

POLICY SYNTHESIS
FOOD SECURITY RESEARCH PROJECT – ZAMBIA

*Ministry of Agriculture and Cooperatives, Agricultural Consultative Forum, Michigan State University
and Market Access and Trade Enabling Policies (MATEP) Programme, Lusaka, Zambia*

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UNDERSTANDING ZAMBIA'S DOMESTIC VALUE CHAINS FOR FRESH FRUITS AND VEGETABLES*

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Major Findings:

- The *proportion of smallholder households selling horticultural produce is very low* suggesting that new demand points could enjoy substantial supply response if they link effectively to the smallholder sector.
- *The small-scale traditional marketing system continues to dominate fresh produce flows in the country.* Prices for consumers in this system are much lower, and quality is comparable and sometimes superior to supermarkets. Yet these markets suffer from *serious structural problems* due to a lack of public investment and little collaboration between public officials and traders in market management.
- The Urban Markets Development Program represents *a major and impressive effort to improve wholesale and retail markets* in the country, but has run into problems as *legislative reform has stalled.* In addition, *UMDP was not designed to address key issues of improved linkages between rural farmers and urban markets.* These need to be addressed with improved market information and marketing extension.
- *Zambia's horticultural sector operates in a regional market,* exporting and importing every year. Understanding and quantifying this trade will be the first step in ensuring that policies and programs are conducive to continued high rates of growth.
- *Major new supermarket outlets are in the market to stay,* and their effects on smallholder farmers and the traditional marketing system need to be better understood. Where appropriate, programs to facilitate direct marketing by smallholders to these chains should be supported, but should not distract from an overall focus on improving urban wholesale and retail markets and linking these more effectively to farmers.

BACKGROUND: Demand for horticultural products grows rapidly with urbanization and increased income. While worldwide demand for cereals increased by about 20% per capita since 1960, demand for fresh produce more than doubled. Because horticultural produce is a high value item, and because of the diversity of fruits and vegetables demanded by consumers, such growth provides major opportunities for farmers to diversify their production and increase their incomes. Such opportunities may be especially valuable for women, who are the primary producers and marketers of horticultural produce throughout

Africa. Finally, from the farm through retailing, horticultural production employs about twice as much labor as cereals per hectare of production; small farmers, rural laborers, and the urban poor stand to gain inordinately from these employment opportunities.

Yet Africa, alone among developing areas, saw per capita supply of fresh produce *decline* since 1960. Zambia probably has not escaped this trend. Reversing the trend, and realizing the growth potential that horticulture presents, will require concerted action throughout the

supply chain, based on reliable information and on collaboration between the private and public sectors.

OBJECTIVES: This policy synthesis summarizes results from an in-depth report ([FSRP Working Paper #17](#)). Its purpose is to begin generating the empirical information needed to launch a process of stakeholder consultation regarding the key challenges facing the country's horticultural sector.

DATA AND METHODS: To characterize the fresh produce marketing practices of rural households, we use nationally representative data from surveys carried out in 2001 and 2004 by the Central Statistical Office (CSO) in conjunction with the Ministry of Agriculture and Cooperatives (MACO) and Michigan State University's Food Security Research Project (for sampling procedures see Megill 2004). Because relatively little previous research had been done on the domestic horticultural sector, we undertook a structured rapid appraisal in Lusaka and Ndola during late 2005.

The rapid appraisal sought to identify what stakeholder organizations exist for the sector and what roles they play; identify key policies and public sector practices affecting the sector, and the agencies involved in each; develop a preliminary estimate of several key variables in the sector; qualitatively assess the cleanliness, logistical efficiency, and level of value-added in traditional wholesale and retail markets; compare FFV prices in supermarkets and open air markets; and develop a preliminary estimate of gross farm-wholesale mark-ups, and wholesale-retail mark-ups for five key FFV items.

MAIN FINDINGS: Figure 1 presents a simplified channel map of the fresh produce systems serving Lusaka and Ndola, cities which together account for nearly half the country's urban population. We highlight here four points. First, while smallholder farmers account for most of the fresh produce supply to the cities, large farms also play a substantial role. Second, large farmers tend to sell directly into urban markets, while

smallholder farmers nearly always face intermediation, either through brokers or assemblers. This intermediation increases marketing costs for smallholders and decreases the prices they receive. Third, single wholesale markets – Soweto in Lusaka and Main Masala in Ndola – dominate urban marketing, but are increasingly complemented by modern wholesalers serving supermarkets, and by *Freshpikt*, a major processing operation.

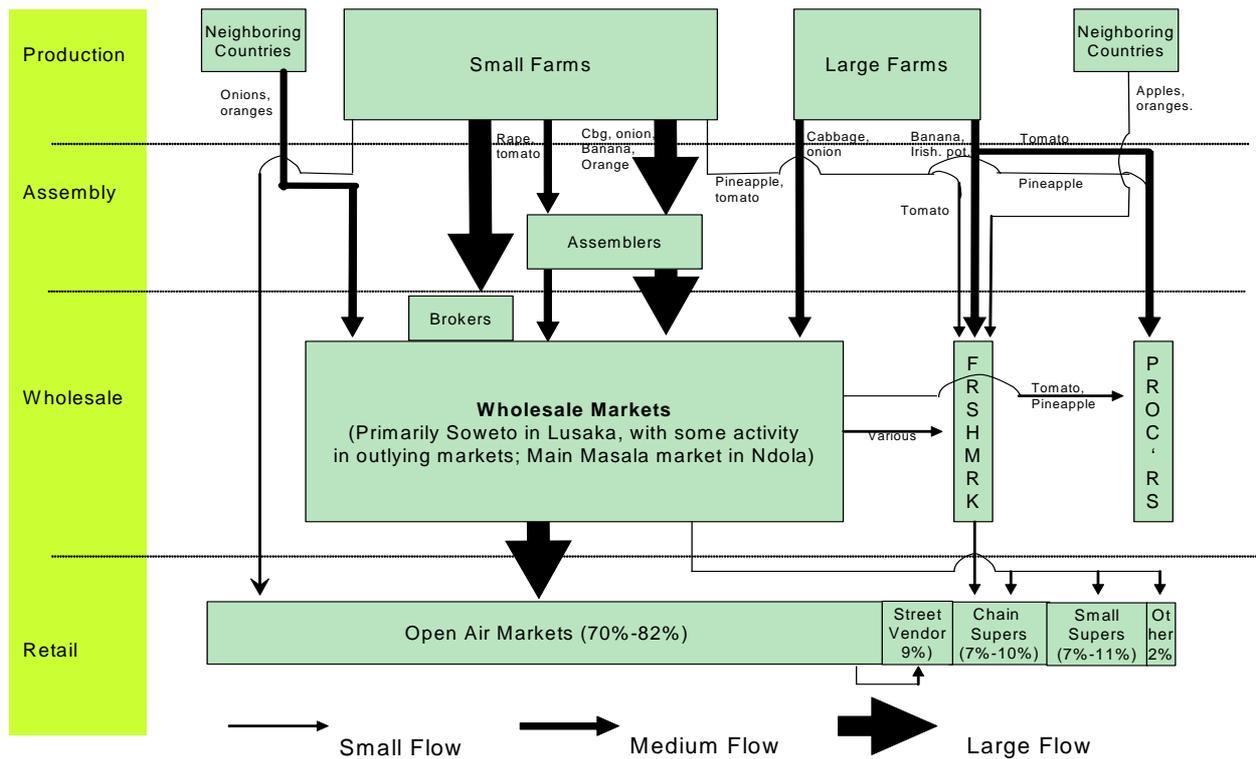
Finally, open air markets and street vendors dominate retailing in each city, although supermarket chains and small supermarkets, together have captured perhaps 14%-21% of the fresh produce market.¹

At the *farm level*, fewer than 20% of smallholder farmers sold horticultural produce in 2004. Farmers in Copperbelt and Lusaka were the most likely to have sold, and these two provinces, along with Northwestern (due to new mining activity) lead in total supply to markets. Tomato, rape, and cabbage together account for about 75% of the value of sales from the smallholder sector; dry onion, okra, and eggplant each hold shares of 2%-3%. Banana predominates in fruit production, but is not among the top five overall; as a result, vegetable production value exceeds fruit by a factor of about five.

In addition, farm-level horticultural sales are quite concentrated, with 20% of sellers – about 3% of the rural population – accounting for three-quarters of all sales. For the top 80% of sellers – 13% of the population -- horticulture is the most important source of cash income from agriculture, exceeding maize, cash crops such as cotton and tobacco, and livestock. Supplies from 10 large farmers interviewed around Lusaka suggest that smallholder farmers remain the primary suppliers of all these products (with the exception of Irish Potato).

¹ More definitive estimates of the retail market shares will be available in 2007.

Figure 1. Simplified Channel Map of Lusaka and Ndola Fresh Fruits and Vegetable System



Assembly of tomato, rape, and cabbage occurs through a decentralized process from within 20-30 km of each city. Less perishable onions arrive from Eastern province, Malawi, and Tanzania, and oranges from Zimbabwe, RSA, and Mkushi near Lusaka. We estimate that at least 80% of all fresh produce reaching each city passes first through Soweto in Lusaka and Main Masala in Ndola. Smallholders tend to bring perishable items such as tomato and rape directly to wholesale markets; these farmers nearly always have to sell through brokers, which reduces the price they receive. Cabbage, dry onion, banana and orange all arrive at Soweto through traders who do not utilize brokers. Among “first sellers” in Soweto, gross margins for most items range from one-third to over one-half of the prices they paid in rural areas.

Freshmark is the fresh produce wholesaling agent for Shoprite; it purchases its supplies from domestic farmers and traders, and traders in neighboring countries. **Freshpikt** is a large processor which began operation in late 2005 and has quickly become a major buyer of tomato, dry beans, pineapple, and other products.

Retail marketing of fresh produce is highly diversified. Consumers obtain their produce in open air markets ranging from very large wholesale/retail centers, to smaller markets serving mostly low- and middle-income consumers, to markets serving almost exclusively high- and middle-income consumers; from small independent supermarkets and chain supermarkets; from street vendors; and from traditional shops.. Main and residential markets are used for a broad array of food items, including staples, but not much for fruit.

Retail mark-ups in surveyed markets range from 30%-80% over retailer purchase price, with lowest mark-ups for the highest volume items: cabbage, tomato, and rape. Soweto and Main Masala appear to have comparable overall mark-ups, while Kaunda Square’s is much higher (reflecting typically higher prices in outlying markets). Total farm-to-consumer markups established on one day in July 2006 ranged from 65% to 92% of the price paid at farm. Because relationships can vary greatly from day to day, more reliable information on markups throughout the chain requires regular data collection.

Small local supermarkets and supermarket chains dominantly serve high- and medium-income consumers. Local supermarkets sell mostly tomato, onion, cabbage, and other fresh produce preferred by high-income groups. Shoprite sells primarily fruits along with tomato, cabbage, onion, Irish potato, and exotic items. Leafy vegetable availability is very limited in all supermarkets. Shoprites in high-income neighborhoods and small supermarkets tend to be used for a wide range of food types, while those in middle-income neighborhoods are used almost exclusively for staples and perhaps for meat, eggs, and dairy; 60% of shoppers in these Shoprites indicated that they most often bought vegetables in open-air markets. A key reason for this pattern is that ***prices in supermarkets*** are 60%-100% higher than in Soweto.

The ***Urban Markets Development Program*** focuses on revision of legislation and market bye-laws, improved physical infrastructure, and associated credit, training, and outreach activities. At its core is a “new management model” emphasizing active participation of stakeholders in the management of markets and a reorientation of public officials towards facilitating commercial activity. The ***Markets Act*** has been widely perceived as a barrier to this more participatory approach, and its revision has received high priority. Two problems have emerged. First, uncertainty about the specifics of the proposed revisions has led to concern among marketeers that the new Act may not fully meet their needs. Second, there is no prospect of new legislation until the next Parliament sits in 2007.

POLICY ISSUES: Despite inroads from more modern supply chains, Zambia’s traditional horticultural marketing system serves the vast majority of urban consumers in the country, remaining competitive based on the prices it offers to poor- and middle-income consumers, locational convenience, and the perceived quality advantage it holds for green leafy vegetables. At the same time, the system is fragmented, its main markets are chaotic and unsanitary with woefully inadequate physical infrastructure, it delivers

low returns to most traders who operate in it, and it is very poorly suited to linking farmers more closely with consumers to provide an increasingly reliable supply of quality produce. If these linkages could be strengthened, it is likely that the farming sector could respond strongly, given that less than 20% of all smallholder households sell fresh produce (compared to 70% in Kenya and 25% in Mozambique). UMDP has correctly identified regulatory and infrastructural issues as a top priority, but its success is threatened by concerns among some stakeholders regarding the revised Markets Act of the Ministry of Local Government and Housing.

Without offering here an assessment of that Act, we offer several suggestions for consideration by stakeholders. First, the *de facto* managerial structure in urban markets, and especially the role of the various trader groups, must be better understood if a truly participatory management approach is to emerge from reforms to the Act. Second, improved market information and marketing extension is needed to more actively link farmers to wholesale markets and other market opportunities. Third, efforts underway to link farmers to *Freshpikt* should be supported, and *Freshpikt* prices, quality standards, and purchase volumes should be integrated into any information system that is developed. Fourth, efforts to link farmers to the supermarket sector should be supported, but not at the expense of an overall focus on improving the traditional system that serves the vast majority of consumers. Finally, continuing improvements in the system require up-to-date empirical information injected into a decision-making process driven by active and broad stakeholder consultation.

* This policy synthesis is a condensed form of the FSRP Working Paper No. 17 entitled “[Zambia Horticultural Appraisal: Understanding Domestic Value Chains of Fresh Fruits and Vegetables](http://www.aec.msu.agecon/fs2/zambia/index.htm)”, and is downloadable at: <http://www.aec.msu.agecon/fs2/zambia/index.htm>.