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MAIZE MARKETING AND PRICING IN LESOTHO: IMPLICATIONS FOR POLICY REFORM

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A study was conducted during 1994-1995 amongst policy makers, government officials, retailers and millers in Lesotho to review the maize marketing system and procedures for setting maize prices at producer, mill-gate and consumer levels. Set prices distort price signals which influence decisions to allocate and distribute resources to provide goods and services for markets. Lesotho is a net importer of maize grain, the major staple, implying that maize pricing and marketing policy affect food security. Results indicate flexible informal marketing channels, fixed formal marketing channels and declining real producer, mill-gate and consumer prices in recent years. Falling real South African Maize Board export grain prices and evidence of subsidies to commercial Lesotho mills explain these price trends. Changes to the one channel formal marketing system and nationally administered price structure that would encourage an open market system with less restrictive interregional maize trade are recommended.

SAMEVATTING: MIELIEBEMARKING EN -PRYSBEPALING IN LESOTHO : IMPLIKASIES VIR BELEIDSHERVORMING

'n Studie is gedurende 1994/95 gedoen by beleidsbepalers, regeringsamptenare, kleinhandelaars en meulenaars in Lesotho om die mieliebemarkingsstelsel en die prysbepalingsprosedures op produsente-, meulhek- en verbruikersvlakke te ondersoek. Vasgestelde pryse vervals prysse wat 'n invloed uitoefen op besluite oor allokasie en verspreiding van bronne vir die voorsiening van goedere en dienste aan markte. Lesotho is 'n netto-invoerder van mieliegraan, die belangrikste stapelvoedsel, en bemarkingsbeleid voedselsekureit beïnvloed. Resultate toon plooibare informele bemarkingskanale, vaste formele bemarkingskanale en dalende reële produsente-, meulhek- en verbruikerspryse in onlangse jare. Dalende reële Suid-Afrikaanse Mielieraad uitvoerpryse en aanduidings van subsidieë aan Lesotho graanmeulens verklaar hierdie prysstendense. Veranderinge aan die eenkanaal formele bemarkingsstelsel en aan die nasionale geadministreerde prysstelsel wat 'n opemerkingsstelsel met 'n minder beperkende internasionale mieliehandel sal meebring, word aanbeveel.

1. INTRODUCTION

Maize is the major food staple in Lesotho, constituting some 50-60 percent of the diet (kilojoules) of average Basotho households (National Early Warning Unit, 1994). This study was conducted in Lesotho to investigate its maize marketing and pricing system during the 1980's up until early 1995, prior to major policy reforms in Lesotho and South Africa. The Lesotho government's overall

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agricultural policy objectives have been to improve rural incomes, provide employment and to improve national food security (Government of Lesotho, 1986; 1992). Mechanisms to stabilize producer and consumer prices of maize and reforms to maize marketing are some of the policy instruments used to improve food security (Government of Lesotho, 1986; 1992). Strategies for food security in the 1980's were based on increasing local capacity to produce staple cereals, through increased agricultural development and food production, to maintain critical food reserves (Tola, 1988; Eckert, 1983; Swallow and Borris, 1988). The fear was that world sanctions against South Africa, and potential breakdown in political relations between Lesotho and South Africa, would put Lesotho under severe risk of food shortages, as about 50 percent of its food supplies came from South African commercial imports (Government of Lesotho, 1981; Tola, 1988; Swallow and Borris, 1988; UNCDF, 1993). This prompted the government to engage in the Food Self Sufficiency Programme (1979/80) to expand food grain production (Government of Lesotho, 1981; 1986; Tola, 1988; Swallow and Borris, 1988; Eckert, 1982; 1983), with the first objective to achieve self-sufficiency in maize and sorghum production within five years. Maize pricing and marketing regulations (which will be discussed later) were established to support this initiative of self-sufficiency in the staple grains (Government of Lesotho, 1981; 1986).

By the start of the 1990's, political changes in South Africa reduced fears about reliance on South African imports. Commercial imports of staple grains had also not appreciably declined, as regional trade envisaged under the Southern African Development Coordinating Conference, now the Southern African Development Community (SADC), had not provided Lesotho with food imports. The costs to the government of the large scale Food Self Sufficiency Programme were mounting. Between 1980/81 - 1982/83, the Republic of China provided loans totalling US\$6,6 million, the government of South Africa provided a credit line of R2 million and the government of Lesotho secured various loans and overdraft facilities in excess of R19 million (Swallow and Borris, 1988). Hanneken (1993) estimated losses and bad debts of over R17 million for 1992 alone. These considerations and pressure from multi-lateral donors for the government to pursue macroeconomic reforms to reduce government expenditures and debt (Government of Lesotho, 1994; Ministry of Agriculture, 1995) drew attention to maize marketing and pricing regulations (Motsamai, 1994).

Maize and grain market reforms were proposed under both initial and enhanced Structural Adjustment Programmes (Government of Lesotho, 1994) and by Ministry of Agriculture guidelines (Ministry of Agriculture, 1993; 1994a) initiated in the 1980's and early 1990's. The Structural Adjustment Programmes

were seen as a necessary step towards stabilizing the economy and to increase growth potential which was impeded by structural impediments (Maruping, 1995; Government of Lesotho, 1994). These were evident in the form of a growing fiscal deficit, negative and widening external current account deficit, and rising public debt, whilst structural under-development and distortions were seen to hinder the growth of the economy (Maruping, 1995). The Structural Adjustment Programmes suggested that government stop supporting and subsidizing parastatals such as Co-op Lesotho which was the principal supplier and buyer of farm inputs and produce and the main formal purchaser of grains. They also recommended the privatization or commercialization of all parastatals in the agricultural sector and of government owned agro-industries. Suggested reforms to the Food Self Sufficiency Programme included the phasing out of government support and subsidies to the Technical Operations Unit and the Lesotho Agricultural Bank administered credit component of the programme (Government of Lesotho, 1992; Ministry of Agriculture, 1993).

Past research by Olson (1985) on long term demand for maize in Lesotho, has shown that despite shifting consumer trends and rising incomes, demand for maize would continue to grow and local supply factors would increasingly be unable to cope with this demand. Brokken (1986) reported that most agricultural produce in Lesotho was for home consumption or marketed locally in the informal market with little farm produce entering the formal market, while marketing infrastructure was poor. Mokitimi (1990) found the formal maize marketing system was very small and would need to expand to meet growing consumer demand, whilst a very active informal market operated parallel to the formal market. Bayley (1993) deemed the maize marketing system in Lesotho to be inefficient and overly regulated, protecting the commercial millers at a significant cost to government and consumer welfare.

This paper extends the above research by investigating policy measures applied to maize marketing and maize price setting in Lesotho and their impact on consumers, producers, millers and the government. It recognizes the need to re-orientate food security objectives in Lesotho away from those that applied in the 1980's when sanctions could have limited grain imports from South Africa. The need for government to implement liberalisation of the maize grain trade as suggested by Bayley (1993) is supported. The elimination of subsidies to the commercial mills and the removal of price regulations are also recommended.

2. MAIZE MARKETING SYSTEM IN LESOTHO

Lesotho is a small Southern African state surrounded by the Republic of South Africa. The marketing of maize and other agricultural products in Lesotho is

primarily governed by the 1967 Agricultural Marketing Act, the 1979 Marketing Amendments Act and various Legal Notices published periodically in government gazettes. The 1967 Marketing Act empowers the Minister of Agriculture to gazette regulations and/or intervene in aspects such as product pricing, trade and marketing. Seasonal forecasts for production are made before and after harvest and a trading account constructed using projections of existing and/or expected national stocks from imports and food aid monitored by the National Early Warning Unit and the Food Management Unit. Most maize grown in Lesotho is consumed by households and there are few surplus producers. Most domestic maize (about 70 percent) is grown in the northern and central districts of Lesotho (Ministry of Agriculture, 1994a). The commercial mills are strategically located in the border towns of Maseru (centre) and Maputsoe (north), which are convenient for importing maize grain. The maize is imported from South Africa through the South African Maize Board which is the sole exporter of maize in South Africa. The South African Maize Board transports the maize mainly from silos in the Free State by rail to Maputsoe and Maseru (Lesotho Milling Company, 1994).

Imports, including food aid, constitute over 50 percent of total annual consumption of maize in Lesotho. Consumption figures for maize show an average of 126 kilograms per capita for the period 1981-1993 (Bureau of Statistics, 1994; Austin, 1993; Food Management Unit, 1994).

2.1 Informal sector

Maize produced in the informal sector is primarily consumed at the household/village level and very little enters the formal marketing chain. Maize is ground at home or by hammer millers who charge milling fees. A few surplus producers also sell maize privately or engage in maize trade for bartering purposes, particularly in exchange for livestock. Bayley (1993) and the Ministry of Agriculture (1992) report 70 kilogram bags being exchanged for one or two sheep in the Highlands (sheep sold for about R250 each in 1994).

2.2 Formal Sector

Data for the period 1981/82 - 1993/94 show that most households are deficit producers (Ministry of Agriculture, 1994b; National Early Warning Unit, 1994; Food Management Unit, 1994). Formal maize marketing channels are very limited and there are only three mills in Lesotho. The parastatal, Lesotho Flour Mills, milling maize as Lesotho Maize Mill in conjunction with a management team from Spillers (UK) since 1986, is located in Maseru. Two other mills, Maputsoe Milling and Maseru Roller Mills, are both operated under Lesotho

Milling Company, a partnership between Tiger Oats (a South African registered company) and the Lesotho National Development Corporation (government parastatal). Maseru Roller Mills has been milling maize for 23 years. The mills process and package maize meal and maize by-products (animal feeds), wheat meal, and sorghum. Lesotho Flour Mills also packages and distributes other commodities such as sugar. The bulk of maize processed in the formal sector comes from commercial imports and food aid. Both Lesotho Flour Mills and Lesotho Milling Company report that less than 10 percent of their intake is from local production. Table 1 shows the amount of local maize milled and its proportion to all maize milled commercially in the period 1987/88 - 1992/93.

Lesotho Flour Mills also milled 3 000 tons of donated food aid on behalf of government in 1988/89 and 4 000 tons in 1989/90 above local intake and commercial imports. Lesotho Flour Mills in 1991/92 and 1992/93 received direct commercial imports of 20 000 and 17 500 tons, respectively, from Zimbabwe (Lesotho Flour Mills, 1994). Lesotho Milling Company has not processed any food aid in the past five years and receives direct commercial imports through the South African Maize Board and its agents.

Table 1: Local versus imported maize milled commercially in Lesotho, 1987/88-1992/93

YEAR	LOCAL MAIZE¹⁾ (Tons maize milled)	IMPORTE D MAIZE²⁾ (Tons maize milled)	TOTAL MAIZE (Tons maize milled)	LOCAL MAIZE MILLED (Percent)
1987/88	8 906	83 865	92 771	9,6
1988/89	11 156	75 305	86 461	12,9
1989/90	8 805	89 028	97 833	9,0
1990/91	23 760	135 703	159 463	14,9
1991/92	3 400	132 600	136 000	2,5
1992/93	1 593	143 288	144 881	1,1

Sources: 1) Lesotho Milling Company (1994) and Lesotho Flour Mills (1994)
2) Food Management Unit (1994)

Maize throughput at Lesotho Flour Mills has been rising since the mill's inception (1986) with a 39 percent per year increase from 1988/89 - 1992/93 (Lesotho Flour Mills, 1994). Annual turnover increased from R78,67 to R164,17 million over the same period. Sugar packing, wheat processing, animal feeds production and other operations contribute more to Lesotho Flour Mill's revenue than maize milling. Revenues from the processing of maize averaged only 6,35 percent of turnover over the five year period considered.

At the Lesotho Milling Company's Maputsoe mill, throughput of maize in the years 1989/90 to 1992/93 varied from 50 532 to 67 342 tons. Annual turnover over that period rose steadily from R34,64 to R60 million. Maize revenue averaged 94,3 percent of overall turnover over the four year period. For the Lesotho Milling Company's Maseru Roller Mills annual maize throughput and revenue averaged about 25 000 tons and R23 million respectively from 1990/91-1992/93, with maize revenue averaging 96 percent of total revenue (Lesotho Milling Company, 1994). Table 2 summarises annual throughput and turnover for the commercial mills.

Based on 1992/93 figures, Lesotho Flour Mills produced 49,1 percent, Maputsoe Mill 38,6 percent and Maseru Roller Mills 12,3 percent of commercially milled maize meal in Lesotho. Both Lesotho Flour Mills and Lesotho Milling Company are reluctant to expand purchases of domestic maize because of high transaction costs, relatively high local prices and inconsistent quality compared to maize

from South Africa. Local producers supply irregular and small quantities of maize and often have to travel long distances to reach the commercial mills. The government stipulates that all domestic maize delivered to the mills must be bought (Motsamai, 1994). Co-op Lesotho (prior to the 1992/93 marketing year) and other traders buy locally produced maize at the legislated price and sell it to the mills at the government gazetted price (Legal Notice No 142 of 1992), as do farmers who deliver to the mills (Ministry of Agriculture, 1994b). The price offered by Co-op Lesotho to farmers was the price set for traders. Private traders are known to offer more than this price (Ministry of Agriculture, 1992), but they rarely purchase locally produced maize with the intention of selling to the commercial mills. Bayley (1993) and Motsamai (1994) suggest that private traders are not convinced that the price they receive from the mills for delivery of maize is sufficient incentive compared with higher expected returns from informal market sales. Co-op Lesotho, after incurring trading losses for over a decade, was closed during the 1992/93 marketing year in terms of Structural Adjustment Programme clauses to reduce government expenditure and sell non-profitable parastatals (Ministry of Agriculture, 1994a).

Table 2: Maize throughput and annual turnover (R million) of maize mills in Lesotho, 1988/89-1992/93

Year	Lesotho Flour Mills		Lesotho Milling Company			
			Maputsoe Mills		Maseru Roller Mills	
	Maize Milled (Tons)	Turnover (R mill)	Maize Milled (Tons)	Turnover (R mill)	Maize Milled (Tons)	Turnover (R mill)
1988/89	16 171	78,669	*****	*****	*****	*****
1989/90	*****	103,127	57 821	34,644	*****	*****
1990/91	60 059	115,775	50 532	34,951	26 409	23,458
1991/92	80 869	149,795	65 749	52,364	23 804	24,218
1992/93	85 641	164,171	67 342	60,000	21 537	22,590

***** Indicates that these figures were not available

Sources: Lesotho Flour Mills (1994) and Lesotho Milling Company (1994).

All of the commercial maize meal produced is sold locally. Reports of illegal imports of both maize grain and meal are common. The commercial mills have challenged certain stores and border controls (posts where they suspect or have information that maize grain/meal is entering the country) over import infringements. Only the Lesotho government, through the Department of Economics and Marketing, can legally issue import permits for commercial and

non-commercial uses of maize. Imports are restricted for maize grain and mealie meal. The areas adjacent to South Africa are not closely policed, customs officials rarely conduct searches and there are large sections without border controls, so maize import regulations can be avoided. High internal transportation costs make illegal maize meal imports from South Africa cheaper than the locally milled maize meal. Inconsistent supply and the lack of available credit place constraints on the trading of local maize meal. Lesotho Milling Company only makes bulk deliveries upwards of eight tons and extends only limited credit to traders. Discounts are available only to large buyers. Where infrastructure is well-established, the mill delivers to all 10 districts of Lesotho. The new maize marketing system operating in South Africa since 1 May 1995 has not altered existing formal trade arrangements and marketing opportunities with Lesotho. While maize can now be traded freely within South Africa, with market-related regional pricing replacing the old cross-subsidized "single-price" system, the South African Maize Board remains the sole exporter of maize. The commercial mills in Lesotho, therefore, in effect are still unable to purchase directly from South African producers and agents. Agricultural products generally, and maize in particular, are not subject to Southern African Customs Union (SACU) free trade regimes, although this may well change under the current renegotiation of the SACU Treaty (Motsamai, 1995).

2.3 Marketing opportunities

Most local producers in Lesotho can sell their grain either to the mills (formal) or to informal buyers (other households and local traders/millers). Surplus producing households with large quantities of maize grain participate in the formal market as suppliers when they sell to the mills, particularly immediately after harvest. This is probably due to 1) a cash need after harvest as farmers cannot wait to sell on the informal market once home grown grains have been consumed; 2) a need to repay bank financed Food Self Sufficiency Programme loans or loans for contractor services; and 3) high transaction costs (storage, handling, etc) which make formal producer prices competitive with the informal price (Bayley, 1993). Reasons 1 and 3 suggest that the informal market price after harvest is low and closely approximates the formal market clearing price. Selling to the formal sector is thus the most attractive economic option for large surplus producers whose supply is net of own subsistence needs. These conditions plus the producer price determine the quantity of grain sold to the mills and the quantity sold to the informal market.

For grain deficit producers (most households), grain can be obtained by either purchasing commercial maize meal from traders and retailers, and/or buying grain on the informal market. Bayley (1993) and the Ministry of Agriculture

(1992) contend that in most areas the price of maize grain tends to approach the retail price of refined maize (RP) minus informal milling costs (MC). Due to the availability of commercial meal, (RP-MC) effectively becomes a ceiling price for transactions within the informal market. Supply of maize at this price is perfectly elastic to rural consumers. Maize suppliers will sell at the market clearing price as determined by local demand conditions. Trade flows of local maize grain are limited to the period just after harvest. Hence, there is an inflow of commercial maize meal to grain deficit areas despite local consumer preferences for coarser (local) maize meal.

3. PRICE SETTING, MARGINS AND CONTROLS

Farmer representatives from the ten districts, officials from the Ministry of Agriculture and senior personnel from Lesotho Flour Mills and Lesotho Milling Company are involved in setting prices at different levels in the maize marketing system.

3.1 Producer price

Producer prices are set by the Ministry of Agriculture for producers who deliver to the three commercial mills. Prices are also set for deliveries to trading stores by calculating handling charges plus a variable margin - dependent on the import parity price which is based on the South African Maize Board price (Motsamai, 1994; Bayley, 1993), and local production costs. The local producer price is based primarily on local production costs derived from cost calculations made by the Food Self Sufficiency Programme and quoted contractor prices. The producer price calculations are determined by the Ministry of Agriculture and farmer representatives (Motsamai, 1994). Uniform or pan-territorial pricing strategies have been used for the whole country. This system benefits producers in surplus areas who otherwise would receive lower prices (Masters, 1993).

Real maize producer prices have declined steadily in the last ten years from around R430 per ton to just under R350 per ton in 1994 (1989 = 100). This is largely due to falling real prices of maize grain imports from South Africa which are used as a reference, and pressure on government from the three mills to not support high local producer prices (Motsamai, 1994). South African producer prices have consistently been lower than Lesotho producer prices and direct cross-border purchases from South African farmers would allow Lesotho buyers to acquire cheaper grain. However, the new South African regulations stipulate that the South African Maize Board remains the sole exporter of maize.

3.2 Informal miller price

Informal millers do not have their prices set by government. In 1992, a study carried out by the Department of Economics and Marketing in Lesotho showed average informal milling costs to vary from R1,00 to R2,50 per 12,5 - 15 kilogram container (Ministry of Agriculture, 1992). Informal millers in both urban and rural areas can buy directly from local farmers without their buying and selling prices being monitored or enforced by the government.

3.3 Formal miller and consumer prices

3.3.1 Mill-gate price

The government consults with miller personnel on maize milling margins and then determines and legislates the mill-gate price (Lesotho Milling Company, 1994). Prices are based on the border parity price, costs of production (for local producers and reflected in the producer price), processing, refining and packaging, plus what Lesotho Flour Mills (1994) claims is a 10 - 15 percentage mark-up which also includes transport (Lesotho Flour Mills, 1994). Border parity pricing is necessary, since the bulk of grains milled is imported from South Africa. The mills' transport and procurement costs are in respect of imports. Quoted transport figures per ton for 1991/92 and 1992/93 for Lesotho Flour Mills were R38,91 and R44,20 compared to R48,00 and R67,00 for Lesotho Milling Company. Some of these discrepancies are due to Lesotho Milling Company reporting mean transport costs for two mills at two different locations (Lesotho Milling Company, 1994).

Lesotho mill-gate prices for maize meal have generally declined in real terms since 1983/84. In 1984/85 the price was a high of R637,37 per ton, dropping to a low of R441,40 per ton in 1993/94 (1989 = 100). The trend is similar for smaller volumes of maize meal. South African mill-gate prices appear to have declined over a comparative period, from R712,25 per ton (1981/82) to R674,71 (1993/94) per ton (Directorate of Agricultural Information, 1994), as the South African Maize Board has paid lower net producer prices which reflect export losses. The mill selling price in South Africa, prior to the 1995 policy change, covered South African Maize Board prices, agents' costs, milling costs and mill profit margins.

The Lesotho government gives *de facto* monopoly powers and subsidies (effected through amendments and bills provided by the 1967 Marketing Act) to both Lesotho Milling Company and Lesotho Flour Mills. There are no reported figures to show the extent of subsidisation, but the total level of subsidy is estimated in Table 3 by the difference between South African and Lesotho mill-gate prices. The rationale is that the alternative to purchasing locally milled

maize meal would be to import maize meal from South Africa. The estimates are a lower limit as transport costs have been ignored. The estimated total level of subsidies has risen in real terms since 1989/90, and for the 1992/93 season was some R38,05 million (assuming estimated mill throughput of 174 550 tons). Subsidy amounts are estimated after converting 80 kilograms of sifted maize meal to a one-ton equivalent.

Table 3: Estimated Lesotho government subsidies to mills, 1989/90-1993/94, in real terms (1989 = 100).

Year	SA Mill-gate Real Price * R/ton	Lesotho Mill-gate Real Price R/ton	Estimated real Subsidy R/ton
1989/90	713,60	585,77	127,83
1990/91	718,63	576,91	141,72
1991/92	705,44	563,20	142,24
1992/93	705,78	487,79	217,99
1993/94	674,71	441,50	233,21

* Converted 80 kilogram sifted maize meal to a one-ton equivalent

Sources: Directorate of Agricultural Information (1994), Bureau of Statistics (1994), and Department of Economics and Marketing (1994)

Close to 100 percent of the commercial grain market in Lesotho is controlled by Lesotho Milling Company and Lesotho Flour Mills. The commercial mills, informal millers and the general public cannot make direct bulk purchases without import permits that are limited at the discretion of the Department of Economics and Marketing (Legal Notice 78 of 1992). For the period July 1992 to June 1993 permits were granted to the general public to import 5 395 tons of maize (barely 2,9 percent of commercial grain consumption) compared to 184 050 tons by the commercial mills (Department of Economics and Marketing, 1994; Bayley, 1993). Informal mills probably continue to exist due to 1) indigenous rural and some urban preference for coarser maize meal; 2) convenience with respect to time and location; and 3) lower direct milling costs (Motsamai, 1994; Bayley, 1993).

3.3.2 Consumer price

Since 1988 retailers and wholesalers have been free to determine their own prices for maize meal, except in 1992 when a severe drought was experienced and government set the price. Consumer prices for maize meal, taken from Bureau of Statistics CPI estimates for 12,5 kilogram and 2,5 kilogram quantities,

declined in real terms between 1988/89 - 1993/94. For the 12,5 kilogram unit, prices dropped from R8,99 to R7,60 (or 15,46 percent) over the five year period. A direct comparison between real consumer prices in Lesotho and South Africa shows that Lesotho consumer prices have fallen from R719,20 per ton to R608,00 per ton, whilst South African consumer prices have remained fairly constant at around R1 080 per ton (1990 = 100) (Directorate of Agricultural Information, 1994). Over the past five years, the differences between consumer prices in Lesotho and South Africa have grown, with South African consumer prices being higher. The Lesotho government's subsidy to the mills and the withdrawal of maize subsidies in South Africa from 1993 probably explain these differences. In real terms South African Maize Board prices fell at a slower rate than South African producer prices and the Maize Board - producer price margin increased, due to the need to finance export losses (Faminow and Laubscher, 1991; Directorate of Agricultural Information, 1994).

4. POLICY IMPLICATIONS AND CONCLUSIONS

Lesotho is likely to remain a net importer of maize grain in the medium to long term, as over 50 percent of total annual grain consumption is made up of imports. This situation has not been reversed, despite major investments and capital infusions made in the 1980's to increase self-sufficiency in maize. Maize pricing and marketing policy measures to support food self-sufficiency initiatives have led to falling real producer prices over the last 10 years, and most farmers remain net deficit producers. Farmers producing small surplus quantities of maize grain for sale generally sell to the local informal market. Efforts have been made to change the producer price setting mechanism -based on cost of production and border parity pricing criteria - by using improved cost of production estimates, with a shift from data supplied by the Technical Operations Unit of the Ministry of Agriculture to estimates from individual farm machinery operators. Costs for inputs are no longer based on Co-op Lesotho prices but on prices from private sector input suppliers (Ministry of Agriculture, 1994a).

Lesotho production cost estimates are, however, difficult to obtain since production is influenced by different production systems, technological and environmental conditions. Costs that influence farmer decisions (opportunity costs) are subjective (Takavarasha, cited in Krishna, 1990), and basing price supports on cost of production is not a justifiable concept (Pasour, 1980). The likely reason for cost of production pricing is the Lesotho government's desire to meet self-sufficiency targets in staples (Gray, 1992), but is this sufficient or justifiable if relatively cheaper imports are available? Other changes considered include the removal of pan-territorial (uniform across districts) and pan-seasonal

(uniform throughout the season) producer prices. Use of pan-territorial pricing prevents both the private sector and parastatal bodies from engaging in profit-generating trade (Kingsbury, 1989; Muir and Takavarasha, 1989). Uniform prices also "infer an implicit transport subsidy which distorts resource allocation by encouraging the production of maize, which is a low value, high bulk commodity even in remote and unsuitable regions" (Muir and Takavarasha, 1989:112).

At the mill-gate level, the most important factor is the border parity price, as most commercially milled maize is sourced from South African Maize Board exports. The South African Maize Board export price affects the Lesotho government's decisions on both maize milling margins and mill-gate prices in Lesotho. If this export price significantly increases or fluctuates, the government may try to reduce the impact of these changes by adjusting maize milling margins and mill gate prices. In the longer term, however, expected further liberalisation of export maize marketing in South Africa will result in domestic and international prices becoming more correlated, and Lesotho will find it more difficult and more expensive to isolate itself from these influences. Government pricing policies also prevent competition between mills, and reduce trader and wholesaler competition for market share.

If maize prices are to remain affordable to Lesotho consumers when most households are deficit producers and government subsidy costs are rising, the present one-channel marketing system and administered price structure are possibly inappropriate. It may be possible, for example, to obtain maize grain at relatively lower prices directly from South African farmers. This would have to be negotiated with the South African Maize Board as the sole South African exporter, and SACU which prohibits free trade of some agricultural products, including maize. Allowing consumers and traders to trade and market maize grain in an open market system with less restrictive interregional maize movement (remove restrictive licensing) could also be an option. Removal of regulated prices and import restrictions on maize grain could see producer prices in Lesotho fall further. The few surplus maize producers in Lesotho would be likely losers, while the majority of producers who are net consumers would benefit.

Deregulated markets could benefit consumers through a wider product choice and lower prices. Both rural and urban consumers could then obtain their more preferred local coarser meal since more grain would enter the local market. However, consumers in the Highlands could pay more for maize grain with deregulation since the cross-subsidisation effect of pan-territorial pricing would be eliminated. In a deregulated market the major mills would face increased

competition from the local hammer mills, thus providing incentives to reduce marketing and milling costs, resulting in reduced maize meal prices. The market share of local hammer mills would likely increase, especially in more remote areas. The repeal of legislation requiring the major mills to buy all grain offered to them could stimulate growth in other areas of the economy and improve rural non-farm incomes. Profit margins to major mill operators could decline as product prices fall and turnover declines due to reduced market share. The mills may, under these circumstances, have to shed labour and increase productivity. Lesotho Flour Mills already produces a wide variety of goods and its profit record suggests that it could survive with less maize milling. Lesotho Milling Company would need to diversify and operate in other commodities. The existing major mills would benefit from buying less local maize grain if they no longer had to purchase all locally produced maize that is delivered.

There would, however, be a trade-off between deregulation of maize marketing and the removal of price controls and government subsidies during the transition. The expected maize meal price increases when subsidies are removed would be partly offset by expected price reductions due to more competition and less control on grain imports. Financially, the government (taxpayers) would benefit from reduced or eliminated subsidies and less administrative procedures required to police, monitor and regulate maize pricing and marketing. Privatization of the mills would also provide revenue for the government which could then justify phasing out the Food Self Sufficiency Programme and re-direct agricultural transformation into the production of cash crops and other suitable agricultural products as envisaged in the more recent policy strategies for agriculture (Ministry of Agriculture, 1995; Food Studies Group, 1995). The government would also be more in line with meeting the stringent conditions of the Structural Adjustment Programmes.

The discussion above has outlined some of the likely impacts of maize marketing and pricing reform on Lesotho producers, consumers and millers, and the Lesotho government (taxpayers). Further research is needed to quantify the extent of these welfare effects.

NOTE

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REFERENCES

AUSTIN, L. (1993). *Cereal supply and utilization*. Unpublished paper, National Early Warning Unit, Lesotho.

BAYLEY, B. (1993). *Maize marketing in Lesotho and its impact on consumer prices*. Maseru, Lesotho: Annexure to Drought Relief Implementation Group Report.

BROKKEN, R.F. (1986). *Marketing Grains, Pulses and Vegetables in Lesotho*. Research Division Bulletin RD-B-47, Ministry of Agriculture, Maseru, and Research Report No. 12, Institute of Southern African Studies, National University of Lesotho, Roma.

BUREAU OF STATISTICS. (1994). Ministry of Planning, Lesotho.

DEPARTMENT OF ECONOMICS AND MARKETING. (1994). *Ministry of Agriculture, Lesotho*.

DIRECTORATE OF AGRICULTURAL INFORMATION. (1994). *Abstract of Agricultural Statistics*. Department of Agriculture, Pretoria.

ECKERT, J.B. (1983). Lesotho's food priorities. *Food Policy*, Vol 8:76-81.

ECKERT, J.B. (1982). *Toward the Year 2000: Strategies for Lesotho Agriculture*. Lesotho Agriculture Sector Analysis Research Report No. 10. Planning Division, Ministry of Agriculture, Maseru, and Department of Economics, Colorado State University, Fort Collins.

FAMINOW, M.D. AND LAUBSCHER, J.M. (1991). Empirical testing of alternative price spread models in the South African maize market. *Agricultural Economics*, Vol 6:49-66.

FOOD MANAGEMENT UNIT. (1994). Maseru, Lesotho.

FOOD STUDIES GROUP. (1995). *Strategic directions for Lesotho's agriculture and agro-industries*. A study for EU assistance in Lesotho's crop and livestock sub-sectors. FSG, University of Oxford, 1995.

GOVERNMENT OF LESOTHO. (1994). *Policy Framework and Memorandum of Economic Financial Policies*. Ministry of Finance, Lesotho.

GOVERNMENT OF LESOTHO. (1992). *Fifth Five Year Development Plan, 1991-1995, Lesotho*.

GOVERNMENT OF LESOTHO. (1986). *Fourth Five Year Development Plan, 1986-1990, Lesotho.*

GOVERNMENT OF LESOTHO. (1981). *Third Five Year Development Plan, 1981-1985, Lesotho.*

GRAY, J. (1992). Maize pricing in eastern and southern Africa. *Food Policy*, Vol 17(6):409-419.

HANNEKEN, B.H. (1993). *Food Self Sufficiency Program: 2nd Report on Cost and Effort.* BMB Consultant Report for Lesotho Agricultural Development Bank, Maseru.

KINGSBURY, D.S. (1989). *Agricultural pricing policy and trade in several SADCC countries: Preliminary results.* In Godfrey Mudimu and Richard Bernstein (eds.), *Household Food, National Food Security in Southern Africa.* University of Zimbabwe / Michigan State University Research Project. Department of Agricultural Economics and Extension, Harare. Zimbabwe.

KRISHNA, R. (1990). *Price and technology policies.* In Carl Eicher and John M. Staatz (eds.), *Agricultural Development in the Third World.* Baltimore: John Hopkins University Press.

LESOTHO FLOUR MILLS. (1994). *Discussion with management, Lesotho.*

LESOTHO MILLING COMPANY. (1994). *Discussion with management. Lesotho.*

MARUPING, A.M. (1995) *Lesotho: Six years under the Economic Structural Adjustment Programme - causes, objectives, policy measures, and the way forward: 1988/89 - 1993/94 and Beyond.* Staff paper, Central Bank of Lesotho, Lesotho.

MASTERS, W.A. (1993). *The scope and sequence of maize market reform in Zimbabwe.* Food Research Institute Studies, Vol 22(3):227-251.

MINISTRY OF AGRICULTURE. (1995). *Agriculture: A strategic programme of action.* Draft prepared for Round Table Conference on Agriculture, Environment and Tourism, Maseru.

MINISTRY OF AGRICULTURE . (1994a). *Agricultural Situation Report.* Compiled by Ministry of Agriculture Statistics Section and Bureau of Statistics, Lesotho.

MINISTRY OF AGRICULTURE. (1994b). *Discussions with staff.* Lesotho.

MINISTRY OF AGRICULTURE. (1993). *Government policy on agricultural sector*. Draft discussion paper, Lesotho.

MINISTRY OF AGRICULTURE. (1992). *The informal grain market in Lesotho*. Proceedings of a Seminar. Maseru, Lesotho, September 1992.

MOKITIMI, N. (1990). *Analysis of the Performance of the Lesotho Grain Marketing System*. Research Report No. 27, Institute of Southern African Studies, National University of Lesotho.

MOTSAMAI, M. (1995). *Personal communication*. Chief Marketing Officer, Ministry of Agriculture, Lesotho.

MOTSAMAI, M. (1994). *Personal communication*. Chief Marketing Officer, Ministry of Agriculture, Lesotho.

MUIR, K. AND TAKAVARASHA, T. (1989). Pan-territorial and pan-seasonal pricing for maize in Zimbabwe. In *Godfrey Mudimu and Richard Bernstein (eds.), Household Food National Food Security in Southern Africa*. University of Zimbabwe/Michigan State University Research Project. Department of Agricultural Economics and Extension, Harare, Zimbabwe.

NATIONAL EARLY WARNING UNIT. (1994). *Data for various years*. Maseru, Lesotho.

OLSON, R.E. (1985). *Marketing patterns and long term demand for maize meal in Lesotho*. Ministry of Agriculture Planning Division, Maseru, Lesotho.

PASOUR, E.C. (1980). Cost of production: A defensible basis for agricultural price supports? *American Journal of Agricultural Economics*, Vol 62(2):245-248.

SWALLOW, BM. AND BORRIS, B. (1988). Cooperative agricultural development and food production in Lesotho. In *Kwesi Prah (ed.), Food Security Issues in Southern Africa*. The Institute of Southern African Studies. The National University of Lesotho Southern African Studies Series No. 4.

TOLA, A. (1988). *Food security in Lesotho: The challenge and strategy*. In Kwesi Prah (ed.), *Food Security Issues in Southern Africa*. The Institute of Southern African Studies. The National University of Lesotho Southern African Studies Series No. 4.

UNCDF. (1993). *Food Self-Sufficiency Programme Credit Scheme Evaluation. Mission Report to Government of Lesotho.*