



Agribusiness Firms in Zambia's Maize Subsector

*A Review of Their Characteristics, Constraints,
and Innovations*

Final Report

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**Division of Food, Agriculture, and Resources Analysis
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**AGRIBUSINESS
FIRMS IN ZAMBIA'S
MAIZE SUBSECTOR:
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CHARACTERISTICS,
CONSTRAINTS, AND
INNOVATIONS**

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September 1993

AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT

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LIST OF ACRONYMS

CUSA	Cooperative Union Savings Association
DCU	District Cooperative Unions
GRZ	Government of the Republic of Zambia
MAFF	Ministry of Agriculture Food and Fisheries
NCZ	Nitrogen Chemicals of Zambia
PCU	Provincial Cooperative Unions
SADCC	Southern Africa Development Coordinating Committee
SPCMU	Southern Province Cooperative Marketing Union
USAID	United States Agency for International Development
ZAMS	Zambia Agribusiness and Management Support
ZAMSEED	Zambia Seed Company
ZCF	Zambia Cooperative Federation
ZNFU	Zambia National Farmers Unions
ZR	Zambia Railways, Ltd.

FOREWORD

The Development Fund for Africa (DFA) has challenged the U.S. Agency for International Development (USAID) to scrutinize vigorously the effectiveness and impact of its development assistance programs in Africa and to make the adjustments needed to improve on the record of the past. Agriculture is the dominant sector in sub-Saharan African economies and a potential catalyst for generating broad-based, sustainable economic growth. Achieving sustained increases in agricultural productivity requires attention to technical, environmental, and marketing issues. The USAID Africa Bureau's Office of Analysis, Research, and Technical Support; Division of Food, Agriculture, and Resources Analysis (ARTS/FARA) has been analyzing the Agency's approach to the agricultural sector in light of the DFA and the recent experiences of sub-Saharan African countries.

In January 1991, the Africa Bureau adopted "A Strategic Framework for Promoting Agricultural Marketing and Agribusiness Development in Sub-Saharan Africa" to provide analytical guidance to USAID/W, REDSOs, and field Missions. The framework suggests (a) that, while technical and environmental problems must continue to be addressed, a major cause of the poor performance of the agricultural sector has been the inefficiency of the marketing systems and (b) that improving agricultural marketing systems can have a significant beneficial impact on incomes, foreign exchange earnings, domestic consumption, and food security. The framework further suggests that private agribusiness firms and supporting financial services have a critical role to play in the development of more efficient agricultural marketing systems and that more empirical information is needed regarding the specific policies, regulations, institutions, and services that can best promote more efficient marketing systems and private agribusiness growth.

To enhance the analytical guidance and technical support that the Bureau provides to the field, ARTS/FARA initiated a series of empirical studies of the issues affecting marketing systems and private agribusiness development in several countries in sub-Saharan Africa. This document--entitled *Agribusiness Firms in Zambia's Maize Subsector: A Review of Their Characteristics, Constraints, and Innovations*--is a product of these studies. The field research for, and preparation of, this report were carried out by Abt Associates, Inc.

We would like to thank USAID/Zambia and express our appreciation to our colleagues in USAID/W and the U.S. Department of Agriculture for their participation in the review of this study. We trust that the report will provide ideas, information, suggestions, and approaches that will be useful to other Missions involved in or planning agricultural marketing and agribusiness activities. We intend to conduct more in-depth research on agricultural marketing systems and agribusiness development and to provide analytical assistance to field Missions in sub-Saharan Africa so that we can extend our efforts to improve and measure the performance of the agricultural sector.

-- Ernest F. Gibson
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USAID/AFR/ARTS/FARA

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We wish to extend our gratitude to the many individuals who assisted in the support and planning of this study. First of all, we would like to thank the USAID Zambia Agribusiness and Management Support (ZAMS) Project for arranging logistical support and for providing technical advice to our team. We are also grateful to the USAID Mission in Lusaka for their encouragement throughout the course of the study. The agribusiness study would not have been possible without funding from the Africa Bureau's ARTS/FARA office nor without the technical and logistical support of Abt Associates. John Holtzman and Charlie Stathacos provided helpful comments, suggestions and quality control. Jack Hopper and Jame Wertz edited the document and Marsha Strother managed the report production.

Lastly, we wish to thank the Ministry of Agriculture Food and Fisheries (MAFF) and all the participants interviewed during the study for their openness and honesty.

ABSTRACT

This report, funded under the USAID Africa Bureau's analysis of agricultural marketing and agribusiness development in Sub-Saharan Africa, reviews the characteristics and constraints that affect the ability of Zambian agribusiness entrepreneurs to invest in new or existing maize marketing activities. It further examines the innovations developed by these entrepreneurs to survive and compete under the new market liberalization policies in Zambia. In the final sections, the authors suggest public sector strategies for alleviating constraints and supporting agribusiness enterprises in Zambia.

1. INTRODUCTION

The government's view toward private enterprise development in Zambia has radically changed in recent years. New policies adopted in 1991 have reversed previous government programs that regulated the distribution of inputs and controlled producer and consumer prices on all agricultural commodities. Parastatals that once monopolized all agricultural marketing and processing functions are now being dissolved or privatized. On a macro level, policy reforms have called for the adjustment of exchange rates in real terms, lifting foreign exchange restrictions, and liberalizing export and import trade.

Zambia's transition to a market economy has not, however, proceeded without complications. The elimination of commodity subsidies has had detrimental effects on consumers, who in the short run have been forced to spend a greater share of their disposable income on food. Agricultural producers no longer receive government subsidies for farm inputs and consequently have experienced a sharp rise in production costs. In the private sector, many agribusiness firms do not yet have the financial capacity to replace the parastatal marketing and processing functions. The government is also struggling to define its future role in supporting these private sector businesses while ensuring national food security.

Despite these obstacles, there are several promising developments occurring in agribusiness firms in Zambia. New enterprises of various sizes and functions are adopting innovations to compete under the new market liberalization policies. Carefully planned and consistent government support services to the private sector can encourage agribusiness expansion in the future.

This study was commissioned by the United States Agency for International Development (USAID) to examine agribusiness firms operating in the maize subsector. More specifically, it analyzes the constraints and innovations of these firms under the new policy reforms. The report is divided into four chapters: an introduction, an overview of Zambia's maize marketing system, an analysis of agribusiness firms in the maize subsector, and a conclusion with suggested public sector responses to alleviate constraints.

1.1 Purpose of the Study

The purpose of this study, funded by the Africa Bureau's ARTS/FARA office, Agricultural Marketing and Agribusiness Unit, is to gain a better understanding of the characteristics and constraints that affect the ability of Zambian agribusiness entrepreneurs to invest in new or existing maize marketing activities. The study further examines the innovations developed by these entrepreneurs to survive and compete under the new market liberalization policies.

Because agribusinesses in Zambia vary considerably in size and scope of operation, the study compares the constraints that affect domestically or regionally oriented enterprises with those that affect export-oriented firms. It also solicits feedback from these firms to suggest ways to alleviate constraints in order to create better marketing opportunities.

Although the primary focus of the study is on private enterprises, parastatal organizations continue to play a major role in maize marketing and processing. Therefore, they were also examined during the study to gain a better understanding of the interrelationships between the private and public sectors.

The scope of work for this study outlines six specific research areas to explore during interviews with agricultural entrepreneurs:

1. What private agribusinesses are currently active in the maize marketing system in Zambia?
2. What are the principal characteristics of these firms and their managers?
3. What specific constraints, identified by these agribusiness owners, impede the ability to invest in new or increase existing marketing activities? Do these constraints differ depending upon the size of the firm?
4. What are the sources of market information for maize marketing? How can access to market information be improved?
5. What are the major marketing cost components for these agribusinesses? What percentage of marketing costs are attributed to transport costs? How can transport costs be reduced?
6. Are there public or private associations to support agribusiness development? How effective are these institutions in communicating the concerns of agribusinesses to policymakers? How effective are market promotion services to agribusiness? How can these services be strengthened?

Responses to these questions will enable donor agencies and policymakers to gain a better understanding of the maize marketing system in Zambia and subsequently to devise appropriate strategies that encourage private enterprise development.

1.2 Approach and Timeframe

This study combines both subsector and case study approaches, examining individual firms and the interrelationships among different participants in the maize marketing system. Agribusinesses of various sizes and functions were interviewed to gain an understanding of their characteristics and constraints.

The field research was conducted during a four-week period in July 1993 and covered four provinces: Lusaka, Central, Copperbelt, and Southern. These provinces collectively produced more than 60 percent of the 1992-93 maize crop and contain major road arteries and

a rail line from north to south. An itinerary of the team's daily travels, interviews, and activities is presented in Appendix 2.

The team began the study by contacting key informants in Lusaka and compiling names and locations of millers, lending institutions, and government buying agents in each of the provinces. During the second and third weeks, the team visited the provincial towns, interviewing millers and traders and tracing maize flows back to the production areas. Efforts were made to stratify the sample of agribusinesses interviewed by size, function, and location.

During the final week of the study, the team returned to Lusaka to conduct follow-up interviews and to receive updates from the Ministry of Agriculture, Food and Fisheries (MAFF) and the lending institutions on the progression of fund disbursement for the maize marketing season.

1.3 Limitations of Study

One of the major drawbacks of this study was the limited field time allotted to conduct an assessment of the entire country. Consequently certain production areas, such as the Eastern Province, which produces more than 20 percent of the nation's maize crop, were not visited. Provinces located at greater distances from major transportation networks and consumption areas invariably have constraints and innovations that differ from those located in provinces with easy access to the rail line. Therefore, this report may not adequately represent the viewpoint of agribusinesses in the outer provinces.

Another limitation to the study was that the team lacked sufficient time to explore the interrelationships between the maize subsector and other commercial cereal crops. Sorghum, rice, millet, and wheat are also produced and marketed, but due to the complexities of the maize subsector, commercial activity of these cereal crops was not investigated. Maize, however, is by far the most important crop in Zambia and constitutes 70 percent of the land in cultivation.

A third drawback was that the study was conducted during a time of transition when the government was struggling to resolve conflicts among consumers, farmers, traders, and millers. Maize marketing arrangements were continually changing and policies were unclear to marketing participants. This report represents the maize marketing situation in July 1993. Any future changes in agricultural policy or government marketing arrangements could affect the structure and performance of the marketing system described in this report.

2. OVERVIEW OF ZAMBIA'S MAIZE MARKETING SYSTEM 1993-94

To fully understand the characteristics, barriers to expansion, and innovations of agribusinesses in the maize subsector, it is first necessary to review the production situation and marketing arrangements under which the firms must operate. This section describes the 1992-93 maize production season, the MAFF Food Security Division's marketing arrangements for 1993-94, and key bottlenecks in the 1993-94 maize marketing season.

2.1 1992-93 Maize Production Season

Zambian farmers harvested a bumper maize crop this year due primarily to superior rainfall. The MAFF Food Security Division predicts that maize production in 1992-93 will exceed the national average for the last seven years by 28 percent. Production comparisons between the 1991-92 deficits and the 1992-93 surplus situation are even more striking, yields are three times last year's estimates:

Exhibit 1: Zambia Maize Production Estimates for 1991-92 and 1992-93

ZAMBIA MAIZE ESTIMATES	UNITS	1991-92	1992-93
Area Cultivated	Hectares	661,606	633,326
Estimated/Expected Yield/Ha	90-kg bags	8	26
	Metric tons	.72	2.3
Estimated/Expected Production	90-kg bags	5.4 million	17.8 million
	Metric tons	486,000	1,602,000
Estimated/Expected Sales	90-kg bags	2.9 million	10.3 million
	Metric tons	261,000	927,000
Retention	90-kg bags	2.5 million	7.4 million
	Metric tons	225,000	666,000

Sources: Planning Division, MAFF, Central Statistical Office and, Zambia Early Warning Unit

By the end of this year's production season, farmers anticipated record revenues from maize sales. Since prices on agricultural commodities were now liberalized and export restrictions relaxed, many farmers believed they would receive regionally competitive prices on their maize crop. Unfortunately, the 1993-94 marketing season has been marred with problems, and by late July 1993, only a fraction of commercial maize had been marketed. If maize is not

moved in time this year from surplus areas into storage, postharvest losses will be great and Zambia food security could once again be threatened.

Exhibit 2 is a map depicting the major maize production regions in the country and the typical flow patterns of maize from surplus to deficit areas. Large mill sites are located in the provincial capitals and large towns. Given the inefficiencies of the domestic market and the high import parity prices on maize in bordering countries, many enterprises with access to regional markets are exporting maize to neighboring countries this year rather than selling locally.

2.2 Marketing Arrangements for the 1993-94 Season

In early 1993, the government devised a plan to assist private grain dealers and to recover government loans paid to farmers during the previous season. A proposed 15 billion kwacha (U.S. \$27 million)¹ would be channeled through lending institutions to support maize marketing operations.

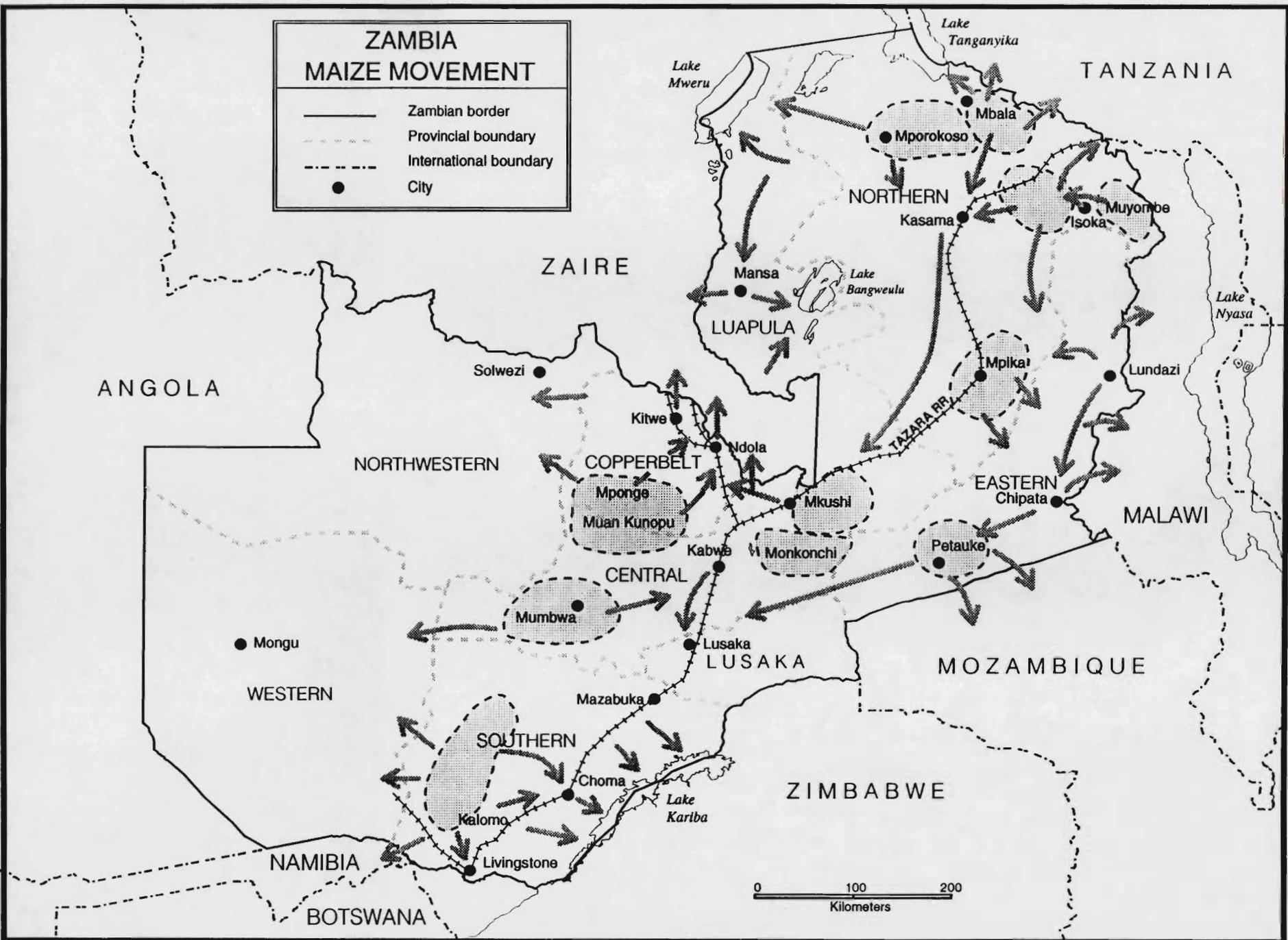
Details of the marketing plan were outlined by the MAFF Food Security Division in a report entitled "Agricultural Marketing Arrangements for the 1993-94 Season." This document stated that marketing subsidies on maize and other crops were eliminated and into-mill prices and transport rates would now be liberalized. A floor price to maize producers of K5,000 per 90-kg bag was suggested to be paid "by buyers when produce is delivered to designated depots of the dealers."

The government's role in the new marketing arrangements would be that of a facilitator to support development efforts of the private sector and to provide producers with marketing information in order to ensure a fair return on their investment. Although the government would not be involved in marketing, it would "monitor developments in the market for policy formulation purposes." Government would also be responsible for maintaining strategic grain reserves.

Three agricultural lending institutions (ZCF Finances, CUSA, and LIMA Bank) and one provincial cooperative (SPCMU) were designated to buy maize from farmers who had outstanding loans with the government from the previous year. These institutions would be allocated government funds to purchase maize. The institutions were to subcontract buying agents in each of the provinces "to buy maize from farmers and sell it to millers on behalf of the lending institutions." These buying agents would earn commissions for the handling of maize. Private businesses were also free to trade in maize, but they would have to finance their marketing operations through commercial bank loans or through their own resources.

¹US\$1.00 = K 555 in July 1993

**EXHIBIT 2
ZAMBIA MAIZE FLOW**



In addition to maize marketing, the three lending institutions were also instructed to supply fertilizers for the 1993-94 production season to small-scale and emerging farmers. Total fertilizer demand for maize next season is estimated at 250,000 metric tons, of which 60 percent would be distributed by lending institutions and the remaining 40 percent by private dealers, NCZ, and donor agencies.

Exports of both maize and maize meal were permitted under the new marketing arrangements, but only after local consumption requirements were met. Therefore, dealers needed the approval of MAFF and the Department of Commerce, Trade and Industry before exporting. A two-million bag limit on maize exports was later adopted by the MAFF Food Security Division.

2.3 Marketing Season 1993-94: What Went Wrong?

This season's maize marketing problems in Zambia are complex and are linked to events and marketing arrangements implemented during the previous season. Several key factors have hindered the maize marketing season this year and discouraged private sector investment. These factors are described below.

2.3.1 Postponing Restrictions on Yellow Imported Maize Sales

Last year, donor agencies from European and North American countries, provided drought relief maize to SADCC countries. Zambia received more than 500,000 metric tons of imported maize from USAID and the EEC, thus avoiding a national famine. Yellow imported maize was stockpiled in silos and storage sheds throughout the country.

In May 1993, farmers began harvesting this year's bumper maize crop. Since there were excess stocks, restrictions on the sale of relief maize was postponed through the end of June and into July. As a result, this year's local white maize had to compete with the cheaper yellow maize for several months, thus retarding the maize marketing season. In an effort to keep prices low, many millers stocked sufficient supplies of donor relief maize to last through August and into September. Thus, demand for local maize is currently lower than in previous years.

2.3.2 Selection of Buying Agents Who Lack Infrastructure and Knowledge of Production and Marketing Systems

Applicants wishing to participate in the maize marketing season 1993-94 were screened by the government and lending institutions before they were accepted. Below is the list of criteria used by MAFF to select buying agents:

1. They must be persons of good standing.
2. They must prove to be financially viable.
3. They must be citizens of Zambia, or if they are a company they must already be registered in Zambia.

4. They must specify their area of operation.
5. They must indicate the volume of grain that they intend to handle.
6. They must have transport capabilities, tarpaulins, empty grain bags, and have access to storage facilities.
7. They must establish that they have never been convicted of any offenses concerning any form of trading operations.

The lending institutions conducted a second screening of applicants after MAFF had compiled a preliminary list. Lending institutions investigated certificates of incorporation, outstanding debts, and ownership titles on equipment for potential buying agents.

Despite these screening processes, many of the buying agents who were chosen do not have adequate access to finances, transport, and storage facilities. Several of these buying agents have been referred to as "briefcase operators" because they conduct business without any physical offices or means of transportation.

Buying agents in several different provinces are also unfamiliar with the territory they have been assigned and therefore have difficulty locating farmers with outstanding debts. Farmers have been reluctant to sell to the buying agents since they have no established rapport in the area.

As a result of these problems, the lending institutions view the buying agents as obstacles rather than assets to the marketing operation. They have subsequently resorted to sending their own agents to purchase maize from farmers in certain provinces.

2.3.3 Confusion Over Loan Recovery

Another related marketing problem is that maize purchases are tied to loan recovery from the previous season. Due to financial constraints, lending institutions have instructed the buying agents to recover only enough maize to offset each farmer's debt. In July, the price offered to farmers for a 90-kg bag of maize ranged from K5,000 to K6,000.

By turning over only a portion of their marketed grain to offset loans, some farmers are worried that future buyers may not return to purchase their remaining stocks of maize. Other farmers are responding in the opposite manner, refusing to pay back their loans with maize, speculating that prices will rise in the future. They are also seeking to sell to other maize dealers who offer more attractive prices. They are therefore postponing payments on last year's debts. In general, there is great confusion concerning when and by what method farmers are obligated to repay their loans.

2.3.4 Slow Release of Funding

At the beginning of the 1993-94 maize marketing season, the government promised to release K15 billion to the designated lending institutions. Thus far, two tranches have been

disbursed: K780 million to each of the four agencies at the end of June and K500 million to each in mid-July. The first tranche was used for transportation needs, the second for maize purchases. Therefore, as of mid-July, only a fraction of the total funds promised have been disbursed to each institution.

2.3.5 Maize Export Restrictions

The MAFF two-million bag export restriction on maize has been difficult to enforce. Parity prices in neighboring countries are nearly double Zambian domestic prices, and traders are eager for foreign exchange earnings. Hard currency is received through South African and European banks. Thus, maize is leaving the country before local consumption demands have been secured.

2.3.6 Farmgate Floor and Into-Mill Ceiling Price on Maize

In an attempt to control the rising price of maize meal and to appease growing pressure from consumer groups, the government set an into-mill ceiling price of K7,000 per bag in July 1993. Coupled with the previous floor price to farmers of K5,000 per bag, a K2,000 per bag marketing margin was created.

These pricing policies have led to several distortions in the maize marketing system. At the farm level, many dissatisfied farmers are refusing to sell their produce at the suggested floor price, regardless of their distance to storage or mill sites. At the mills, some farmers, strapped for cash, are selling at an into-mill price of K6,500 or less to millers. Millers, however, still use the K7,000 bag into-mill price to calculate milling costs. Thus, higher costs are passed on to consumers.

Dissatisfaction over price floors and ceilings has created bottlenecks in the marketing system. Consequently, millers have been unable to secure sufficient stocks of maize to mill and they are currently operating at less than full capacity.

3. AGRIBUSINESSES IN THE MAIZE SUBSECTOR: CHARACTERISTICS, CONSTRAINTS, AND INNOVATIONS

This section examines different types of agribusiness firms in the maize subsector, identifying their characteristics, constraints, and innovations under the new market liberalization policies. Exhibit 3 is a subsector map illustrating the different types of enterprises participating in the 1993-94 maize marketing system. Formal maize marketing channels flow from farmers to the grain dealers, who deliver maize to mills or government storage installations. Millers, in turn, process maize into maize meal and distribute to wholesalers and retailers. Breweries and feed processors use maize by-products. Maize is exported mainly by large-scale agricultural producers and grain dealers, while imports flow into the system through government storage facilities.

Informal channels are represented on the left side of the diagram where small and emerging farmers sell grain directly to small-scale maize traders. These retailers then sell maize grain directly to consumers at local markets and along roadsides. Consumers, in turn, transport the maize to hammermills, where they pay to have their maize processed into meal. This informal channel is becoming stronger in Zambia as many consumers seek alternate ways to minimize rising food expenditures.

This section of the report describes the participants illustrated in Exhibit 3, from input distributors to maize producers, grain dealers, transporters, maize millers, wholesalers/retailers of maize meal, and finally, the livestock feeders and breweries. Each of these groups is divided into subgroups according to size and function. The subsections begin by discussing small-scale businesses in each industry, followed by a description of larger scale operations.

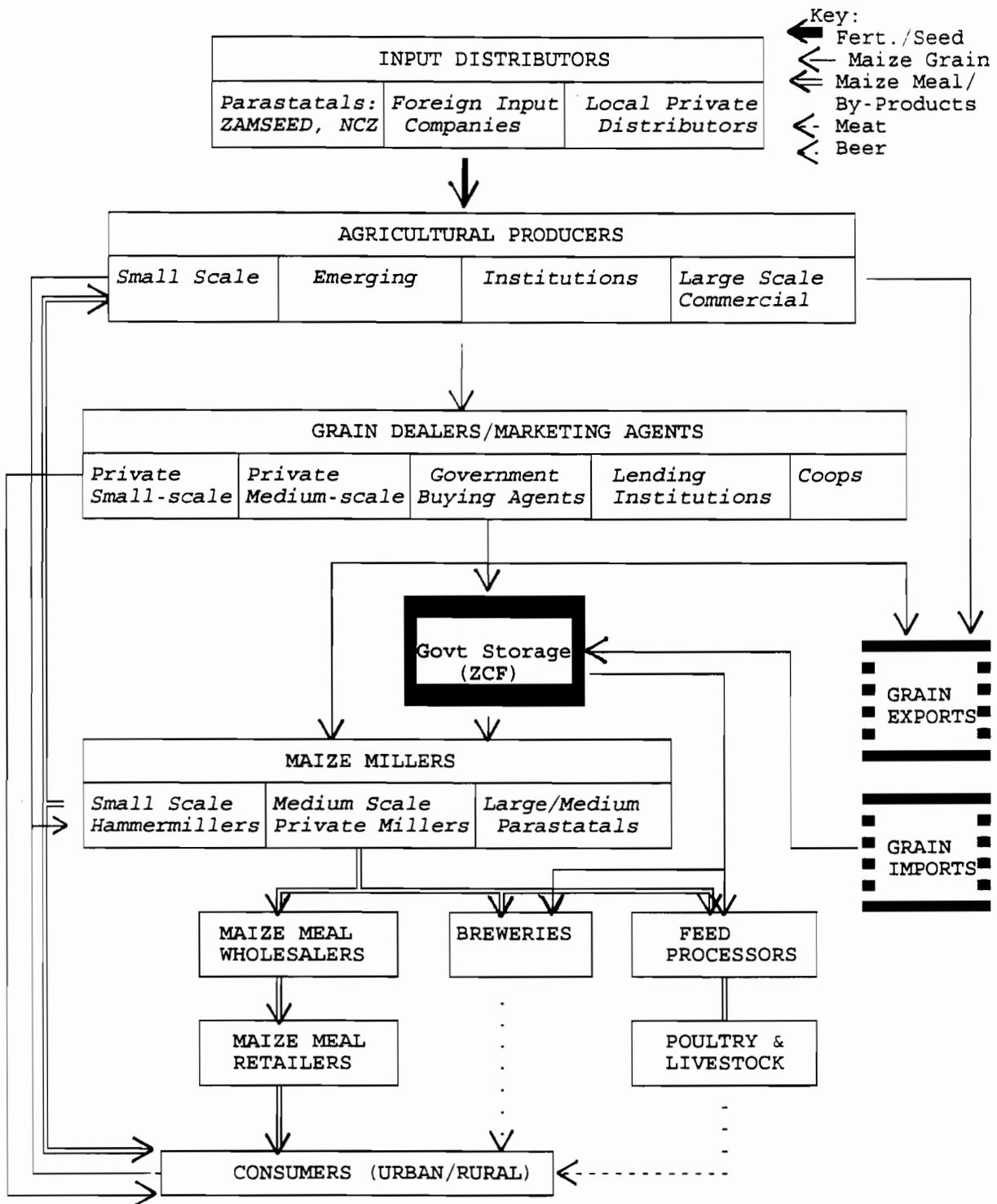
3.1 Agricultural Input Distributors

Agricultural inputs in Zambia consist mainly of improved seed and fertilizer. Farmers receive these inputs principally from ZAMSEED, the national seed company, and Nitrogen Chemicals of Zambia (NCZ), the national fertilizer parastatal. ZAMSEED continues to dominate the seed market and estimates that it still supplies more than 90 percent of the improved maize seed to local farmers. It also has a strong lobbying position in government. Foreign competitors such as Cargill and Pioneer have had difficulties penetrating the maize seed market since they have not yet developed superior maize varieties suitable to climatic and soil conditions in Zambia.

Maize seed is distributed to farmers through private traders and provincial and district cooperative stores. To encourage seed sales, ZAMSEED sponsors extension programs for farmers that promote ZAMSEED's improved seed varieties. Since most of their seed multiplication programs are administered by farmers, ZAMSEED has established a close communication and working relationship with the agricultural sector. Foreign assistance programs in management and technical fields are other strategies adopted by ZAMSEED to help them retain their competitive edge.

EXHIBIT 3

ZAMBIA MAIZE SUBSECTOR MAP 1993-94



In contrast to the seed industry, the national fertilizer producer and distributor, NCZ, is having difficulties competing with foreign firms. South African competitors are gaining a greater share of the market this year and have established distribution networks throughout the country.

NCZ explained that its fertilizer costs of production were high for a number of reasons. First, their equipment is outdated and far less efficient than that of foreign companies. They also lack foreign exchange to purchase chemical inputs needed in fertilizer mixes. Another problem is that all NCZ inputs must first come through Lusaka, and then be mixed and distributed to the outer provinces, a process that doubles handling costs. Foreign firms, on the other hand, bypass Lusaka and ship fertilizer directly to the provinces. The survival of NCZ could be in jeopardy unless it can improve efficiency and contain production costs.

3.2 Maize Producers

Maize producers in Zambia have encountered numerous risks in the past two years. Shifting climatic conditions caused maize shortages in 1991-92, which were followed by record harvests in 1992-93. In addition to climatic uncertainties, agricultural producers are disturbed by the effects of inconsistent government policies on agriculture. Although trade and prices of agricultural goods are supposedly liberalized, the government has announced "indicative" producer floor prices and into-mill prices, on maize this year. Both of these prices are pan-territorial; that is, they apply to all provinces in the country regardless of distance to markets. A two-million bag export restriction has also discouraged large commercial farmers who would like to market maize in bordering countries.

The Zambia National Farmers' Union (ZNFU), which represents over 1,600 farmer groups in 24 associations, has strongly opposed direct government intervention in agricultural production and marketing. The association is one of the most powerful producer lobbying groups in the country, encompassing membership from individuals, associations, companies, and cooperatives engaged in farming.

One of the key conflicts between the government and ZNFU is what is perceived as MAFF setting a maize farmgate floor price and into-mill ceiling price for 1993. The "floor" price was supposedly calculated by MAFF based on the expected cost of production with an added profit margin. This price did not link domestic with international prices. Many farmers argue that the floor price is far below their break-even costs.

Although large-scale farmers were reluctant to discuss costs, several emerging farmers provided detailed information of their farming operations. Break-even costs from farmers interviewed were lower than the K5,000 floor price, even after calculating interest on loans and transportation costs. Loans to purchase inputs and the interest on those loans, accounted for nearly half of the emerging farmers' total costs. Labor expenditures constituted 15 percent, while transportation to depots and empty bag purchases were 11 and 27 percent, respectively.

Maize producers in Zambia are categorized by size according to the number of hectares cultivated, the degree of mechanization, and the quantity of maize marketed. The four basic types of growers are small-scale, emerging, commercial, and institutional, and each group has experienced different types of constraints in marketing produce.

3.2.1 Small-scale Farmers

According to MAFF statistics, more than 80 percent of agricultural producers in Zambia are small-scale farmers who cultivate less than two hectares of land per household. Sixty percent of the land cultivated is farmed by this group of producers. Small-scale farmers typically use family labor, are not mechanized, and have limited access to farm inputs. Consequently, their productivity is low, and average yields per hectare are less than half that of commercial farmers. Most of the maize produced by small-scale farmers is for home consumption, although small surpluses are marketed. Many small-scale farmers have small granaries for on-farm storage, but they must purchase maize meal during the months November–April prior to harvest.

Traditionally, small-scale farmers marketed maize through NAMBOARD, the agricultural marketing parastatal, and later to cooperatives. Now with the emergence of buying agents and some private traders, these farmers have more marketing options than before. Many live in isolated areas, however, and lack adequate price information and experience in marketing their produce. Therefore, they sometimes sell maize at inferior prices or decide to sell at the wrong time because they are unaware of alternative markets and buyers. Small farmers may also wait too long to sell, anticipating better prices, which they may or may not receive.

Another constraint facing small-scale farmers is their lack of access to financing. Unlike the other groups of farmers, small-scale producers typically have limited access to chemical fertilizers and improved seed. Given this year's high interest rates, though, small farmers may actually have a competitive advantage in marketing since they do not have costly loans and interest payments from the previous season.

3.2.2 Emerging Farmers

Emerging farmers constitute roughly 12 percent of all growers and cultivate slightly larger areas (three hectares or more) than the small-scale farmers. According to Mckenzie and Chenoweth (1991) in the "Maize Marketing Policies, Consequences and Needed Reforms" report, emerging farmers account for over 30 percent of expected maize sales. Similar to the small-scale farmers, they lack adequate on-farm storage and become net maize meal purchasers during the deficit periods of November to April. Emerging farmers use mostly family labor although local hire is common for weeding and harvesting during certain months. Other emerging farmers own oxen and some hire tractors to plow their fields.

Interviews revealed that emerging farmers have better access to farm credit than small-scale farmers. The credit obtained to purchase fertilizer and seed, plus the interest on these

loans, however, accounts for nearly 50 percent of their production costs. Higher interest rates on loans in the future could discourage farmers from purchasing inputs for the next season, and thus decrease crop yields. Also, to minimize high interest rate payments this season, these farmers must sell their maize early in the season to pay off their outstanding debts.

Another related financial constraint is the short loan recovery periods that lending institutions place on farm equipment loans. Shorter recovery periods result in higher monthly principal and interest payments, thus creating a barrier to mechanization for small farming operations.

The imposed in-mill price on maize has a negative effect on emerging farmers by reducing their ability to negotiate prices with traders. They also suffer from the general lack of market structure since the disintegration of NAMBOARD (the national marketing parastatal) and several other marketing cooperatives. Similar to small-scale producers, emerging farmers often live in isolated areas and lack reliable information on market prices.

An additional constraint, observed in Kabwe, was a restriction on farmers' selling maize in public markets. In each of the provinces visited, maize grain was being sold in or near the local markets. Farmers, however, were not permitted to sell maize in some of these locations because market masters wanted to create employment opportunities for local urban residents. Therefore, farmers were obliged to sell maize at wholesale prices to retailers, who in turn resold at the marketplace to consumers.

Emerging farmers have developed a number of innovations to cope with the uncertainties of maize farming in Zambia. Many expressed interest in diversifying their cropping mix next season although they lacked information on domestic and regional markets of alternative cash crops.

Another innovation of emerging farmers is investment in small business ventures to supplement their farm incomes. Hammermills are often owned and operated by emerging farmers in rural areas. These mills are located near trading depots to serve neighboring farmers who bring commercial maize to market. Some farmers who operate hammermills have expanded their businesses to provide dehulling and lumber sawing services to rural communities. One emerging farmer devised a mobile hammermill scheme, whereby he transported the mill in a pickup truck to different locations each week in order to serve a larger population.

Some emerging farmers, in response to the financial difficulties of marketing maize to lending institutions and government buying agents, have resorted to marketing their own crop by paying transport vehicles to haul bags to market centers or milling sites. Availability of private transport was not a constraint in the production areas visited, but transport charges could be costly depending on the destination. On the road to Mkushi, for example, farmers were charged K1,500 per bag transportation fee to Luanshya. Given the in-mill ceiling price of K7,000 and the depot price of K5,600, transporting their produce to mills was not economical.

In Monkonchi, however, farmers frequently marketed their produce in Kabwe since transport was cheaper.

3.2.3 Large-scale Commercial Farmers

Although the main focus of this study is on small agribusiness enterprises, large-scale farmers are major participants in the maize marketing system and have strong information networks with markets throughout southern Africa. They typically belong to provincial and/or national farming associations that have a strong lobby in government. Large-scale farmers are therefore an important economical and political force in Zambia.

Large-scale farmers are few in number but collectively produce 30 percent of commercial maize in Zambia, according to MAFF. Their farms average over 70 hectares and are fully mechanized. Unlike the small holders, large farmers have better access to farm inputs, credit, and storage facilities, and they produce the highest yields per hectare (30 bags on average) in the country. They are also more involved in marketing functions and sometimes purchase maize from smaller farmers to assist in marketing.

One of the major constraints of large-scale farmers is the interest rates they must pay on loans. Unlike small and emerging farmers who receive government-supported interest rates on loans of 70–80 percent, large-scale producers must borrow at commercial interest rates, which are currently 140 percent. They must therefore sell their crop as quickly as possible at the end of each season to avoid paying additional interest on outstanding loans. This is a major disincentive to storage and discourages farmers from purchasing new equipment.

Another barrier to expansion is the export restriction placed on maize this season. Only two million bags are allowed for export this year, which has forced several large-scale farmers to sell locally or to export without permits. Zaire, Botswana, Malawi, and Namibia are all receiving maize this year from Zambian farmers. Farmers who are unable to export to these markets will not have access to the foreign exchange earnings they need to purchase new equipment. They will consequently reduce maize production next year in favor of other crops such as soybeans and groundnuts, which have no export trade restrictions.

A third limitation to large-scale farmers this season is the "indicative" price floor and in-mill price ceiling imposed on maize. The fixed marketing margin is a disincentive for farmers to sell to local milling operations and to ZCF storage facilities.

Large-scale farmers are adopting new tactics to cope with these constraints. They will diversify their cropping mix next year, cultivating less maize and more soybeans and tobacco. Many large-scale farmers have opted not to invest in new farm machinery until interest rates become lower. This season, several are seeking ways through associations to lift the two million bag trade restriction on maize. In the meantime, some large-scale farmers are retaining maize in on-farm storage facilities, speculating that prices will increase in the near future. This

strategy is risky, however, since outstanding debts with compounded monthly interest could offset any financial gains from higher maize prices.

3.2.4 Institutional Farmers

Institutional farmers represent less than 1 percent of the total number of growers in Zambia and produce less than 5 percent of maize sold for commercial use. Because they play a relatively small role in the maize marketing system, this group of agricultural producers was not interviewed during this study.

3.3 Maize Dealers/Marketing Agents

Maize in Zambia is marketed by a variety of grain dealers who differ in the functions they perform and in size of operation. This section examines five different categories of maize traders, from small-scale maize retailers, who receive no financial assistance, to government-sponsored lending institutions, which supply maize to public storage facilities and milling parastatals.

3.3.1 Private Small-scale Retailers

The retail maize market in Zambia has expanded rapidly this year. Ninety-kilogram bags and 15-kilogram tins of maize are commonly sold by small-scale traders in or near most urban market centers. Most of these traders are young, in their teens or early twenties, and because they have limited capital to invest in marketing they conduct all business transactions in cash. Sales turnover is usually low, between 2 and 20 bags of maize per week. Once small-scale traders sell their stock, they purchase additional maize from farmers and transport it to urban centers.

Small-scale traders do not typically own transportation but commission pickup truck drivers to haul their bags to market centers or roadsides. These traders sell directly to consumers who, in turn, mill the maize at local hammermills. Although truck transport is most common, some small traders have begun to transport by rail. In Livingstone, small-scale traders are strategically located near the rail station, between the marketplace and one of the hammermills. They transport maize from Kalomo by train once a week by communally renting a railcar and accompanying their cargo to Livingstone. In July 1993, traders were purchasing maize from farmers at K4,500 delivered to Kalomo. Transportation costs to Livingstone are shown in Exhibit 4.

The retail price of maize grain at the marketplace in Livingstone was K900 per 15-kilogram tin. Thus, traders who used train transport received a profit of approximately K400 per 90-kilogram bag sold.

Exhibit 4: Example of Transport Costs from the Southern Province

Mode of Transport	Distance (km)	Transport Costs (per 90-kg bag)	Comments
Train to Livingstone	90	K350	Price includes handling charges
Truck (Station-Market)	1-2	K150	
Hired Truck (Kalomo to Market in Livingstone)	90	K700	Price includes handling charges

Entry into small-scale maize trading is not restrictive. Those who can invest K10,000 or less and are willing to travel to contact farmers in rural areas can easily begin operations. One of the constraints they face, though, is the financial means to expand their businesses to market larger quantities. Capital constraints also inhibit them from integrating vertically into the hammermill business or from selling maize meal.

To increase profits, maize retailers sell their maize stocks in smaller units and charge markups. These retailers mentioned that the most popular quantity of maize now sold is the 15-kilogram tin. One way to keep cost low is to sell yellow relief maize, which until recently was available at government storage facilities. Small-scale traders observed that some consumers were purchasing and milling yellow imported and white local maize together to reduce costs.

Maize retailers in several markets work collectively, not only to rent transportation but also to purchase sacks. According to parastatal millers and maize meal retail/wholesalers, this group of traders is becoming a formidable competitor in the maize marketing system, particularly in the Southern Province.

3.3.2 Private Medium-scale Assemblers/Distributors

Private medium-scale assemblers/distributors differ from small-scale retailers in several respects. First, they usually have access to formal financial sector loans and sometimes provide credit to farmers. Second, medium-scale traders market larger quantities of maize and typically own their transport equipment. Therefore, they have the capacity to reach a larger farming population than the small-scale traders. They do not sell maize retail to consumers as is customary among the smaller traders. These entrepreneurs usually trade in multiple commodities, such as soybeans, tobacco, and other cash crops, and they also have access to export markets, although most of their trading is domestic.

Several of these medium-size traders were selected in 1993 by the government and lending institutions to act as buying agents. Thus, in addition to purchasing maize with their own resources, they buy maize for the government and transport stocks from production areas into mills and government storage.

Medium-scale traders have experienced numerous difficulties this year with the 1993-94 marketing arrangements. Government disbursement of marketing funds has been slow and farmers have been reluctant to sell maize at the farmgate price suggested by the lending institutions. Another problem is that private traders who are acting as buying agents do not take physical ownership of the maize purchased. Therefore, there is the potential to buy low-quality grain because they have no grading system and they rarely inspect maize for quality.

By mid-July 1993, private traders had purchased empty sacks and constructed open-air trading depots, but only limited quantities of maize had been purchased. While traders waited for government funds and for farmers to agree on an acceptable farmgate price, they purchased other cash crops from their contract farmers.

3.3.3 Government-appointed Buying Agents

At the beginning of this season, MAFF selected over 200 buying agents to assist in purchasing maize for the government. This number was later reduced after lending institutions conducted a second screening of applicants and eliminated certain agents. Lending institutions' role in the marketing system was to channel funds to buying agents so that they could purchase maize from farmers.

These buying agents are very diverse. Some are medium-size private traders, such as Marklands, who already have the physical infrastructure to market maize. Some are cooperatives, while others are "briefcase operators" with limited or no experience in marketing and no established rapport with farmers, other traders, or millers.

This year, lending institutions required the buying agents to first collect maize from farmers with outstanding loans. This has proven difficult because many of the agents are not familiar with their appointed marketing areas and with local farming communities. The loan recovery system is also inefficient because it requires agents to make multiple visits to the same farmers; first to collect maize as payment for outstanding loans, and later to purchase the remaining maize stocks.

Buying agents do not pay farmers in cash, but rather distribute receipts for maize delivered to depots. Farmers must take the receipts to district or provincial banks for reimbursement where there is usually a minimum ten-day delay period in payment. Farmers do not like this system, and would prefer to be paid directly in cash at the depots.

In the Southern Province, buying agents criticized cooperatives for failing to collaborate in marketing maize. Although many of the cooperatives owned transportation and storage facilities, they denied the buying agents access to their equipment and installations. Buying agents consider this lack of cooperation a major deterrent to their operations.

Since the marketing arrangements this year are new, there are not yet many marketing innovations adopted by buying agents. Most are waiting for government or the lending

institutions to finance their operations and to instruct them when, where, and at what price to purchase maize. Some agents keep funds in bank accounts where they can earn interest on the money while they wait for the government and farmers to negotiate prices.

3.3.4 Lending Institutions and SPCMU

The government chose four institutions this season to act as primary maize buyers: CUSA, Lima Bank, ZCF Finances, and SPCMU. These institutions monitor government funds used to recover outstanding loans made to farmers last season. Buying agents have been appointed to locate and transport the maize to mills or storage.

Thus far, only a fraction of this season's harvest has been marketed through the lending institutions. SPCMU, for example, estimated that by mid-July, it had recovered only 5 percent of the commercial maize from the Southern Province. Several factors have caused delays in maize purchases. First, the government has only released a portion of the K15 billion promised to the lending institutions. Therefore, buying agents are not paid and maize cannot be purchased. Second, the lending institutions lack control and supervisory powers over the buying agents. The government selected the buying agents, and lending institutions do not have confidence in the agents' abilities.

Another problem is that the lending institutions are centrally operated from Lusaka and sometimes have difficulties disbursing funds on a timely basis to distant provinces. They have also been accused of not understanding the constraints that exist in rural communities, since they are primarily lending institutions and lack experience and knowledge marketing maize.

Due to their mistrust of buying agents, lending institutions have appointed their own agents in certain provinces. Buyers who work directly for the institutions are referred to as "primary buying agents." Since the primary agents work directly for and are accountable to the lending institutions, there is more cohesion and control over their marketing operations. This practice was observed in the Copperbelt where CUSA and Lima Bank had their own agents involved in the marketing system.

One method used to regulate the "independent" buying agents' use of funds is to pay them for services rendered rather than pre-financing their marketing activities. This prevents them from using government funds to invest in nonagricultural business ventures. For example, lending institutions required buying agents to arrange for empty sack deliveries to rural depots before agents were reimbursed for transport costs in the Central Province.

Lending institutions meet with representatives of the MAFF once a week to provide the government with updates on the maize marketing season and to receive current information on the disbursement of government funds.

At the farm level, lending institutions and SPCMU have also devised strategies to improve their operations. They provide discounts to farmers in all provinces who deliver their

maize to the tarmac for pickup. This strategy reduces transport costs to the more isolated farming communities.

3.3.5 Cooperatives

In the past, cooperatives were the primary maize traders in Zambia. This year, SPCMU was appointed one of the primary maize purchasers and some of the provincial and district cooperatives were selected as buying agents. Other cooperatives no longer receive government support services and are experiencing difficulties maintaining their operations. Thus, cooperatives vary in their roles and effectiveness in the maize marketing system. Many have the physical infrastructure to market commodities, but they do not have the capability to move maize to the urban areas.

3.4 Transporters

The two most common modes of transportation in Zambia are road and rail. The national rail company, Zambia Railways (ZR), is seldom used by large traders due to theft and slow delivery problems. Therefore, the vast majority of marketed maize is transported by road in Zambia. During the study, private trucking companies and two major trucking associations were interviewed to gain a better understanding of the constraints that affect the transport of maize.

Zambia has the physical infrastructure and capacity to market all of the maize produced in the country. International and domestic trucking fleets commonly traverse the major road arteries transporting goods to major urban centers. Small privately-owned pickup trucks circulate on secondary roads to transport people and agricultural goods. Trucking costs average US \$0.06 per ton per kilometer. There are several constraints, however, that have discouraged the efficient transport of produce this year.

Trucking companies had hoped to play a larger role in the 1993-94 maize marketing season. Although some were appointed buying agents, many were not supportive of the system devised this year. There are more open-air district depots this season, for example, which makes maize recovery more difficult and expensive because vehicles must make several stops and load smaller quantities per stop. Truckers also argue that the new system increases managerial costs and the potential for theft.

Another constraint to expansion in the transport sector is the rising costs of fuel and spare parts for vehicles. Fuel, according to the one company interviewed, exceeds 25 percent of their operating costs, due primarily to the heavy GOZ surcharges on imported fuel. Spare parts are expensive, especially for domestic companies without foreign exchange earnings.

Large international and domestic trucks traveling on Zambian roads are often overloaded. Overloading destroys the roads and bridges, thus negatively affecting transport services for agricultural goods.

To overcome these constraints and protect Zambian roads, one of the trucking associations is working with the government to establish a road rehabilitation committee. It is also lobbying the government to place stricter controls at weighing stations and to more prudently patrol borders for vehicles that do not comply with Zambian regulations.

Several transport firms mentioned that Zambia is underutilizing its comparative advantage in transport. Because the country is strategically located in the center of southern Africa, most trucks must travel on Zambian roads. At the moment, international transport companies are not contributing enough to support the roads they use. Transit fees in Tanzania, for example, are US\$16 per 100 kilometers compared with US\$8 in Zambia.

3.5 Maize Millers

Maize milling in Zambia has changed dramatically within the last few years. Prior to market liberalization, parastatal milling companies controlled the industry and set prices for maize meal. These companies are now experiencing competition in some areas from private hammermills and rollermills who are vying for a larger share of the milling market. The ZAMS Project estimates that nearly 5,000 hammermills are now operating in the country; in some market centers such as Livingstone, their combined milling capacity rivals that of the parastatal plants. Consumers who purchase maize and have it milled pay less than they would for commercial maize meal sold in stores and markets. Thus, an increasing number of Zambian households are processing maize grain at hammermills.

Competition among millers is more pronounced in the South than in the Central and Copperbelt provinces. In the Copperbelt, milling operations in Kitwe, Ndola, and Luanshya are still controlled by parastatals who provide employees with subsidized maize meal. Household incomes in the South are generally lower and consequently, consumers are more sensitive to price changes and actively seek ways to minimize food expenditures.

This section of the report discusses three different categories of millers in Zambia: small-scale hammermills, medium-scale private millers, and parastatal millers. Each of these groups is responding differently to constraints in the 1993-94 maize marketing season. Past studies have been conducted on small-scale hammermills and the competitiveness and pricing policies of parastatal millers. Less attention has been focused on the medium-size private millers.

3.5.1 Small-Scale Service Hammermills

Hammermills are typically owned by small-scale entrepreneurs or farmers who process maize in marketplaces or private compounds as a service to the local population. These operations are often family-run or engage two to three employees. Mills are located throughout the country; those in larger towns are usually electric while rural hammermills are mostly diesel powered.

Peak milling season is from April to November, when farmers and consumers have greater access to maize grain. In some areas, consumers wait up to four hours to mill maize at urban hammermills. During low demand seasons, owners scale down operations by reducing their daily hours and labor force.

Most hammermill operators mainly provide milling services to consumers and have not expanded operations into purchasing maize to mill on a commercial basis. Since service milling is in such high demand, hammermillers currently have limited incentives to process and market maize meal. Commercial milling requires a substantial financial outlay to purchase maize grain and empty bags, which also discourages them. An additional barrier to expansion into commercial marketing is the lack of storage facilities and transport equipment to store and deliver maize meal to retail outlets.

One of the major competitive disadvantages facing hammermillers is the quality of maize meal they produce. Consumers complain that meal processed at hammermills is not as fine as commercial breakfast and roller meal from the parastatals. Thus, service milling at hammermills tends to attract mainly lower-income consumers who are more price sensitive; these mills have been less successful in attracting customers from medium- and higher-income groups.

Mechanical breakdowns and difficulties in obtaining spare parts also inhibit the expansion of hammermilling operations. Every hammermiller interviewed mentioned the problem of repairing equipment, damaged from overuse and poor maintenance. Most millers did not inspect maize before milling to take out foreign matter or take the time to sift maize before milling. Thus, stones accidentally left in maize bags during milling frequently break screens which are costly and difficult to replace.

New entrants in the hammermill business have declined in 1993, primarily due to high equipment costs and interest rates. Small business support programs such as SIDO assist entrepreneurs in purchasing hammermills, but require short loan repayment periods of three years or less. Therefore, monthly principal and interest payments are high, which acts as a barrier to entry for many potential hammermill operators.

In several cities including Lusaka, Kabwe, and Kitwe, entrepreneurs prefer to install hammermills close to their own residence instead of at marketplaces or roadsides where maize meal is sold. Their choice of location was primarily for security considerations. Consequently, consumers are obliged to buy maize at one location, transport it to the hammermill site, and then transport their maize meal back to their homes. The process of purchasing maize, transporting, and milling can be extremely time consuming.

Hammermillers do not have formal information networks, but they are aware of prices charged by neighboring competitors. Pricing for service milling tends to be fairly competitive at most sites, ranging from K100 to K150 per 15-kg tin. Hammermillers have no formal associations but receive promotional information and training from the USAID-funded ZAMS Project.

Entrepreneurs who own hammermills have developed several innovations to overcome the constraints mentioned above. To better service customers, they extend operating hours during peak demand months. Owners also competitively price milling services to attract more clients.

Improving the quality of maize meal is accomplished in several ways. Some operators have asked customers to soak their maize before milling, thus softening maize kernels and reducing the risk of damage to machines. Others have purchased dehullers that are used prior to milling. Several operators, though, did not have adequate information on prices and locations to purchase these machines. The use of small-mesh screens (Number 1 size) is another way to produce a finer quality maize meal. Although small-mesh screens produce higher quality meal, grinding takes longer, and therefore is slightly more expensive than milling with larger screens.

Other income-generating strategies for hammermillers include forming milling contracts with livestock feeders and breweries. These industries sometimes use hammermillers located in urban areas as a source of low-grade maize meal. This type of arrangement is popular with hammermillers because they avoid the quality concerns of service milling to consumers. Another advantage is that milling contracts with livestock feeders and breweries can improve business during the low consumer demand periods from November to April. Maize is procured from ZCF storage or from maize stocks supplied by the companies.

Mobile hammermills is another strategy devised by entrepreneurs to reach a larger population. Entrepreneurs with access to transport can move their mills from one site to another on a daily or weekly basis.

3.5.2 Medium-scale Private Millers

Medium-size millers, along with hammermillers, have increased in number over the last few years as a result of market liberalization. Most of these operations are managed by entrepreneurs who have diversified into milling from other businesses. Unlike the small hammermillers, medium-size millers typically own their own transportation equipment and storage facilities. The size of their labor force varies considerably, ranging from 10 to 50 employees. Workers operate during night and day shifts milling, packaging, and shipping maize meal.

Maize is usually purchased from ZCF through buying arrangements with farmers, and sometimes from parastatal millers. After processing, the maize meal is sold through arrangements with national retail stores and market retailers. A few of these entrepreneurs also own retail stores and bakeries where they sell their products.

Prices of maize meal are still determined by the parastatal millers. Thus, medium-size private millers usually price their products to slightly undercut the competition. Most millers receive price information over the telephone or send sales representatives into retail stores and markets to monitor prices of different brands. Unlike the parastatal organizations, these private

millers were more receptive to supporting an association that could represent their concerns to the government. A millers' association already exists in Zambia and is chaired by the owner of one of the mills in Kitwe.

Last season, many of the medium-size millers benefited from sales of yellow relief maize and stocked sufficient quantities to meet their milling requirements through September 1993. Thus, their maize procurement costs this season have been relatively low. Once their stocks are depleted, they will be forced to purchase white local maize. Medium-size millers are concerned that they may not be able to compete with parastatals once this occurs because the parastatal maize meal is subsidized by the government.

Another competitive disadvantage is that medium-scale private millers are not able to produce as high a quality maize meal as the large milling operations because the medium-scale millers have lower grade machinery and screens. Customers usually prefer the finer breakfast meal, which is milled at National Milling and other parastatal mills.

Private millers have devised several innovations to overcome their constraints and more effectively compete with hammermillers and parastatal millers. One entrepreneur in Mazabuka captured consumer markets that are not currently supplied by parastatal mills by distributing maize meal to distant fishing villages along Lake Kariba and backloading dried fish that is processed into animal feeds.

In Livingstone, a medium-size private miller packages maize meal in 12.5, 5, and 2-kg sacks instead of the traditional 25-kg bags. Smaller packages are more popular with low-income households who are unable to purchase maize meal in bulk. Smaller packages are especially popular toward the end of each month, when consumers' disposable income is lowest. This same entrepreneur also offers free maize meal delivery to retail stores and offers credit to shopowners who carry his product.

Several of these milling firms also offer payment-in-kind programs to their workers, providing maize meal in return for labor; others have streamlined their operations, reducing their labor force and improving their forecasting of consumption patterns.

Another strategy common among medium-size private millers is to reduce costs by vertically integrating. This has been accomplished by purchasing farming operations to keep costs of maize supplies low. Other millers have integrated forward into the transport and retail industries in an effort to capture a greater share of the maize meal market.

Medium-size private millers have also diversified their product lines to reduce financial risks. In Mazabuka and Livingstone, millers now manufacture animal feeds, fish products, cooking oils, and mill different types of cereal grains such as sorghum, rice, and wheat.

3.5.3 Large-Scale and Medium-Scale Parastatal Millers

Until recently, parastatals enjoyed a monopoly in the milling industry. Large companies such as National Milling and Mulungushi Investment still maintain a large share of the market, but must now compete with smaller milling operations. Similar to other maize marketing participants, they too must adapt to changing market conditions.

Parastatal millers mentioned numerous constraints that affect their business practices. Although many of these mills have facilities to store several tons of maize, they are experiencing cash liquidity problems to purchase maize from traders. Consequently, several of the millers visited in July were operating 25 percent or more below their milling capacity.

Labor redundancy and managerial problems also hamper parastatal milling operations. Although several managers mentioned the need to streamline the labor force, they had legal difficulties reducing the number of employees. They also had problems controlling "ghost employees," laborers who received overtime payments during night shifts but work far less efficiently. Another constraint to management was the centralized structure of their operations. All marketing and operational decisions are made by the managers. In one of these companies, the manager had to approve the price and delivery conditions of maize, even for farmers selling only a few bags at a time.

The threat of privatization has effected parastatals in different ways. Some, such as National Milling, have chosen to conduct business as usual, upgrading their plants and investing in new milling equipment. Others are reluctant to improve their milling efficiency until they are certain of the companies' destinies. Some companies believed that employee training programs were no longer needed until the future status of the mills was certain.

Parastatal millers have been criticized for responding so slowly to price changes this season. Although they often purchase maize below the in-mill ceiling price, parastatals are still using K7,000 in their formulas for milling costs. Approval to change prices and reduce costs must be approved first by top-level management. The smaller millers, on the other hand, were more flexible in pricing.

Price information is exchanged over telephone lines. Competing firms, acting as clients on the phone, can easily call and receive current prices on maize meal in different mills. Parastatal millers are not typically supportive of miller associations, believing that they would be accused of colluding if they belonged to any organized group.

Although large-scale millers are usually price leaders, they have followed the lead of other smaller firms for market innovations. For example, National Milling is now packaging smaller bags of commercial maize meal and offering free delivery to some outlets, as private millers have done. They also mill other grains such as sorghum to diversify their product lines and keep equipment operating at higher rates of utilization.

Perhaps the strongest competitive edge for the parastatal firms is the quality of maize meal they produce. Consumers interviewed still preferred commercial maize meal over hammermilled meal, but due to rising costs they often resorted to milling their own maize.

3.6 Maize Meal Wholesalers and Retailers

Maize meal wholesalers and retailers purchase, transport, package, and sell maize meal to consumers at public markets and national stores. They have established different marketing arrangements in different locations. For example, in the Soweto Market of Lusaka, wholesalers operate outside the market walls where they receive maize meal deliveries from the parastatal milling companies. Sometimes wholesalers also transport grain from one area in town to another. Wholesalers earn a small commission per bag for transport and handling charges to retailers inside the market place. After purchasing sacks, retailers in many markets repackage maize meal into small 2- and 5-kg plastic bags to sell to consumers.

Several of these traders in Lusaka and Livingstone mentioned that their business has declined this year as a result of hammermills and the increased availability of maize grain in markets. They could not sell their products at competitive prices with service-milled maize meal.

Another problem mentioned was that some of the parastatal mills placed limits on the number of maize meal bags wholesalers and retailers could purchase. There was a 200-bag limit every two weeks to prevent meal from flooding the market and to discourage maize meal smuggling. Some large millers also require traders to hire miller transport and delivery services, which are more expensive than private transport companies.

An additional constraint observed in the markets was an imposed selling price on maize meal. According to market masters, prices of many agricultural commodities are set during weekly or bi-weekly meetings with retailers. Traders who sell maize meal at prices below or above the designated prices are reprimanded by the market masters.

Retailers are innovative in devising ways to improve sales. Some deliver maize meal to consumers, charging a specific transport fee within a given radius. Others sell at multiple points within a market or in several different markets to capture a greater market share. These retailers may have several shops located in different parts of town. Retailers also devise credit schemes with millers and receive discounts for purchasing in bulk.

3.7 Feed Processors

Animal feed processors rely on maize for their feed formulas. Feed processors buy maize from government storage and sometimes directly from farmers. Animal feeds are distributed by road and occasionally by rail. One of the major constraints mentioned by the processors was the difficulty obtaining and purchasing imported ingredients such as vitamin

concentrates for livestock feeds. Due to the rising cost of foreign ingredients, they anticipate that feed costs will increase in the future, despite an inexpensive source of maize.

Processors used several strategies to maintain their market share and contain costs. They diversified their products to include other lines of feed, from ostrich to pig starter, and they have marketing contracts with farmers to supply maize.

3.8 Breweries

Breweries are also purchasers of maize grain and meal. National Breweries and Zambia Breweries are both parastatals who obtain maize supplies primarily through ZCF storage facilities. Maize at National Breweries is mainly milled at the plant, but sometimes the company arranges contract milling services with local hammermillers. Both breweries own transportation equipment and storage facilities.

Similar to the parastatal milling operations, breweries may soon be privatized. They are therefore hesitant to expand operations until they are certain when privatization will occur. Although they too purchased sufficient quantities of yellow relief maize to last into September, their maize procurement costs will rise once their stocks are depleted and they are forced to buy domestic maize.

To minimize costs, National Breweries has diversified its product line to include a cheaper brand of beer called "Shake-Shake," which is sold in cartons. This is particularly popular among lower-income groups. National Breweries has also begun to use sorghum and millet, as a substitute for the more expensive maize, in its products.

4. CONCLUSIONS

Despite many obstacles, there are promising developments in Zambia's private sector. New competitors are emerging in the maize marketing system who can improve the future performance and efficiency in agriculture. The survival and expansion of these firms will largely depend on the government's ability to assess their needs and to design and implement appropriate support programs. Future policy decisions and regulations must be clearly understood and supported by all participants in the maize marketing system. This will require strengthening communications between government and agribusinesses.

Donor agencies are currently implementing programs to bridge the gap between the public and private sectors and to encourage the growth of Zambian agribusiness firms. In August 1993, the World Bank provided the GOZ with financial assistance for the maize marketing season 1993-94. Funds are currently being disbursed through lending institutions to expedite maize recovery. The World Bank and African Development Bank will also provide financial and technical assistance to improve road infrastructure, market information, and MAFF's commodity grading and standards system.

USAID's recent programs have included assisting in the privatization of parastatals and supporting hammermill entrepreneurs through the Zambia Agribusiness Management and Support (ZAMS) Project. The EC/GRZ is implementing a marketing information project in Central Zambia that collects, compiles, and disseminates price data in different local markets and mills. These are just a few examples of some of the many agribusiness development activities underway in Zambia.

Future development efforts are needed to support agribusiness entrepreneurs and improve communications between the public and private sectors. At the farm level, stronger laws are needed to protect contract farming arrangements. Farmers can often receive higher prices on the open spot market than through contracts they have signed during the previous season, and consequently, they sometimes break their agreements and sell to the highest bidder. Clear guidelines on loan repayments that state when debts will be recovered and the consequences to violators could eliminate this problem. The enforcement of such arrangements will benefit both farmers and traders and reduce the confusion that has handicapped the maize marketing season this year.

Small and emerging farmers could also benefit from improved marketing information on maize and other cash crops. Timely price information broadcast on radio to farmers and traders would improve their ability to make sound marketing decisions. Unfortunately, many areas in Zambia do not receive radio coverage, and radios and batteries are scarce in many of the more isolated farming areas. Therefore, investment in communication equipment is needed in order to reach a larger listening audience.

Another development priority for producers is on-farm storage. Most small-scale farmers have limited storage space and are therefore forced to market their produce prematurely

instead of storing to sell at a more opportune period. Improved design and construction of household storage facilities could greatly benefit small farmers who become net maize meal purchasers during half the year.

More liberal export policies would also encourage the immigration and investment of large-scale farmers from other countries. Zambia is currently farming only a fraction of its arable land, land that could be cultivated in the future by efficient, highly productive, farming operations. Large-scale producers are export oriented and therefore face different constraints than small and emerging farmers. Several mentioned the desire to implement a system whereby they could produce a certain percentage for local markets and a fixed percentage for export. This system would encourage large farmers to expand production in subsequent years while guaranteeing adequate supplies for local consumption.

Private traders would benefit from marketing extension programs to educate entrepreneurs on how to choose the best marketing options based on the costs involved. Government policy toward maize trading could be strengthened by continuing to support lending institutions but allowing them to select their own buying agents and transport companies for marketing maize. Donor agencies could assist these institutions by providing technical and financial advice to improve the speed and efficient disbursement of funds to provincial offices.

In the milling industry, entrepreneurs of different sizes face different types of constraints. Hammermills, for example, must devise strategies to improve the quality of their milling services in order to attract more clients. **Programs to support the distribution and use of dehullers is one way smaller millers can attain a competitive advantage in the future.** The introduction of a pre-milling sifting process would also greatly help hammermills avoid the equipment breakdowns that have plagued many small entrepreneurs.

Therefore, decisive action on the privatization of these mills will accelerate the process to improve efficiency. Parastatal millers are still awaiting the outcome of the privatization process, and thus are not motivated to improve their performance or buy new equipment until they are certain about the future of their operations.

A clear, more unified and consistent position on marketing arrangements is essential to assure the success of maize production and marketing in Zambia. The role of institutions in the maize marketing system is still unclear to many marketing participants. "Suggested" commodity prices are often interpreted by entrepreneurs as government-imposed pricing. Likewise, changing government policies on maize exports has created confusion among maize marketing agents and farmers..

Public and private associations should allow agribusinesses to collectively inform the government of their needs and concerns. Improving communication between the public and private sectors can be accomplished in several ways. Organizations such as ZNFU, Fed-Haul, Zambia Truckers' Association, and the millers' association are active in promoting their

industries needs to policymakers. Although membership is not restrictive, larger firms usually have a stronger position in these associations and therefore the views and problems facing small entrepreneurs may not always be adequately represented. Efforts are needed to assure that small-scale entrepreneurs have an equal voice in these or other associations.

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Appendix 1
Itinerary for the Grain Marketing Study Team

Date	Day	Location	Organizations Visited/Activities
6/29	Tues	Lusaka	Arrive in Lusaka on BA 053 from London. ZAMS Office (meet H Schartup and Joe Temba) Marklands Limited (govt buying agent) interview.
6/30	Wed	Lusaka	ZAMS Office: Meet John Litschauer (USAID/ZATPID II Project). Discuss assignment with Shartup and Temba. USAID Mission Meetings: L. Sherer, V. Mahan, W. Whelan, B. Wilkinson.
7/1	Thur	Lusaka	ZAMS Office: Monitoring and Evaluation/Training Team (A. Molusaka, G. Nkhatoma, and S. Malonda) Discuss hammermills. Jim McKenzie (USAID/Planning Division) Discuss Zambian govt policies/trade regulations Syringa Dairy Farm Ltd Discuss oilseed farming/trade. Brad Flamm of Famine Early Warning Systems (UNICEF Building).
7/2	Fri	Lusaka	Review McKenzie report on Mktg Policies. USAID debriefing on oilseeds at 10:00. Meet with Wil Whelan to discuss workplan. Finalize workplan with Dr. Temba.
7/3	Sat	Lusaka	Photocopied articles relating to maize mrkting. Set-up interviews in Central and Copperbelt. Send itinerary to H. Schartup and L. Sherer. Review household expenditures reports.
7/4	Sun	Lusaka	Independence day celebration at Ambassador's residence.
7/5	Mon	Lusaka	Create flow diagrams for grains and visit market. Visit Baleni Hammermill (Catholic Mission) Visit Chilenji market.

7/6	Tues	Lusaka	Visit to: Mandevu market (Hammermiller) Soweto market, Kamuala market National Home Store (NHS)
7/7	Wed	Lusaka	MAFF Changeange (marketing agent/trader) ZCF (Finance)
7/8	Thur	Lusaka	National Milling Almagamated Milling (Robinhood) ZNFU
7/9	Fri	Lusaka	Truckers Association Fed-Haul
7/10	Sat	Lusaka- Kabwe	Mukonchi Farm Block Interviews with: Marklands extension agents, South African commercial producers, emerging and small farmers, Hammermill operator. Visit depots, hammermills, farms.
7/11	Sun	Kabwe- Ndola	Kabwe interviews at hammermills and 3 markets. Kapiri-Mposhi interviews at hammermill and market.
7/12	Mon	Ndola- Kitwe- Luanshya- Ndola	ZCCM - Mulungushi Investments Millers SIDO Nkana Millers Luanshya Market Roan Antelope Millers Nkana Millers Hammermill operator (Luanshya)
7/13	Tue	Ndola- Kitwe- Ndola	Jamas Millers National Breweries ZCF silos Kwacha Millers HM Millers
7/14	Wed	Ndola- Mkushi- Kabwe	Misundi (buying agent/input dealer/farmer) Mkushi Farm Block (Mr. Fuller, Farmers Coop)

7/15	Thur	Kabwe- Lusaka	Kabwe Transporters Kabwe Milling EC/GRZ Project Marklands Small Farmer Interview
7/16	Fri	Lusaka	Preliminary report writing
7/17	Sat	Lusaka	Preliminary report writing
7/18	Sun	Lusaka- Choma	Travel
7/19	Mon	Choma Livingstone- Choma	Parboo Rollermillers National Milling Visit to market place Interview with hammermill operator Jelana Farm (large-scale commercial farmer)
7/20	Tue	Choma	Choma Milling SPCMU ZATCO (private coop)-livestock feed Emerging farmer interview in Batoka
7/21	Wed	Monze- Mazabuka- Lusaka	Monze KLB Meashels - Mazabuka Mazabuka Marketing Dev. Co.
7/22	Thur	Lusaka	CUSA ZAMSEED NCZ ZCF(finance)
7/23	Fri	Lusaka	Small Holders Association (Inter-Africa) Red Cross-PPM Relief Program
7/24	Sat	Lusaka	Report writing
7/25	Sun	Lusaka	Report writing
7/26	Mon	Lusaka	Debriefing to USAID

APPENDIX 2

SELECTED NEWSPAPER ARTICLES ON MAIZE MARKETING

Now farmers to fix own maize price

By VENARCIOS
MWANSA

LIBERALISING of grain marketing, which was suspended partly due to the drought which hit the whole of southern Africa, has now gained momentum in Zambia, thanks to the government's commitment to the overall economic reform programme.

The MMD government appears to be gradually relaxing its role in grain marketing which previously vice-president, Levy Mwanawasa said would be done only when "reliable private entrepreneurs take over crop marketing."

The new development is likely to encourage competition among the farming community that today is perhaps the only group which has continued to enjoy government subsidy in one form or another.

Last week, the grain committee of the Zambia National Farmers Union (ZNFU) met in Lusaka where they resolved that members (of ZNFU) would seek K8,500 for a 90kg bag of maize produce.

COMMITTEE

Like other farmers, the grain committee strongly argued that the K5,000 floor price fixed by the government was uneconomical. All delegates (from Lusaka, Choma, Kabompo, Mkushi, Mansa, Kasama, the Copperbelt, Katere, Nchelenge, Mazabuka, Solwezi and Chipata) approved the resolution by the grain committee.

The proposal was, however, received with mixed feelings within government circles. For instance, the government, through the research being undertaken by the environment



* A MAIZE field ... farmers will now fix their own prices of the harvest.

and food security department in the ministry of Agriculture, Food and Fisheries, rejected the proposal describing it as "unrealistic."

The department felt that at K5,000, farmers would break even on their cost and even earn a reasonable profit on their crop. Even Agriculture, Food and Fisheries Minister, Simon Zukas sounded cautious when he endorsed the farmers' demands for K8,500 floor price of the 90kg bag of maize.

The demand, said Mr Zukas, was justified as long as millers were prepared to buy the produce at that price. His reaction was based on the country's liberalised market economy which government no longer has to shape prices of agricultural products.

Market forces, he said, would determine prices of the produce.

Reasons advanced by the ZNFU for demanding the price they did, have been well-documented. These include the fact that with the K8,500 for each 90kg of maize, the farmers would be encouraged to remain in

production next season.

The union (ZNFU) has even warned that any of its members accepting less than this amount would face difficulties in repaying their seasonal loans.

PRICES

It has been found that although the prices higher than any given floor rate have been freely negotiable, there has been a danger that the buyers would only adopt the floor price, as the official fixed rate, and that this rate would remain at the same level throughout the season.

The acceptance of the demand by ZNFU members that the 90kg maize bag floor price be K8,500 and government stand on the matter seem to have in earnest ended the farmers' fury over the previous government maize price of K5,000 which they argued was just too low.

When the government announced its price slightly a month ago, farmers in Kalundwe resettlement scheme in Kaoma were, for instance, reported to have

resolved not to sell maize at this government price.

The farmers, who were reportedly annoyed, based their near-protest on the fact that they were then buying fertiliser at K7,000. For this reason, they said they could not sell their produce at the government-pegged price or would be on the losing end.

Instead, the farmers suggested that their maize be sold at K12,000 or least K9,000. They argued that besides this enabling them settle their loans, they could remain with some profit, the two advantages which could hardly be forthcoming had they continued to sell at K5,000.

High fertiliser prices have been noted as one of the major constraints threatening to bring down crop yields among farmers throughout the country.

Peasants have particularly been identified as one most vulnerable group in the farming community whose crop production could be adversely affected should high prices of fertilisers not be met by the corresponding high prices of the maize crop.

For instance, when he opened a three-day fertilisers' workshop at Kabwe's Masiye motel, assistant secretary in the ministry of Agriculture, Mr Johannes Chanda said that many of the peasant farmers had even cut down on the use of fertilisers as a result.

Mr Chanda disclosed that to alleviate the situation, his ministry last year introduced a liberalised marketing system which entailed the placing of fertiliser import on the open general licence (OGL).

POLICY

He hoped that the free import policy would increase the availability of fertiliser, adding that it would also result in the supply of some new grades and different types of fertiliser. All these were possible means to reduce the prices of fertilisers.

The escalating prices of fuel products has also been cited as another factor for farmers' demand that their maize produce be sold at economical prices.

This has culminated into

ZNFU chairman Ben Kapita warning that growing the crop would not be profitable should the price of the grain (maize) not be adjusted upwards.

According to the ZNFU, it has for a long time been accepted by farmers that the price of maize should roughly be the same as the bag of fertiliser, which now stands at K9,000.

For this reason, they say, farmers selling 90kg bags of maize at K5,000 cannot afford the fertiliser at that price (K9,000) in the next season or even more by then.

But this is just the latest in a row of the benefits farmers in Zambia have started to enjoy from this month onwards.

The first was an announcement by the deputy minister of Agriculture, Gibson Nkusu, that a ban imposed on maize exports had now been lifted.

He said with immediate effect, everyone was free to export maize. The government temporarily banned maize exports in the wake of the drought which ravaged crops in the nation.

Minister resulted into

outside donors providing thousands of tonnes of maize which was meant for national consumption.

Things have turned for the better this year, thanks to the heavy rains of last wet season which had resulted into the expected bumper harvest, estimated at 18 million bags of maize.

Mr Nkusu said as a result, about two million bags of grain would even be exported from the marketable surplus. And again, a direct blessing to farmers in the country, and, indirectly, to the nation as a whole.

Maize exports are just of benefit as they comprise a source of foreign exchange needed to buy agricultural equipment and other inputs.

Also foreign exchange is needed in this cash-constrained economy for its overall development, and resumption of maize exports is just one good news that the whole country has appreciated.

EXPORTS

The government restricted maize exports (but not other non-traditional foodstuffs) to ensure that its stocks were enough to sustain local consumption. It wanted to ensure that maize stocks were available to keep the nation going.

But while the nation was threatened with starvation welcomed the government move, some farmers complained especially in the past few months over its non-removal of export restrictions of maize.

Now, it is quite clear that these farmers are happy, in the same way they are with their newly-proposed maize prices.

The country two months ago expected the last consignment of the 200,000 tonnes of relief maize donated by the USA to arrive in a few weeks. This was after 50,000 tonnes of the same



● ZUKAS ... cautious.



● NKAUSU ... ban lifted.

batch had arrived at the port of Beira in Mozambique.

Mr Nkusu predicted that the maize which had been donated by the various donor countries would last up to May, just in time for harvesting of the local breed.

And true to Mr Nkusu's words, yellow maize meal

is diminishing in some parts of the country while in most has already disappeared and replaced by white (local) maize meal.

This was seen a welcome development which could partly be sustained by maize pricing which is as high as the one proposed by the grain committee of the ZNFU, at least as one marketing basket.

June 3, 1983
Zambia Daily Mail

FEATURES

Round-Table Talks Sought To Thrash Out Meal Price Wrangle

by CHARLES KACHIKOTI
THE impasse over the maize producer price may spark a bitter fight over scarce mealie meal unless farmers, millers and the Government settle for talks to resolve the pricing conflict once and for all. Farmers are demanding K8,000 a 90 kg bag of maize, mainly because following last year's drought many of them made heavy losses and borrowed from banks that have stringent terms of repayment.

A prominent Copper-

belt miller warns that millers are two weeks behind in maize purchasing because the farmers' demands have sparked a running conflict with Government leading to maize stocks declining to "very, very low level."

The conflict hit a deadly decibel last Sunday when President Chiluba flatly refused to honour the farmers' wishes at a rally in Mufuta.

One signal of the gravity of the situation is seen in a letter written by a major

maize marketing agent who has procured 200,000 x 90 kg bags and offered to sell it to the miller — the into-mill price demanded is K11,000!

"As a responsible miller I cannot agree with what farmers are asking for — they should demand K5,000 from millers and let Government sub-

sidise." This, the miller says, would amount to subsidising production and not consumption.

Another miller in the province has told farmers it would not accept maize priced beyond K6,000 a bag. The miller interviewed says "millers should be spared from blame this time. We don't

know at which price to buy maize because different prices are being quoted."

Unless Government moves into the matter sternly, chaos looms for national life. More profitably, a meeting to thrash out a national maize pricing policy should be convened very urgently or else farmers will resort to hoarding maize and millers will not produce anything, the miller says.

Government should work out a means of subsidising the farmers and ensure that they are given better credit terms and cheaper inputs rather than face banks on their own, the miller suggests.

The situation at present, according to the millers' calculations, is that from the 1992-93 season current prices are K4,500 a 90 kg bag of maize which has placed Roller meal selling price at K1,830 and Breakfast at K2,100, a 25 kg bag, officially that is.

If the farmers demand K5,000 a bag, which they are not, the price for Roller would be K3,280 and Breakfast K3,790. If they asked for K7,000 a bag, Roller would sell at K4,185 and Breakfast at K4,836. If they asked for K8,000 a bag, which is now the case, and won their case, Roller would cost K4,638 and Breakfast K5,359 a 25kg bag.

"This is where problems will start. People's incomes are diminishing and companies are laying off workers. Extended families will be even more extended to look after more people than previously."

The miller woefully notes that Minister of Agriculture and Fisheries Mr Simon Zukas told millers that if prices farmers are demanding are fulfilled, Government

low maize presently preserved as strategic reserves to cover the poor.

"It means you will pay the premium price of mealie meal. The trouble is, who determines the 'poor'? We will be going back to the Kaunda days when party men determined who the 'poor' were and kept mealie meal coupons."

Millers have operated at

Despite this, the miller interviewed agrees that millers should not be subsidised, but farmers should.

For instance, at K5,000 a 90kg of maize, which farmers have exceeded, the case for maize processed in Ndola and sent to Mkushi is as follows: For the 205km distance between the transport

Breakfast sold in Mkushi.

Accordingly, from Mansa across 356km to Serenje where maize is processed, Roller costs K3,498.58 and Breakfast K4,842.63. In Mkushi itself, Roller costs K3,111.98 and Breakfast K3,595.90. From Kasama across 200km to Isoka and Mpika, Roller ends up at K3,132.14 and Breakfast K3,619.19.

From Luangwa to Mtilishi 304km apart, Roller is K3,447.86 and Breakfast which does not sell there has no Roller demands K3,295.15 and Breakfast K3,807.55.

These are official calculations only. Other factors worsen the plight of the buyer.

If the maize price was fixed at K7,000 a 90kg bag, with the same considerations of distance and other elements, Mkushi residents would buy Roller at K4,185.48, Breakfast at K4,836.32, Serenje dwellers would buy Roller at K4,393.05 and Breakfast at K5,076.17. In Mkushi, the cost would be K4,016.97 for Roller and K4,641.62 for Breakfast. In Isoka and Mpika, Roller would be K3,986.85 and Breakfast K4,646.48 with Roller at Mtilishi going for K4,464.48. In Kaoma Roller would fetch K4,200.13 and Breakfast K4,853.25.

If matters became so atrocious as to cause a 90kg maize bag to cost K8,000 the meal prices for a 25kg bag would be as follows:

Mkushi Roller K4,637.96 and Breakfast K5,359.17 Serenje Roller K4,340.27 and Breakfast K5,392.94. Mkushi Roller K4,469.45 and Breakfast K5,164.47. Isoka and Mpika Roller K4,414.20 and Breakfast K5,100.63.

and Kaoma Roller K4,652.63 and Breakfast K5,376.44.

For the millers, the cost of processing a K5,000 bag ranges in the K8,600 region; to process a K7,000 bag would cost K11,000 to K12,000 and to handle an K8,000 bag would cost K13,000. The loss is telling.

Marketing agents add their own test to the consumer's patience. In this liberalised environment, any and every agent (pre-tenders not excluded) joins the fray and goes where vehicles agree. Impassable roads mean crops rot. Such agents have their own idea of transport charges since fuel prices never fail to dent the thinking of transporters.

Add to that unscrupulous hammer millers who sell under-grade and inferior quality mealie meal to consumers — often using an established miller's name on the bags. These dealers use recycled bags bought from townships. An instance was uncovered in Kitwe in May.

It is necessary to oppose Mr Zukas' statement last month that Government would not interfere in the price of Maize in line with liberalisation though he said the K8,500 demanded by farmers a 90kg bag was too high.

The ZNFU resolved in May that it would seek K8,500. The emergency reality exists a national funeral over the highly touted 18 million bumper maize crop harvest.

We can ill-afford the commotion that intolerable mealie meal prices spark. The Government should not fear to call all parties to the issue to one table to deal with the size of food on our plates.

It is a matter that demands that millers and farmers, Government and the opposition, climb down from their perches and meet in the valley and make a decision to save



•ZUKAAS



•SCOTT

a loss for ages, and since they are lined up for privatisation, they cannot get loans from banks which are now reluctant to provide credit.

On top of that, millers waltzed in a strange hide-and-seek relationship with former Agriculture minister Dr Guy Scott because he would agree with millers on a new price of maize, and then openly blame millers for consequences when the market reacted. It went on to a point where millers asked him to authorise price limits in writing.

A cost analysis for white meal by the miller, differing by a K30 margin at the most with other millers in the province, indicates costs to the miller and retail prices for distances between source of maize and point of mealie meal production. Millers record

charges at K40 a metre a kilometre is K739, handling charge K20 and the empty grain bag K166.67 (K500 for three) bringing this to a total of K5,925.67. Add bank interest of K1,926 (at 130 per cent for three months) and the cost climbs to K7,851.67 which for a 90kg makes maize K8,724. Deduct bran recovery at K111.11 to leave K8,612.97.

The meal then splits to Roller and Breakfast. Both brands are worth K2,533.23 with packing materials evenly costing K126 both ways. Overheads remaining the same at K480 both sides and the quality transfer of K156.56 being absorbed by the miller, the profit margin of 10 per cent for Roller and 15 per cent for Breakfast creates the difference at K3,280.50 for

Hammermills to solve meal prices

By CHARLES MUSHITU

MABLE Mambwe is a worker at one of the farm houses in Lusaka's Barlastone area. When the mealie meal prices were announced recently, she could only laugh at the people who were complaining of the hike because to her the increase did not make any difference to her normal life.

Miss Mambwe has always

relied on the local hammermill where she takes her maize to grind for her mealie meal. She buys a 25 kg bag of maize at only K1,000 which, when she grinds at K100, gives her two 25kg bags of mealie meal which now goes for about K4,000 each in shops.

She has since set an exam-

ple to all surrounding residents and those from the nearby Lilanda compound who have since stopped buying pre-packed mealie meal from the retail shops.

This initiative is now being perceived by some leaders as the only means of cushioning the impact of the Structural Adjustment Programme (SAP) in as far as the price of mealie meal is concerned.

Recently, Matero Member of Parliament, Samuel Miyanda called on the government to establish hammermills in townships in order to bring down the cost of mealie meal.

Mr Miyanda said government must move away from the practice of encouraging people to buy pre-packed mealie meal from millers when they could acquire it cheaply by using hammermills.

"We should try to find practical solutions to these problems instead of haggling with farmers and millers over the prices," he said.

He explained that three 25kg bags of mealie meal could be ground from one 90kg bag of maize.

When the programme of installing hammermills was conceived, the then UNIP government targeted rural areas as the sole beneficiaries as it was believed that people in the rurals were the most disadvantaged in terms of procurement of mealie meal.

By late 1990, over K50

million had been spent on the hammermills and distributed to the targeted centres.

For example the Village Industry Service (VIS) spent about K17 million to buy 155 hammermills which were loaned to women's clubs and individuals in rural areas. None was given to urban areas.

Since then, the hammermill was associated with rural areas and little did the UNIP government realise that the same machines could help bring down the prices of mealie meal in urban areas.

The fact that the prices of mealie meal are now beyond reach by many Zambians with many of them living on simple foods the provision of hammermills in urban areas should receive maximum attention if most families are to survive.

The high meal prices have been compounded by meagre wages and salaries obtaining in many companies with no hope of being raised.

Except those living in low density areas, people who live in compounds grow maize every year on small scale basis which if there were hammermills, they could take for grinding.

For example, in Kalikiliki compound in Lusaka one woman, Mrs Exhilda Nakazwe this year produced five 90kg bags of maize from her one Lima field.

But because there are no

hammermills nearby, she has wasted all her maize on brewing traditional beer and giving it out to neighbours who cook it for their breakfast meals.

If, for instance, there was a hammermill nearby, such women could have been taking the maize for grinding to cut on the cost of their mealie meal expenditure.

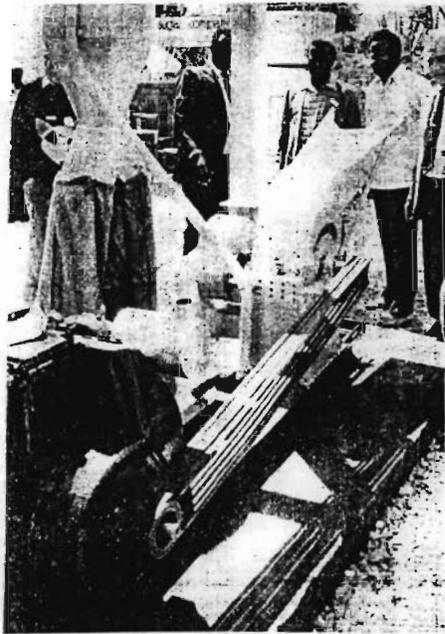
Many people think that the provision of hammermills in compounds may be a practical step of beating the meal prices unlike the introduction of subsidies as perceived by some socialist economists.

Last week, Zambia Congress of Trade Unions (ZCTU) president Fackson Shamenda suggested that government introduce meal subsidies in order to lessen the burden most people have in terms of buying the staple food.

But the suggestion has since met criticism from different quarters led by President Chiluba who said the move would only delay the economic restructuring programme which was currently on schedule.

Some economists say that in this free market economy, the provision of hammermills would bring about stiff competition to the milling industry and consequently bring down the price of mealie meal in retail shops.

For example, last February it was reported that the influx of hammermills in Livingstone had led to the piling-up of mealie meal in shops and markets around the tourist capital.



* A hammermill

7/9
Daily Mail

By CHARLES MUSHITU

haulage

THREE months after the marketing season was due to start, no one knows when and how the haulage exercise will commence. The Truckers Association of Zambia (TAZ) seems not in a hurry while waiting for government to sort out their logistical problems.

But government says it has released the funds for the purchases of maize so that collection of crops could start.

On the other hand, the Zambia National Union of Farmers is discouraging farmers from selling their products at the government floor price.

This is the confusion that is reigning in the maize haulage exercise and fear is looming that given another two months of delay, most crops will go to waste, especially that the rain season is just round the corner.

Government has released K15 billion to purchase this year's harvest estimated at 18 million bags of maize.

But the truckers are saying that the K15 billion is inadequate to cater for the purchases of the maize and transport costs.

Mr Charles Madondo, TAZ chairman, in an interview said that although government had released this money, it was not enough to buy the produce.

He explained that if, for instance, the whole amount was to be spent on maize purchases, only 2,141,855 of 90 kg bags would be



* MR Madondo truckers waiting.



* MR Zukas - state released funds.



* MAJOR Chibamba - will repair road

bought which would only cover three months of the nation's consumption. Zambians consume 900,000 bags per month.

"So you can see that the money that has been released is not even enough to feed the nation for more than three months hence the need for more funds," he said.

Mr Madondo said that as transporters they would not start hauling maize because most of the big farmers have not yet sold their maize.

Government has admitted that the K15 billion initially allocated is not enough and is scouting for another K30 billion from

donors. Agriculture, Food and Fisheries minister Simon Zukas said although the amount required to buy maize is estimated at over K70 billion, not all funding need come from the government under liberalisation.

He said the K15 billion set aside by government was only meant to set the marketing season rolling.

"The K15 billion is what the government has and government is not the only buyer. It is the facilitator. The money goes back to government again. So the K15 billion is the prime to pump and let it flow," he said.

While government has

insisted on K7,000 per bag of maize, the actual maize price from the producer will not be K7,000 unless that maize is sold directly to millers.

This means that since the government has instructed its agents, like the Zambia Co-operative Federation (ZCF), to sell to millers at not more than K7,000, the purchase price of maize from farmers will be lower so that buying agents can also realise some profits.

This will mainly affect the farmer who will be forced to sell their maize at lower than K7,000 while transporters will also have problems in securing payments.

For example, to date the

ZCF owes truckers more than half a million Kwacha and the co-operative body has only paid out about 26 per cent of the debt.

This came to light when TAZ members went to ZCF depot in Lusaka to demand for their payments and arrange for this year's crop transportation recently.

Mr Madondo doubted whether truckers would start transporting crops when they had no money to service their vehicles.

Some TAZ members have threatened to switch to transporting maize for export where farmers are ready to pay them promptly.

He appealed to government to devise a new method of disbursing payments to truckers, saying the present system of paying through its buying agents was cumbersome.

"Each time government releases funds to buying agents it takes three days before the cheques to reach the banks and once this is done, the banks also take 15 days before clearing the money to buying agents. After the money has been released, a period of three weeks elapse before transporters are paid," Mr Madondo explained.

Mr Madondo explained that as a result, transporters had to wait for more than a month to be paid, adding that this red tape heavily contributed to the delay in hauling maize.

The haulage exercise has also been delayed by poor state of roads in rural areas forcing truckers to refuse to go there.



* RURAL maize depots use tarpaulins to protect maize from rains.

They have warned that they would not risk their vehicles by going to areas where the roads had not been graded for the haulage exercise as this would mean incurring a lot of expenses for repairs.

But government says it has not abdicated its role as it was still paying attention to rehabilitate the damaged infrastructure which included repairing of the roads.

Major Celestino Chibamba, deputy minister of Works and Supply, says government has set aside at least K30 million for rural roads rehabilitation programme. In addition, government had released early this year for the same programme over K700 million.

The government also released, for the task force committee on road rehabilitation, fund account from which the task force is expected to draw for its road maintenance programme.

From the K1.9 billion for the task force K817 million had already been spent on rehabilitating roads which include those in Lusaka rural.

In Central province the bumper harvest this year may go to waste because all the major roads leading to farms were impassable. Central province perma-

nent secretary Austin Mweemba said: "If the money is not released promptly we stand to lose all the harvest this year in Central province because almost all feeder roads in the province need urgent attention.

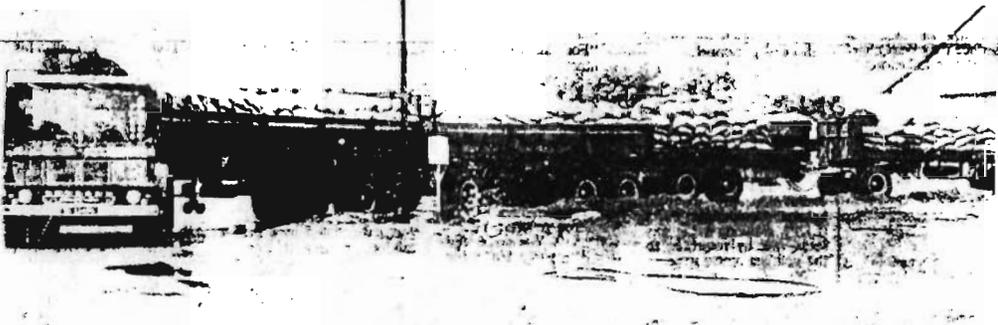
"If we do not repair the roads, transporters will be reluctant to send their vehicles on such roads to collect the maize and other produce from depots," he

said. But some councils where there are still impassable roads, have taken the initiative to use the money they have to repair bridges and grade feeder roads to facilitate the crop haulage.

Kalomo district council for instance is reported to have set aside an amount in the range of K300 million for the roads rehabilitation programme.

According to the council chairman Wesley Mbulo, the roads which they are concentrating on are those that are leading to depots to facilitate the smooth crop haulage. The district is among the productive areas in Southern province.

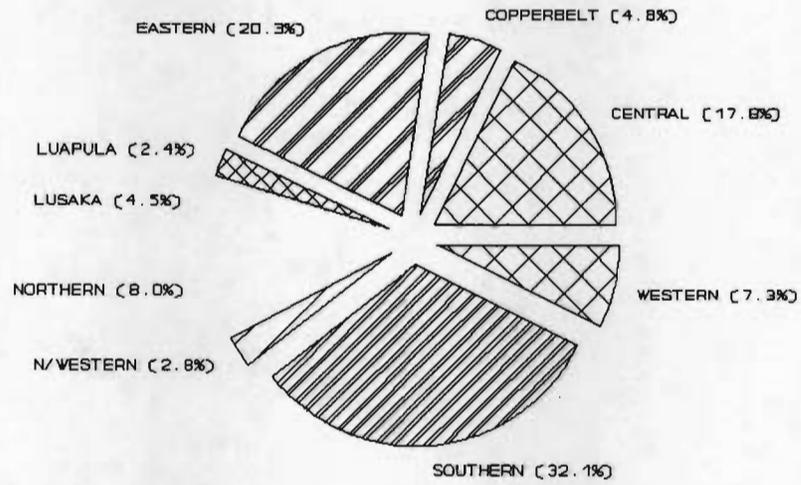
But as for TAZ, they are patiently waiting for government and farmers to agree on the price of maize before they can start the haulage exercise.



* TRUCKS loaded with maize bags bring in food to safe storage. No one knows when maize haulage will start this season.

APPENDIX 3
PROVINCIAL ESTIMATES OF MAIZE PRODUCTION IN 1993

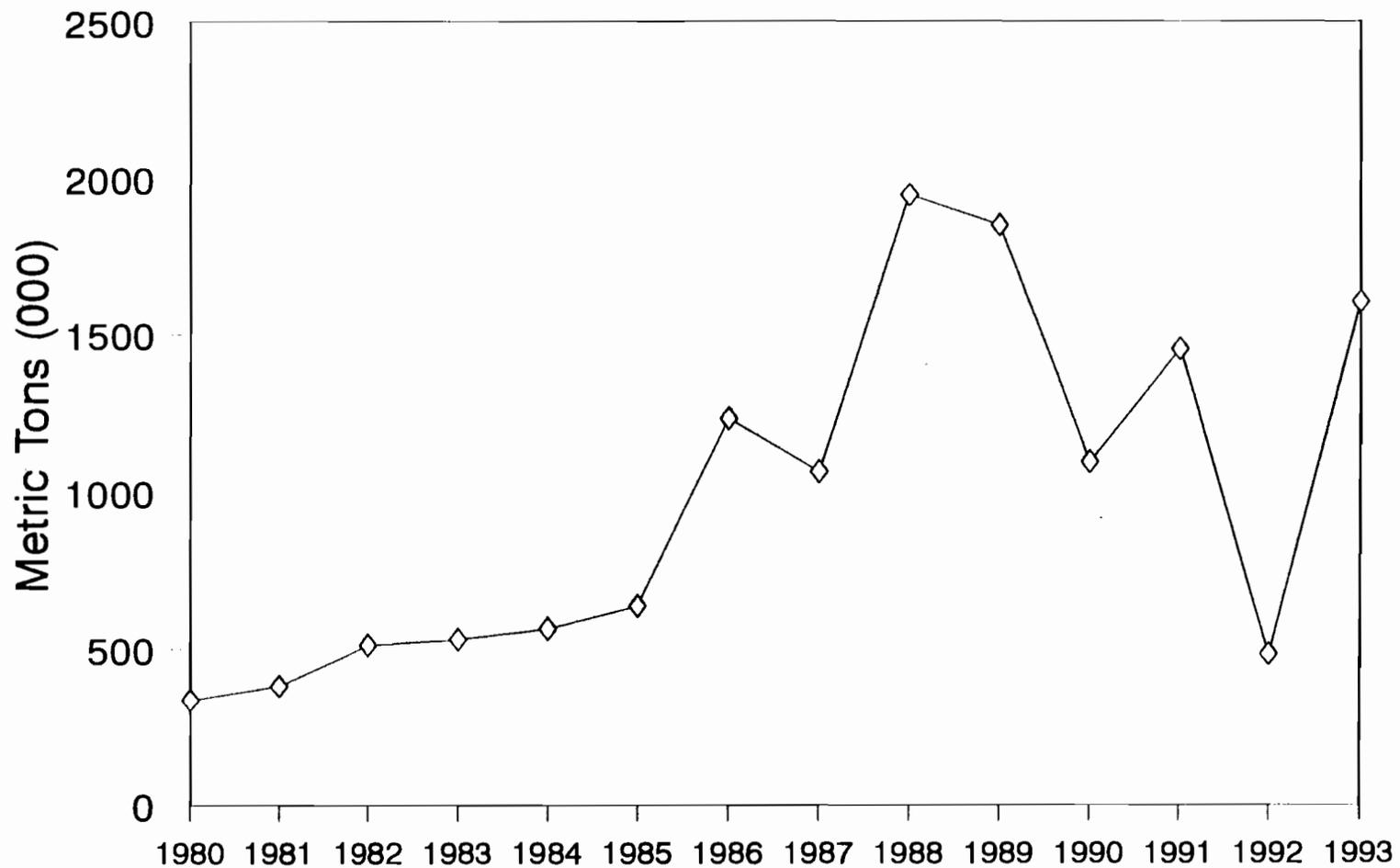
1993 ESTIMATED MAIZE
PRODUCTION IN ZAMBIA (By Province)



MAIZE PRODUCTION STATISTICS FROM MAFF

Zambia Maize Production, 1980 - 1993

Metric Tons (000)



Source: MAFF