONATED**			PERCENT SELF SUFFICIENCY *		
	MAIZE	WHEAT	PULSES	MAIZE	SORGHUM	WHEAT
1974/75	8.1	1.4	3.0	48.5	91.0	66.
1975/76	5.1	1.9	1.0	37.2	91.0	57.9
1976/77	4.4	1.2	0.7	56.6	91.5	54.7
1977/78	2.2	1.4	2.5	55.5	97.7	60.1
1978/79	3.2	9.1	5.9	49.0	97.3	44.3
1979/80	4.2	11.1	5.5	47.2	94.0	32.8
1980/81	6.1	11.7	9.2	48.1	90.0	27.6
1981/82	5.3	20.8#	8.4	38.6	92.2	24.3
1982/83	4.8	34.7#	19.6	39.5	94.8	18.5
1983/84	4.4	40.5#	16.4	38.5	83.8	26.0

Source: Lesotho Agricultural Situation Report, 1985 Edition.

* Total Production divided by total production plus total imports.

**No sorghum was donated during this period.

Includes donated whole wheat sold through commercial channels.

The amount of exports has varied widely from year to year, but in most years Lesotho has been a net exporter and thus more than 100 percent self sufficient in pulses. Recently, domestic shortfalls of peas and beans have been met through donations.

MARKETING OF GRAINS AND PULSES

Until 1974 commercial buying and selling of grains and pulses was conducted by licensed private traders. The traders set their own prices without government regulation until 1973, when the Government began to set prices for maize and sorghum. In 1975, the Produce Marketing Corporation (PMC), a parastatal body, took over the marketing of grains and pulses and private traders were no longer allowed to trade in them except as agents for the PMC.

The primary justification for supplanting the private traders with the PMC was the accusation of unfair practices by private traders. These traders were accused of purchasing from farmers at prices well below the levels that would have been dictated by competitive markets, and selling back to them at prices above what was necessary to cover the costs of transport, storage and finance. (Marketing Sections 1983). However, analysis had shown that this practice of paying unfair prices was concentrated among a few traders, and that most traded at prices dictated by current competitive market conditions (Tarbox 1979).

Before the PMC took over marketing of grains and pulses, less than 10 percent of the maize, sorghum and wheat were marketed through commercial marketing channels, and for some time after the PMC took over even less grain was marketed (Marketing Sections 1983). However, as will be shown later, data show the percentage of production marketed through formal channels has recently increased as more is delivered directly to the mills.

From 1975 on, producer prices were also set by the Government for wheat, beans and peas. The PMC was made the sole purchaser of these products, with several integrated rural development projects and Coop Lesotho acting as agents. The PMC was dissolved in 1981 and some of its functions were taken over by Coop Lesotho.

Although it is called a cooperative, Coop Lesotho is not organized as a cooperative. Coop Lesotho's predecessor, the Basutoland Cooperative Banking Union, did in fact operate as a cooperative until 1963. At that time it came under government control and became known as the Finance and Marketing Cooperative of Basutoland (Lesotho) until taking the name Coop Lesotho in 1972. From 1972 to 1980 Coop Lesotho acted as an input supplier and agent for PMC. From 1980 until recently Coop Lesotho has been the sole formal market outlet for grains and pulses. Recently, the option was opened to producers to deliver directly to the maize mills and the flour mill as well as to Coop Lesotho.

Prices for maize, sorghum and wheat are gazetted at harvest time and remain in effect throughout the ensuing year. Until May 1985, prices were equal at all Coop Lesotho locations throughout the country and Coop Lesotho was required to accept all offerings at the gazetted prices. Now, the gazetted price for maize is regarded as a minimum price at the maize mill gate. For maize delivered to the mill, Coop Lesotho may pay the gazetted price minus transport costs to the mill. Maize purchased for resale to consumers in the interior areas may be bought and sold at prices above the mill gate minimum price.

The gazetted prices are usually set somewhat above the import parity level with the nearby markets in the RSA, but not so high as to encourage illegal imports of lower priced RSA products to be sold at Lesotho's supported prices. Thus, the pricing policy is to support and encourage domestic production as much as possible. This policy is further reinforced by the fact that corresponding RSA gazetted prices are also set well above world prices. As Lesotho exports no maize, sorghum or wheat, few problems are encountered with this procedure.

However, this pricing procedure did cause problems for the PMC in the marketing of peas and beans and had to be modified for the 1981/82 season. In contrast to maize, sorghum and wheat, prices for peas and beans were not gazetted in the RSA and up to half of the peas and beans produced in Lesotho

are intended to be exported to processors in South Africa (Wyeth and Moletsane 1984). If prices of peas and beans were gazetted above the RSA prices, they could not be exported without a loss. The PMC was then faced with having either to sell on the export market at a loss or to store the commodities, hoping for future price increases. When prices were gazetted below those existing in the RSA markets, Lesotho farmers sold directly to RSA buyers and PMC was unable to fulfill delivery contracts with RSA processors (Wyeth and Moletsane 1984).

Coop Lesotho is enjoined by law from operating at a loss or making a speculative profit on exports at the expense of farmers. Therefore, Coop Lesotho accepts peas and beans only at prices that allow export without a loss. It bases prices on current prices offered by RSA processors. If these are not acceptable, it quits buying from farmers (Wyeth and Moletsane 1984). The Government continues to announce price guidelines for peas and beans, but these are not binding.

The Marketing Sections of the Research and Planning Divisions, MOA, (1983) investigated whether pricing policies and marketing organizations had contributed to declines in production of grains and pulses in the late 1970's. They concluded that pricing policies had adversely affected production of peas and beans when their prices were gazetted at levels severely out of line with those prevailing in the RSA. There was no evidence that pricing policies had adversely affected grain production. After 1974 the number of outlets where farmers could sell their grain was much reduced. While no adverse effects of this reduction were found, the investigators cited a danger that programmes to increase production might flounder if market outlets were inadequate to handle increased production.

Table 6 displays data on the quantities of the three foodgrains and two pulses marketed through the formal channels in 1982.

Table 6: Lesotho food grain production and marketing by crop and by marketing agency - 1982, tonnes and (percent of total production).

<u>ITEM</u>	<u>MAIZE</u>	<u>SORGHUM</u>	<u>WHEAT</u>	<u>BEANS</u>	<u>PEAS</u>
Local production	79,825	26,014	14,462	2,621	4,552
Total quantity marketed	16,604 (21.0)	27 (0.1)	4,756 (33.0)	465 (17.7)	229 (5.0)
Coop Lesotho	981 (6.0)	27 (100.0)	616 (13.0)	445 (94.8)	229 (100.0)
Lesotho Milling Company	15,623 (94.0)	-	-	-	-
Lesotho Flour Mills	-	-	4,140 (87.0)	-	-
Basotho Fruit and vegetables cannery	-	-	-	20 (4.5)	-

Source: Monitoring and Evaluation Team 1985

Maize

Lesotho produces mostly white maize. Yellow maize is planted only when a short season variety is needed for late planting. Only white maize is accepted at the maize mills. Grades for white maize include grades 1, 2, and 3 and Rejected. Rejected maize for milling purposes may be sold for animal feed. Factors affecting grades are percentages of defective kernels, kernels of another colour, foreign matter, and infestation by weevils. Adjustments are made in price for moisture content in excess of 12.5 percent up to 15 percent. Maize with moisture above 15 percent is rejected.

Before the formation of the Produce Marketing Corporation in 1974, licensed trading stations undertook all of the formal trading of maize without governmental regulation. Traders bought maize from farmers, sold maize and maize products and provided gristing services. Sometimes the traders bought maize at harvest time, stored it in their facilities and resold it for gristing later in the season. However, it has been estimated that only 10 percent of the maize produced was handled by private traders. The remaining 90 percent was either never traded, being utilized by the producers for food, livestock feed and seed, or traded in the informal market, that is, among farmers and villagers.

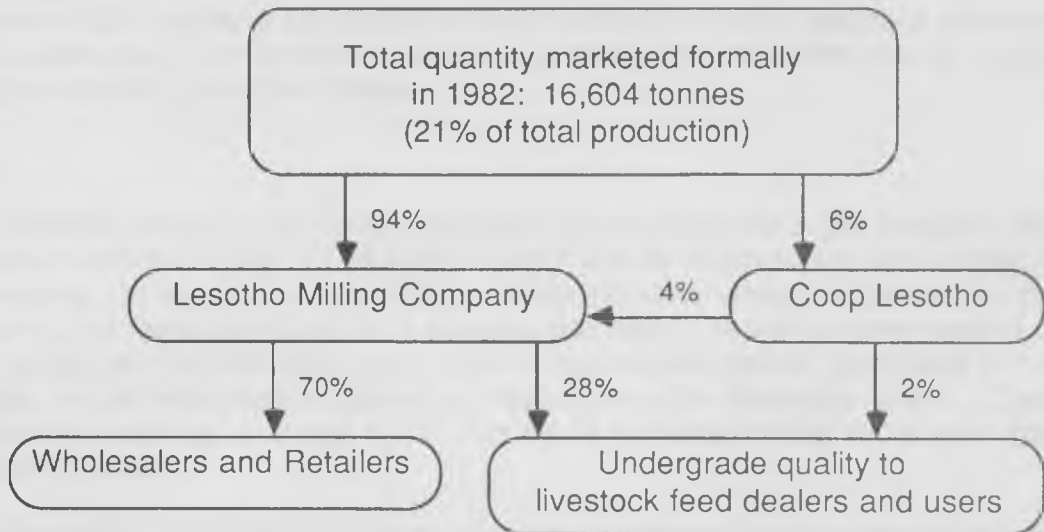
Private traders are no longer involved in the formal market structure except as agents for Coop Lesotho. They are paid a commission for their services and must deliver all they acquire to Coop Lesotho. Analysis conducted by the Marketing Sections (1983) showed that, on the average only, about 6 or 7 percent of the maize produced finds its way through the current formal marketing channels. An analysis by the Monitoring and Evaluation Team (1985) showed that in 1982, about 21 percent of the maize crop was marketed through formal, commercial channels, most of which was delivered directly to the maize mills (see table 6 and figure 1). While such complete data on marketings through formal channels has not been compiled for years since 1982, indications are that this was a "high water mark" in the percentage of maize marketed through formal marketing channels.

Data in table 6 and other data were used to construct the following diagram of marketing channels for domestically produced maize shown in figure 1. All data are for 1982.

According to Olson (1985), the lines of demarcation of milling, wholesaling, and retailing functions among firms are not clearly drawn in Lesotho. The system is complex but fits well into the varied needs of the consumers. Population centers and maize growing areas are located on the perimeter of Lesotho with sparsely populated maize deficit areas in the interior. This situation leads to price relationships between maize and maize meal that discourage marketing of domestically produced maize through formal marketing channels. However, this is desirable as the seller can realize a higher price for his maize than the gazetted price, while the consumer can obtain maize for gristing in nearby private gristing mills at prices lower than meal purchased through the available retail outlets.

Lesotho is about 40 percent self sufficient in maize for both human and livestock consumption. The remaining 60 percent is made up largely by commercial imports and, to a lesser extent, by donations. Commercial imports are primarily obtained through the South African Maize Control Board from its silos located throughout the RSA. Maize prices in the RSA are constant

throughout the year, differences in costs of Lesotho imports are only due to differences in railage costs from different silo sites. Maize is imported in whole grain form as well as meal form. Most of the maize is milled in one of two mills located in the two largest urban centres, Maseru and Maputsoe. The Maseru Roller Mills and the Maputsoe Maize Mill are both jointly owned by the Lesotho National Development Corporation and Tiger Oats of South Africa. Tiger Oats supplies the management.



Source : Monitoring and Evaluation Team 1985.

Figure 1: Marketing channels for formally marketed maize.

These mills currently have capacity to mill about 60 percent of the national deficit for maize meal, or about 36 percent of the total national demand for maize meal. Of the 20 percent of domestically produced maize delivered to these mills, either directly from farmers or indirectly through Coop Lesotho, 30 percent is below grade for maize meal. Thus, less than 14 percent of the meal production of these two mills is from domestically produced maize, the other 86 percent is imported as whole grain.

The meal from these mills is distributed through wholesalers as well as through Coop Lesotho which, in addition to its other activities, undertakes both wholesaling and retailing of maize meal and wheat flour.

The remaining 24 percent of national maize meal requirements is imported as meal. A new mill and storage silos in Maseru are under construction, which when completed in mid 1986, will have capacity sufficient to replace all maize meal imports. This facility is owned by the Government of Lesotho and will be operated under the same management structure as Lesotho Flour Mills.

Sorghum

Nearly all domestically produced sorghum is consumed or traded among farmers without entering formal marketing channels. It is used primarily for brewing a traditional beer, "joala", typically produced at one or more centers in a village (Tarbox 1979). Less than one percent of the sorghum produced in 1982 entered the formal channel, Coop Lesotho (table 6). In most years

Lesotho is over 90 percent self sufficient in sorghum . The deficits have been made up entirely by commercial imports, primarily for the urban market. Slightly over half of the imports of sorghum are unmilled.

The formal market normally values sorghum slightly below maize, but recent investigations have shown that Lesotho's informal market values sorghum higher. Unlike maize, sorghum acquired by Coop Lesotho is usually sold back to local consumers. The RSA standards are used for sorghum grades except that RSA makes a distinction between white and dark sorghum whereas Lesotho does not. The factors involved in grading are the same as for maize except for kernels of another colour.

Wheat

Lesotho exports no wheat and has been less than 30 percent self sufficient in wheat during the 1980's. Winter wheat is produced exclusively in the lowlands, primarily as a cash crop, while summer wheat is planted in the mountains and foothills mainly as a subsistence crop. There is some trading of wheat grown in the mountain and foothill regions for maize produced in the lowlands, maize being less suitable for production in the mountain areas. Over the past ten years an average of 27 percent of the total wheat production has been winter wheat.

The official marketing channel for wheat is Coop Lesotho along with the network of private traders acting as its agents.. Coop Lesotho in turn sells to the Lesotho Flour Mills. Recently, regulations were adjusted to allow for direct delivery of wheat by farmers to the Lesotho Flour Mill. Most of the domestically produced wheat delivered to the mill is undergrade for flour and must be blended with imported wheat for milling.

The Lesotho Flour Mills (LFM) is wholly owned by the Government of Lesotho and is operated by a parastatal under the Ministry of Agriculture. The General Manager overseas the day-to-day operations of the Mill with the assistance of management consultants provided under contract with Spillers Milling Company of the U.K. The LFM is the sole commercial importer of wheat into Lesotho. In 1985/86, the LFM purchased 33,370 tonnes of imported wheat and only 974 tonnes from local sources -- directly from farmers and through Coop Lesotho (Kao, personal interview, April 1986).

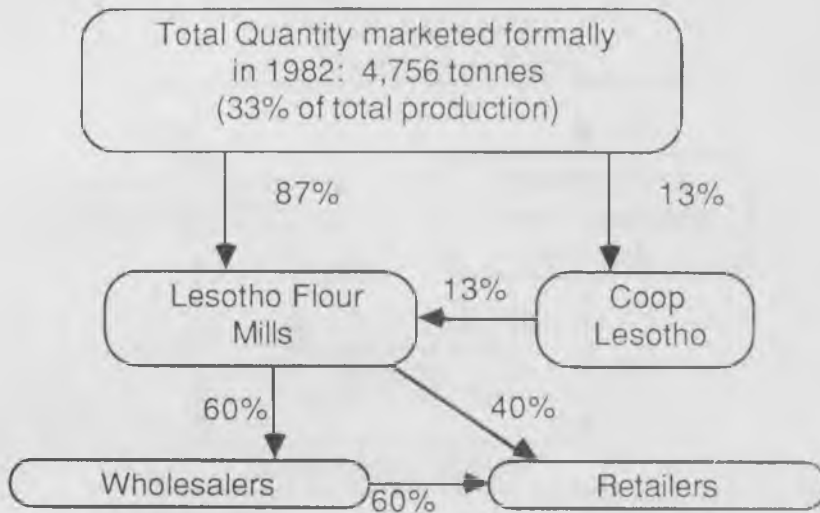
Besides these regular commercial purchases, the LFM also purchases donated wheat from the Food Management Unit at market prices. All food donated to Lesotho is handled by the Food Management Unit, and most of it is distributed to schools, hospitals and clinics through its nine regional warehouses. Donated wheat is used for three specific purposes: (1) for Mountain Emergency Food reserves; (2) for Strategic Food reserves; and (3) for sale to generate income for specific purposes. The Food Management Unit sells monetised wheat to the LFM and delivers the reserve wheat to it for milling and adding to its revolving stock. In 1985 the Food Management Unit distributed 2,698 tonnes of maize meal, 1,163 tonnes of wheat flour, and 1,213 tonnes of pulses as well as sizable quantities of soya milk, milk powder, and vegetable oil. In 1984/85, it sold 19,141 tonnes of donated wheat to the LFM (Mokitimi, personal interview, April 1986).

From its mill in Maseru, the Lesotho Flour Mills distributes wheat flour throughout Lesotho to wholesale traders and other traders on minimum orders of three tonnes. The LFM does not own delivery vehicles, but contracts them

locally whenever deliveries have to be made. In the mountain districts the LFM distributes flour through agents.

Standards are gazetted for Lesotho wheat purchased by the LFM. No distinction is made between summer and winter wheat. There are four grades: B1, B2, B3 and Under Grade. Standards include factors for test weight, moisture, impurities and admixtures, taint and odour infestation.

Data in table 6 indicate that, of the major grains and pulses, wheat has the greatest share marketed through formal channels; 33 percent of total production in 1982 was marketed through formal channels. The marketing channels for this formally marketed wheat are shown on figure 2.



Source: Monitoring and Evaluation Team, 1985

Figure 2. Marketing channels for formally marketed wheat.

Dry Peas and Beans

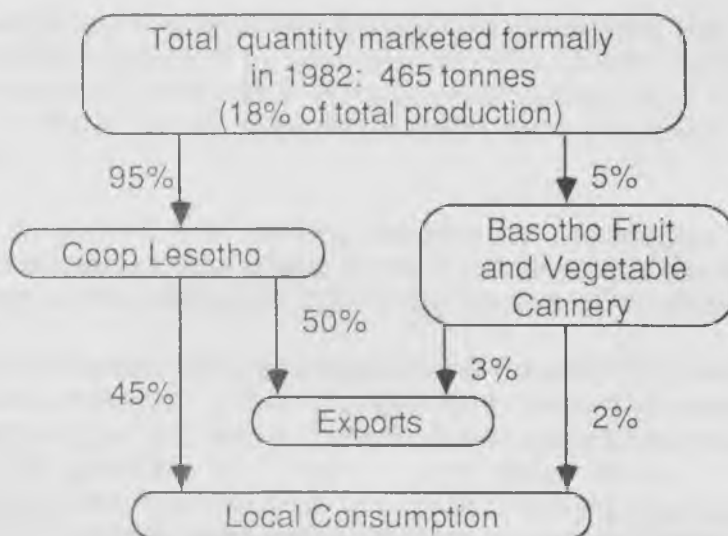
Producers sell peas and beans directly to Coop Lesotho or indirectly through traders who act as agents for Coop Lesotho, and may not sell to anyone else. Coop Lesotho in turn sells mostly to RSA processors, but has recently begun selling packaged dry peas and beans to retail stores and directly to consumers through their own retail outlets.

Coop Lesotho also sells dry beans to the Basotho Fruit and Vegetable Cannery which cans them with tomato sauce imported from the RSA. The canned beans with tomato sauce are sold in both RSA and Lesotho markets. The cannery also has been granted the right to buy dry beans directly from farmers. The structure and functions of the cannery are described in the following section.

Lesotho is both an importer and exporter of dry peas and beans, but is a net exporter in most years. Domestic production of some varieties is inadequate to satisfy domestic consumer demand. Imports come from the RSA mainly through wholesalers who distribute them to retailers or sell directly to

consumers. The primary marketing channels for beans are illustrated on figure 3.

No formal grades are established for dry peas. Because they are picked by hand they are usually of very high quality. Beans are graded for export according to RSA standards. Beans are classified according to: (1) form – flat, round, long round; (2) size– number of dry beans per 30 grams; and (3) colour – white, speckled, and other. There are two grades according to foreign matter, defective dry beans, not true to type, and taste defects. There are also regulations on containers, packing and marking.



Source: Monitoring and Evaluation Team 1985

Figure 3. Marketing channels for formally marketed beans

MARKETING OF VEGETABLES

Two distinct marketing systems can be identified for vegetables produced, marketed and consumed in Lesotho. The first is export oriented and is centered on the Government owned Basotho Fruit and Vegetable Cannery. The second, and more important, is that which delivers fresh vegetables to Basotho consumers.

Vegetables for Processing and Export

The Pilot Asparagus Project began in 1974 as part of the Thaba Bosiu Integrated Rural Development Project and was financed by the UNDP and FAO. Since 1980 it has received both FAO and EEC support but for the next five years support will be provided by the EEC. The number of farmers involved in the project has increased from 14 in 1974, to 96 in 1976, and to 297 in 1984. There are now 720 farmers with asparagus and by the end of 1986 there will be 860 farmers in the asparagus programme. The number of producers, acreage production and yield from 1980 to 1985 is shown in Table 7.

Table 7. Asparagus: Number of Producers, Area, Production, and Yield, by Year

<u>Year</u>	<u>Producers</u>	<u>Hectares</u>	<u>Tonnes</u>	<u>Yield/hectare</u>
1980	290	53.8	101	2.0
1981	266	48.6	170	3.5
1982	257	47.2	181	3.8
1983	245	45.3	158	3.5
1984	260	50.5	231	4.6
1985	289	54.5	255	4.7

Source: Unpublished data, Basotho Fruits and Vegetables Cannery. 1986

Further expansion is planned at 300 new producers per year through 1991 to over 2000 producers by the end of 1991. Each farmer produces asparagus on plots of 0.2 hectares. Area planted to asparagus increased from 19.6 hectares in 1976, to 59 hectares in 1984 to a projected total of 400 hectares in 1991.

In order to extend the canning season for asparagus, some of the expansion is scheduled to take place in the foothills where the cooler climate will bring asparagus into production later in the season (December or January).

The farmers market their asparagus to the Basotho Fruit and Vegetables Cannery at Masianokeng. This Government owned processing facility specializes in asparagus, but also in the off-season cans some beans in tomato sauce as well as peaches and French style green beans. The cannery purchases haricot beans from Basotho farmers for canning, but relies on its own small farm (15 hectares) to produce the bulk of the green beans canned. The Cannery used to procure the bulk of its peaches in the R.S.A, but now relies heavily on Basotho produce (Cannery Management, personal interview, July 1986).

Asparagus produced for the cannery is harvested as white spear asparagus. A small percentage of the asparagus production is harvested green and sold fresh in Maseru supermarkets. Canned asparagus is sold on world markets, primarily to Germany. With the opening of a new international airport within a few kilometers of the cannery, there appears to be fair potential for export of fresh asparagus. However, further development of refrigeration equipment in the cannery and investment in refrigerated trucks is necessary to facilitate transport of fresh asparagus. Such an operation requires very close coordination.

Berries from wild rose are now also being picked and made into jam and sold locally. This is the second year of canning rose hip jam. The idea is to collect these from all over the country.

In addition, the cannery is interested in the purchasing, processing and exporting of strawberries, artichokes and mushrooms (Mokhesi, 1984).

It has been suggested that the cool weather vegetables; cauliflowers, broccoli and cabbages, may be successfully grown and exported into the South African market (Savage, Kraidy and Mannion 1985). However this venture would not necessarily be connected to the cannery operation.

Fresh Vegetables

Fresh vegetables consumed in Lesotho are produced in a variety of situations: home gardens, communal gardens, private commercial farms (with or without project or donor assistance), institutions, state farms, donor assisted projects, and South African farms. The system which has evolved to facilitate the marketing of vegetables from this diverse group of producers is composed of a number of marketing channels, market participants, and government and donor institutions. While there is no parastatal organization involved in the marketing system to parallel Coop Lesotho, there is a network of institutions and agencies involved less directly. Before a discussion of these is presented, it will be useful to consider how total vegetable demand is met.

Data on table 7 indicate the degree of reliance on RSA imported produce, 56.6 percent, and the relative importance of home gardens, 21.8 percent, compared to private commercial producers, 9.3 percent, in meeting total demand. Despite the large donor effort in production projects and state farms, they supply only 8.4 percent of demand. Over 2200 households are involved in communal gardens, but together these produce only 2.4 percent of demand.

Table 7: Lesotho Fresh Vegetable Supply - Disposition, 1985.

<u>ITEM</u>	<u>TONNES</u>	<u>PERCENT OF TOTAL CONSUMPTION</u>
Consumption	48,974	100.0
Project production	2,718	5.5
Private commercial production	4,551	9.3
Communal garden production	1,158	2.4
Imports	27,722	56.6
Home garden production	10,662	21.8
State farm production	1,414	2.9

Sources: Swallow and Mpemi, 1986.

Prices of fresh vegetables are based on supply and demand conditions. There are no government price controls either in Lesotho or in the RSA. There are no customs or import duties on trade between Lesotho and RSA under the rules of the Southern African Customs Union.

However, the government does issue import permits and closes the borders to imports when adequate local supplies are available to meet all local demand. Individual consumers are allowed to bring in small amounts of produce from RSA without any special documentation, but those trading on a larger scale are required to have import permits. These are issued free of charge through the District Agricultural Offices of the Ministry of Agriculture and Marketing. The permits are valid for two weeks and show the amount the traders are allowed to import. Permits are refused when supplies from domestic production are sufficient to meet local demand.

Regulation of imports requires information which is both accurate and timely about consumption, imports and domestic production. Unfortunately, the information currently available is neither. Three methods are available to collecting import data. The first involves tallying the amounts stated on import permits. However, this method over-estimates imports as traders commonly inflate their permit requests in order to accommodate any unexpected sales

(Wyeth and Moletsane, 1983). The second method is an estimation procedure based on the customs declarations collected from importers at the Lesotho border. These are declarations of the values of imports only, and must be divided by some appropriate prices to arrive at quantities. Wyeth and Moletsane (1983) followed this procedure using average South African prices. Both Wyeth and Moletsane (1983) and Savage (1985) suggested that the customs declarations likely underestimate the value of imports, though there is no gain to the importer from undercounting.

Starting in mid 1983, a third method was instituted for collecting import data. Importers had to complete an additional form to receive a permit to import produce. While they still specify a maximum amount they wish to import during the ensuing two weeks for which the permit remains in effect, they also complete a form specifying the quantities and values of the produce they imported during the previous two week period. Import permits are issued by District Agricultural Offices in nine of Lesotho's ten districts (imports destined for the mountain district of Thaba Tseka generally flow into Lesotho through the Maseru District), and decisions to restrict imports are generally taken at the district level.

The lack of information on consumption, production and imports on a continuous and current basis, coupled with poor communication and control systems, makes it impractical to simply reduce imports of particular vegetables by any certain percentage. Nor is it practical to close all entry ports at once, because not all areas of the country have surpluses nor do the surpluses occur at the same time in all locations. Only for one short period in 1985 were all lowland entry ports effectively closed.

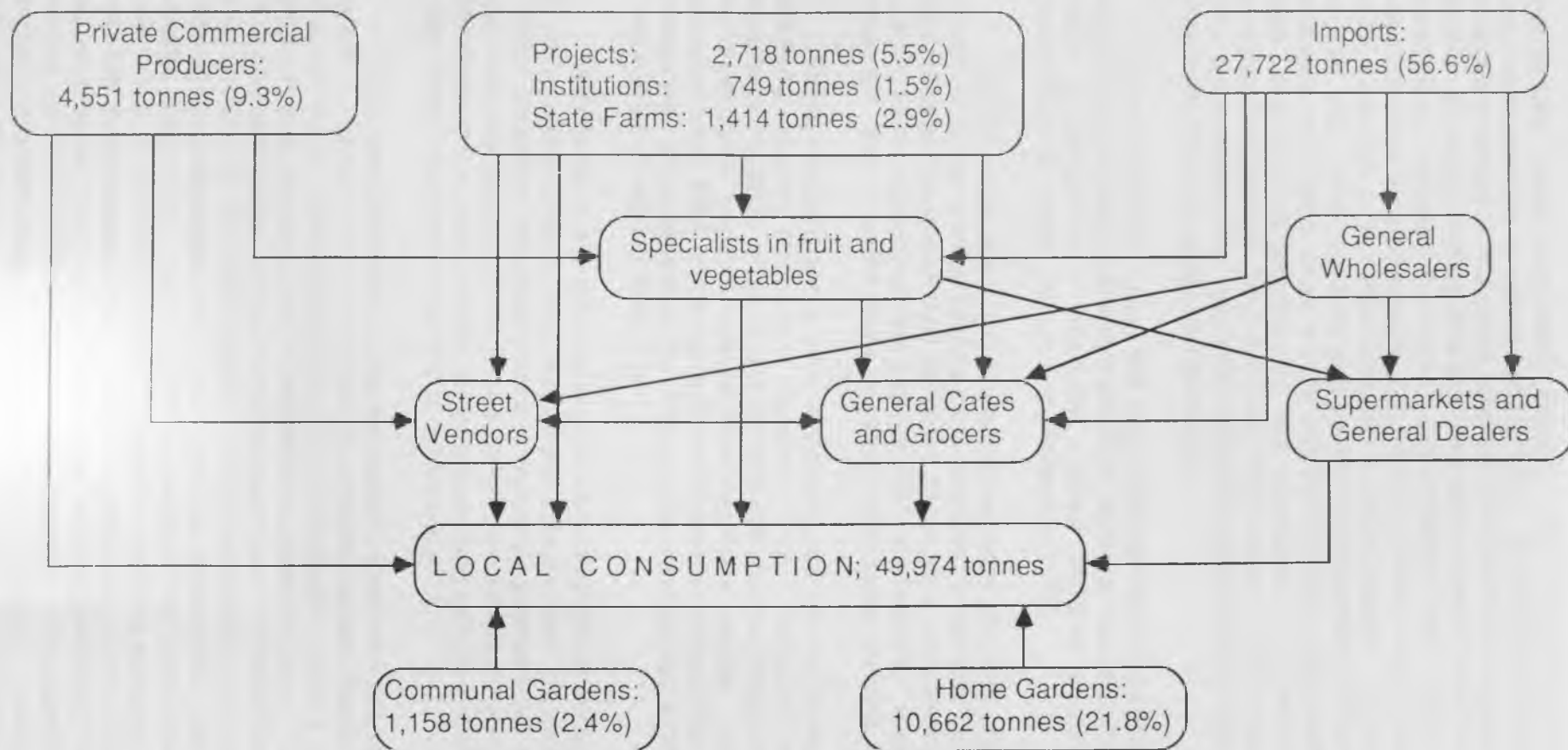
When District Agricultural Officers perceive significant local surpluses of one or more specific vegetables in their districts, certain ports of entry are closed entirely to imports of the specified vegetables. However, since all entry ports are not closed, some imported vegetables still come in through more roundabout routes.

The only direct government involvement in the marketing of fresh vegetables has been through Sunripe Fruits. Sunripe began operations in 1980 as a firm jointly owned by the Lesotho National Development Corporation and Sunripe Fruits of South Africa, and managed by the South African company. In 1982 the Government took over full ownership and management. In early 1983 it sold half of the capital and transferred management to Mafeteng Wholesalers. In late 1984 this half-ownership and management was transferred to Frazer's wholesalers. In early 1986 Frazer's withdrew their interest from Sunripe. The Lesotho National Development Corporation is again searching for a partner. Sunripe was one of the three largest produce wholesalers in Lesotho, but its operations and effect on the market were little different from the other large wholesalers.

Marketing Channels

The complex set of marketing channels for fresh vegetables is displayed in figure 4, and where estimates have been made of quantities they are included.

The distribution of vegetables through the formal marketing channels is handled by five types of traders: general wholesalers, specialty traders,



Source: Swallow and Mpemi 1986.

Figure 4: Marketing Channels for Fresh Vegetables in Lesotho
Tonnes are consumption in 1985 (expressed as a percent)

supermarkets, cafes, and street vendors. The wholesaling function is currently being conducted by a variety of traders. Businesses licensed as general wholesalers handle only a small proportion of the fresh vegetables marketed in Lesotho. Specialty traders and street vendors appear to be the most important wholesalers, followed by cafes, supermarkets and general wholesalers. Those involved in wholesaling buy most of their fresh produce from large produce markets in the RSA and sell to other traders, institutions (schools, hospitals, etc.) street vendors, and directly to consumers. One specialty trader, the largest in Lesotho, buys mostly from the RSA but is also vertically integrated within Lesotho from producer to final consumer. This wholesaler produces vegetables on his own land and also buys directly from other farmers under production contract. He also sells directly to consumers through a retail section connected with his wholesale operations.

Supermarkets buy from the larger wholesalers in the RSA or in Lesotho, and in some instances, directly from RSA produce markets and sell, primarily, directly to consumers. However, street vendors sometimes buy from supermarkets for resale (Wyeth and Moletsane 1983).

Cafes are usually relatively small retailers and sell staples, groceries and soft drinks, as well as various other food and household items. In addition, some cafes sell prepared food for on or off premise consumption. They usually buy their fresh vegetables from local or RSA wholesalers. They sell directly to consumers and, in some cases, to small scale street vendors.

Street vendors are a very important part of the formal fresh produce marketing system throughout Lesotho. They account for a significant percentage of urban trade and dominate commercial sales in smaller towns. The larger street vendors operate from vegetable stands, vans or lorries and purchase from RSA markets and wholesalers as well as from domestic wholesalers. In some towns, the larger street vendors buy significant quantities of vegetables in season from local farmers.

Most farmers are still operating in vegetable deficit areas and are able to sell their surplus produce at or near retail prices to their neighbours. However, in some instances when surpluses temporarily exceed local demand they are faced with marketing their produce outside their immediate area. Invariably they can do so only at substantially lower prices than can be obtained in their own village when local demand exceeds local supply.

First, they must incur transport costs to take their produce to an outside market. Second, they must sell in a market where retail prices are lower because these markets are nearer to wholesale markets and incur lower transport costs from the main commercial sources of supply. Thus, at best they are faced with retail prices that are lower than at home by two times the transport cost to the new market. Third, unless they can sell directly to an institution or undertake to retail their produce themselves, as street vendors in a nearby town or city, they must sell to a retailer (eg. to a supermarket, cafe, or street vendor), who must have a markup for retailing services. They are faced with still lower prices if they sell to a wholesale distributor and in so doing acquire both wholesaling and, indirectly, retailing services. Among the more onerous costs of wholesaling may be packaging. For example cabbages are handled in pockets (bags) that contain 8 to 12 heads of cabbage. These bags cost about 40c each and make up approximately 10 percent of the wholesale price of packaged cabbages.

Few farmers understand the costs and services involved in the formal marketing system. Typically they are convinced that the prices offered are unfair and that traders get too much markup for their costs and services. Recently, a specific farmer vegetable marketing problem was brought to the attention of the Marketing Section of the Ministry of Agriculture's Research Division. Farmers in the Nyakosoba research prototype area responded to recommendations to increase their family incomes through increased vegetable production. The Marketing Section has developed an extension education programme in vegetable marketing designed to help the farmers deal with their own marketing problems.

The point is accepted that marketing is not just an isolated post-harvest activity for which producers have little or no responsibility. Among the more important aspects of the programme are:

- (1) providing information to the farmers on price variability by crop, and by season, and different quality grades;
- (2) acquainting farmers with the possible uses of this information in planning what vegetables to plant and when to plant them;
- (3) providing information on what can be done to enhance and maintain quality during both production and marketing of the vegetable crops;
- (4) assisting farmers in finding appropriate market outlets and channels and arranging transportation.

The farmers responded well to the extension marketing programme. They changed varieties of cabbages planted to better match consumer preference, and on their own, found buyers and negotiated sales.

CONCLUSION

Concern over the increasing dependence on the RSA for imports of the major food grains, pulses and fresh vegetables is reflected in the recent policies of the Government. While a great deal of effort continues to be expended on increasing production, the Government has become increasingly aware that changes in the marketing systems must accompany increases in production. While the current marketing systems for grains and pulses continue to be dominated by parastatals, past experiences have shown that these institutions must be operated efficiently and must be able to respond to the changing needs of producers and consumers.

Lesotho appears to have great potential for increased production of both processed and fresh vegetables. On-going expansion of the processing facility and increased contracting of asparagus production is clearly tapping the potential for processed vegetables, and prospects look bright for future expansions. Alternatives for developments of the fresh vegetable marketing system are being considered, but past experiences have taught that caution must be exercised lest marginal producer gains are bought with large consumer losses.

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