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USAID/ZAMBIA CONSULTANCY REPORT

ZAMS SOCIAL ANALYSIS STUDY

by

THE DEVELOPMENT RESEARCH CENTRE OF ZAMBIA

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ZAMS/USAID-ZAMBIA PROJECT

SOCIAL ANALYSIS STUDY

INTRODUCTION

The purpose of this study is to compile information that will assist USAID consultants to design an agricultural marketing support project for Zambia. Emphasis is being placed on possible intervention measures that could be undertaken to achieve improvements in the agricultural marketing system for both agricultural inputs and outputs.

The objectives of the social analysis study are mainly to:

- 1) Identify the potential beneficiaries of any ZAMS intervention measures
- 2) Indicate how potential beneficiaries might benefit from possible interventions.

In this report these objectives are examined with reference to three possible interventions namely, oilseed processing, fruit and vegetable marketing and modes of transport. The report is based mainly on field interviews conducted in the Lusaka, Munhya, Chongwe, Kabwe rural and Chipata areas. Those interviewed included managers of both government (including parastatals) and private organizations, volunteer and semi-autonomous organizations, farm producers, middlemen (including wholesalers and retailers) and consumers.

BACKGROUND

Zambia covers an area of 752,617 square kilometres. The population today (i.e. 1988) is slightly over 7 million, about 60 per cent of whom live in the rural areas where the major source of livelihood is farming. In the rural areas population densities are low and vast areas of potential arable land remain largely underdeveloped.

The modern sector of the economy is largely based on copper mining, which provides at least 90 per cent of the total export earnings and contributes between 20 and 30 per cent of the country's Gross National Product (GNP). But experience over the last decade or so has shown that the importance of the mining sector to the Zambian economy is on the decline.

The contribution of the agricultural sector to GDP has remained more or less constant at less than 15 per cent. During the period 1980-84 the annual growth rate of the agricultural sector averaged only a mere 1.5 per cent. The reasons for this poor performance include inadequate rainfall, low investments and manpower problems.

The volume and value of agricultural exports have also remained low and constitute only a tiny fraction of total mineral exports (about 2 per cent). In good years the most important

agricultural export have been tobacco and maize. But in recent years the export of fruit, vegetables and flowers, mostly by a handful of large-scale commercial farmers to mainly West European markets have assumed increased importance.

The marketed production of major crops (domestic market) over the last ten years is given in Table 1. It can be seen from the table that, in quantity terms, the major agricultural commodities are maize, sugar and oil seeds. An examination of the major trends in production reveals, albeit in general terms, that a few enterprises such as sugar, sunflower seed, soyabeans, seed cotton and to some extent paddy rice and wheat have shown an expanding trend in recent years. This expansion has been largely due to a high domestic demand and government price incentives to the producer, both small and large. Sunflower seed, for instance, increased from 15,965 metric tons in 1976 to 30,805 in 1986. During the same period, the price of a 50 kg bag of sunflower seed increased from K10 to K41.95, an increase of nearly 320 per cent.

Marked production of cotton and soyabeans has also increased considerably during the 1976-86 period. However, groundnut production has declined mainly as a result of uncompetitive producer prices for this particular commodity. The output of other major crops has fluctuated from year to year mainly due

Table 1: Marketed Agricultural Production in Zambia, 1976-1986

	<u>Unit</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Maize	Tonnes	746,426	693,000	657,000	331,255	382,988	693,341
Tobacco: Virginia		6,262	5,588	3,700	4,590	4,127	2,319
Barley		212	212	264	381	554	665
Sugar		84,028	71,203	72,650	102,148	110,601	102,318
Groundnuts		8,371	7,229	2,234	2,737	2,028	1,320
Sunflower		13,079	13,320	11,355	12,869	28,279	19,223
Seed Cotton		3,891	8,929	10,200	14,916	15,60	17,177
Wheat		3,459	4,741	5,600	4,322	6,670	11,672
Paddy Rice		2,224	2,090	2,970	1,686	2,511	2,673
Soya Beans		944	1,274	2,844	1,294	1,989	3,573
Coffee		13.1	24	55	-	28	40
Tea (Green Leaf)		-	64	85	-	314	362

SOURCE: Central Statistical Office and Ministry of Agriculture and Water Development

Table 1 Cont'd

	<u>Unit</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Maize	Tonnes	508,000	531,164	564,087	636,267	953,031
Tobacco: Virginia		1,861	2,340	2,600	2,200	3,100
Burley		704	537	501	565	630
Sugar	'000t	117,058	1,086	1,179	-	-
Groundnuts		810	1,742	1,58	2,419	4,000
Sunflower		20,362	30,464	40,425	25,496	23,750
Seed Cotton		13,171	31,230	60,915	-	-
Wheat		12,510	10,216	11,314	2,793	-
Paddy Rice		2,420	5,068	5,438	6,280	8,088
Soya Beans		5,140	6,898	9,555	10,601	11,708
Coffee		-	-	-	-	-
Tea (Green Leaf)		103	-	-	-	-

SOURCE: Central Statistical Office and Ministry of Agricultural and Water Development

to variations in weather and intermittent supply of farm inputs but the general trend has been upward as can be seen from Table 1.

ORGANIZATION OF AGRICULTURAL PRODUCTION

A basic feature of agricultural production in Zambia today is that it is undertaken by what are seemingly three distinct farming groups, namely commercial, emergent and traditional farmers. These groups may be differentiated in terms of their location, land tenure, farm size, the kind of crops grown and the type of technology employed, volume and value of farm produce, sales and income levels. A brief description of the three farming groups is given below:

Commercial Farmers

These are a small, but influential group of large-scale commercial farmers who are mostly of European descent. In 1987 this group numbered about 500 farmers and were located mainly along the Livingstone-Kabwe line-of-rail. This area covers some of Zambia's best agricultural land, but most importantly, offers ready access to the major urban markets of Livingstone, Lusaka and the Copperbelt.

Large-scale commercial farmers in Zambia are normally associated with modern relatively capital-intensive systems of agricultural production and have farms in excess of 40 hectares (Ministry of Agriculture and Water Development definition). They are heavily

dependent on external agricultural inputs such as tractors, fertilizers and pesticides and insecticides. Their access to large amount of financial capital makes them to be the most productive group.

The main crops grown by large-scale commercial farmers include hybrid maize, tobacco, sunflower seed, cotton, soyabans, wheat and horticultural products. Almost all of the crop production by large-scale commercial farmers is marketed. Beef, pigs, poultry and dairy products are also produced and marketed by commercial farmers.

To the small group of large-scale commercial farmers can be added the various state agricultural enterprises, most of which operate in partnership with foreign-owned, private companies. Examples of these include the Nakambala Sugar Estate, the Mpongwe Wheat Scheme, the Kawambwa Tea Company, the Gweru Development Company, the Cashew Company and many others. It is important to note, however, that most of the state-cum-private ventures are crop-specific by their nature.

Emergent Farmers

Emergent, or small-scale commercial farmers can be defined as those who sell between 50 and 100 per cent of their crop and who practice some of the improved technology characteristics of large-scale commercial farmers. In other words, these are farmers who are increasingly producing for the market, in contrast to subsistence farmers whose prime objective for cultivation is direct home consumption.

Since 1981, the Zambia Central Statistical Office (CSO) and the Ministry of Agriculture and Water Development (MAWD) have recognized as emergent farmers those with holdings between two and 40 hectares, and with an annual turnover of not less than K1,000. About 100,000 farm families (about 15 per cent of the total) are now thought to belong to this category.

Like large-scale commercial farmers, emergent farmers are still largely located in the Southern, Central (including Lusaka) and Eastern Provinces, although pockets of them can be found in almost every district of Zambia.

The crops grown by this group of farmers mainly include hybrid maize, sunflower, cotton, beans, groundnuts, vegetables and some fruit. Emergent farmers also rear some cattle, pigs and poultry, but on a smaller scale than that of commercial farmers.

In many ways emergent farmers are the focus of deliberate government effort since they are seen as being "progressive" by both planners and decision-makers. They are the ones who receive special assistance in improving their productivity by means of land settlement, extension training and better access to credit by comparison with subsistence farmers. In this respect, emergent or small-scale commercial farmers are perceived by many a development expert as the most important group in any future restructuring of Zambian agriculture.

Traditional Farmers

The bulk of Zambia's population still consists of relatively poor traditional or subsistence farmers unevenly distributed over much of the countryside. These number about 600,000, or 85 per cent of the total number of farm families in Zambia.

Traditional farmers can be seen in terms of cultivating very small holdings of between 0-2 hectares, growing mainly subsistence crops such as cassava, finger millet, sorghum, beans, groundnuts, and various types of local vegetables. Very little, if any, of the farm produce is marketed.

This group of farmers scarcely uses improved farm technology (such as hybrid seeds, fertilizers and tractor/or plough) and there is no doubt that family labour is the main input of agricultural production. Because they rarely produce for the market, traditional farmers are largely by-passed by government supported development programmes.

MARKETING ARRANGEMENTS

Since independence in 1964, the most important means of marketing agricultural produce in Zambia have been through statutory marketing boards instituted by the Government. Other channels are provincial marketing cooperatives, and to a lesser extent private enterprises.

In general, marketing boards have been given a mandate to market specific agricultural products at government-controlled prices. As such the Zambian Government uses the marketing boards as an important means to manipulate production and consumption through price fixing and both producer and consumer subsidies. In 1988 there are four notable statutory marketing boards handling crops in Zambia. These are the National Agricultural Marketing Board (Namboard), the Linat Company of Zambia (LINCO), the National Tobacco Company (NATCO) and the Zambia Horticultural Products (ZAMHORT). The various crops handled by these marketing boards are depicted in Table 2.

Provincial Co-operative and Marketing Unions are the other major channels of marketing agricultural produce in Zambia. In the provinces most primary societies are encouraged by the Government (through the Ministry of Cooperatives) to join into multi-purpose

Table 2: Marketing Arrangements in Zambia, Statutory Boards

Board	Produce Handled	Other Functions
NAMBOARD	Maize	Imports, stores and markets fertilizers, chemicals, seed, grain bags and farm equipment
LINTCO	Cotton, Coffee soybeans	Provides inputs, credit and extension services
NATCO	Tobacco	Supports production schemes, processing, grading and exports tobacco
ZAMHORE	Fruit and vegetables	Processing and canning

co-operatives in order to look after the interests of their members. In fact, as the Government Agricultural Marketing Policy still stands, the idea is to have eventually all marketing of major agricultural commodities in the provinces to be handled by Co-operatives and Marketing Unions. Besides the marketing function, provincial unions make available to farmers seeds, fertilizers and implements for crop production.

In addition to the statutory marketing boards and provincial co-operative and marketing unions, the private sector is visibly present in marketing. This is especially the case in the areas of buying, manufacturing and distributing. For instance, private manufacturers of cooking oil (e.g. Southern Africa Oil Mills based in Lusaka) buy sunflower seed directly from farmers for extraction. In peri-urban and remote areas private hammer-mill into maize meal. But perhaps most significant is the fact that the marketing of fruit and vegetables is largely in the hands of private hands. One explanation for this is that fruit and vegetables are currently being produced on a small scale and it is often the case that producers themselves take their produce to the urban markets for sale. And since the imposition of a ban on the importation of concentrates for the manufacturing of coca-cola and Fanta late last year, big companies such as the Copperbelt Bottlers and Sunquick are now making arrangements with farmers to buy fruit in bulk for the local manufacture of a variety of squashes. The parastatal Zamhort is also heavily involved in this line of business.

The effectiveness of the existing marketing arrangements are however hindered by the ill-defined relationship between the various marketing agencies. For instance, under the present system the relationship between Statutory Boards, the Provincial Co-operative and Marketing Unions and the potential private traders

is not clear. If anything, the present marketing arrangements discourage private traders wishing to participate actively in the marketing of major crops.

An attempt will now be made to examine in more detail, one, the production and possible processing of oilseeds (i.e. sunflower) at the village level and, two, the marketing of fruit and vegetables in and around Lusaka. This is done with special reference to our field investigation conducted between the 24th of May and 12th June, 1989.

OILSEEDS PRODUCTION, PROCESSING AND MARKETING

Production and Marketing

At present the major vegetable oilseeds in Zambia are cotton seed, groundnuts, soyabeans and sunflower. With the notable exception of groundnuts oilseeds are produced mainly as cash crops and are marketed mainly through the Lint Company of Zambia and the Provincial Co-operative Unions, that is, government-approved channels. Groundnuts which have long been cultivated in Zambia especially in Eastern Province are grown for both cash and subsistence requirements and it is not surprising, therefore, that only a small proportion pass through the official marketing channels; the bulk of it is marketed privately whether locally or across the national borders. With the exception of soyabeans,

Table 3: Production Targets of Sunflower During the Tenth Five Year Plan

Province	1984	1985	1986	1987	1988	1989
CENTRAL:						
A ha	12,000	12,340	12,530	14,641	21,533	22,610
P bags	182,516	200,400	182,000	103,446	223,156	234,324
COPPERBELT:						
A ha	590	585	230	185	200	200
P bags	3,378	7,890	2,000	1,520	3,205	3,365
EASTERN:						
A ha	20,700	17,400	15,880	24,185	26,604	27,934
P bags	278,000	247,080	147,500	310,717	342,888	350,032
LUAPULA:						
A ha	290	190	110	87	184	193
P bags	3,300	1,500	1,000	1,556	1,991	2,091
LUSAKA:						
A ha	3,800	3,750	3,720	2,253	2,575	2,704
P bags	61,537	67,830	40,000	18,888	32,922	34,508
NORTHERN:						
A ha	850	425	170	160	474	498
P bags	5,000	8,150	1,500	2,008	4,706	4,941
NORTH-WESTERN:						
A ha	140	39	170	42	106	106
P bags	3,169	977	1,500	265	1,199	1,259
SOUTHERN:						
A ha	19,000	27,761	17,330	10,906	36,061	41,014
P bags	292,347	313,510	240,000	110,485	346,602	363,932
WESTERN:						
A ha	130	100	99	109	120	126
P bags	620	240	582	582	640	672
TOTAL ZAMBIA:						
A ha	57,690	62,519	57,200	31,600	90,979	90,870
P bags	675,470	847,577	616,100	269,665	1,128,124	1,128,124

SOURCE: Interim National Development plan 1987-88

NOTE: A = Acres Planted
P = Production

oilseeds are mainly produced by small farmers (emergent farmers) located mainly in Southern, Central, Lusaka and Eastern Provinces.

As shown in Table 1, oilseed production has been the fastest growing agricultural subsector in Zambia with very high growth rates. Unlike food grains, production in vegetable oilseeds has generally shown an upward trend, particularly during the period under review (1976-86).

Production targets for sunflower during the Interim National Development Plan (INDP) are given in Table 2. It can be seen that the Southern, Eastern and Central (including Lusaka) provinces, in that order, constitute the major producing areas of sunflower in Zambia. In 1986, the four provinces combined produced about 90 per cent of Zambia's sunflower production. The major sources of growth in sunflower production, as well as for other oilseeds have mainly been due to an expansion in area cultivated (see Table 2) and possible increases in land productivity resulting from the use of improved seed varieties. Prices incentives to the farmer in recent years no doubt have also helped the situation.

Major constraints in oilseed production include inadequate technical information and high-cost marketing and processing systems. Thus the importance of developing appropriate technical advice is paramount to oilseed production.

SUNFLOWER OIL PROCESSING

At the national level, vegetable oil production mainly from sunflower and cotton seed is done by Premier Oils Limited (formerly Refined Oil Products). National demand for edible oils stands at about 40,000 tonnes per year. Although Premier Oils operates using modern sophisticated technology, it often operates below capacity (about one-third to about half of full-capacity) and is far from satisfying domestic demand for vegetable oils. It is estimated that about 50 per cent of Zambia's vegetable requirements are imported. It is against this background that small-scale oil press units, particularly to serve the remote rural areas, are being encouraged in Zambia.

Currently there are a number (at least two) of pilot schemes experimenting with sunflower oil expression at conditions approximating the village level. Notable among these are the Kasisi Project (based at Kasisi Mission near Lusaka International Airport) and the Mount Makulu Pilot Project (based a few kilometres south of Lusaka). *

* NOTES

According to information obtained at the Technology Development Advisory Unit (TDAU) of UNZA, another unit is located at Sinanjola village in the Gwembe run by the Gossner Mission another in Kaoma run by a cooperative, and another is located in the Luapula Province.

The Kasisi project is being operated and managed in conjunction with the Technology Development Advisory Unit (TDAU) which is based at the University of Zambia. That at Mount Makulu is a collaborative venture between a team of experts based at Mount Makulu National Research Station, VIS, VITA and ZAMARE.

A visit to the Kasisi sunflower oil expeller unit revealed that the facility basically consists of four separate, hand-operated parts; a decorticator, winnower, roller and spindle press, all of which are now manufactured locally by Lutonda at Kitwe.^{**} The original unit, which used an hydraulic press, was a donation from the Royal Tropical Institute of the Netherlands (KIT), but is no longer used. The cost of the locally manufactured oil press and accessory equipment was put around a figure of K69,000. The Mount Makulu oil expeller is in the same price range at K64,000.

The sunflower oil expeller at Kasisi is operated by six young men who take turns at working at various points of the production process. Under normal circumstances the men work eight hours a day in which they are able to process 200 kg of sunflower seed. Once crushed this yields about 42 litres of unrefined oil which sells at Government-controlled price of K9.20 per litre. Thus a full-working day being in about K386.40. The oil expelling process

** It is reported that Lutonda has so far manufactured about ten such units, all of which have been sold.

also yields a 100 kg of sunflower cake as a by-product which sells at K1.00 per kilo as stock feed. Thus altogether it is possible to raise about K486.40 in a day from the oil expelling process. However, when the cost of sunflower seed at K76 per 100 kg (1988 prices) is taken into account, this works at K304 for the 700 kg required per day. Arithematically, this leaves a gross profit of K182.40 per day, which should go towards meeting labour and management costs, interest and depreciation on machinery.

Since the average consumption of sunflower oil by a family of six people is about 0.75 litre per week, the Kasisi unit producing 210 litres a week (i.e. working five days a week), caters for a market of about 280 families, or a village having approximately 1,680 people.

In subsequent interviews with Fr. McKenna (the overall-in-charge), workers and some of the trainees farmers, it became apparent that the sunflower oil expeller at Kasisi was a welcome venture. It was learnt that the unit provided a ready market for the sunflower produced by the mission and the surrounding local farmers. And unlike before when all the sunflower grown in the area used to be sold to the cooperative union for onward delivery to Lusaka, the situation has now changed especially that people can now obtain vegetable oil locally. Thus there

can be no doubt that both the mission and the local people are benefitting by having an oil press in their midst. Additionally, it is thought that this is likely to stimulate sunflower production at Kasisi mission and the surrounding areas. And although the labour force operating the unit is small it cannot be denied that it has contributed, albeit in a small way, towards employment and income generation. Additional benefits are that the few workers who operate the sunflower oil expeller at Kasisi are learning additional skills which they might find useful for their future career development. The only regret, perhaps, is that the present production line is an all-male outfit with little or no prospects for women having to participate in the processing. It is also doubtful whether at a cost of K69,000 for a complete oil expelling unit many private entrepreneurs would be willing to venture into sunflower processing not knowing all the risks that are involved.

It is also worth noting that the Kasisi mission where the sunflower oil press is being tested has already got a well-developed infrastructure and a good management team headed by Fr. McKenna. If these ideal conditions did not exist, it is doubtful whether the Kasisi experiment would have been a success story that it is today. Most rural areas lack such services and it is therefore important to take this into account when designing the project.

MARKETING OF FRUIT AND VEGETABLES

Zambia produces a number of fruits and vegetables such as oranges, lemons, strawberries, grapefruit, guavas, pineapples, avocados, cabbage, rape, tomatoes and onions. These are mainly grown for the domestic market although since the early 1970's both private and parastatal enterprises have been exporting part of their produce to European markets and the adjacent African markets, especially Angola, Mozambique, Zaire and Botswana.

At the national level the production of fruit and vegetables has increased rapidly mainly because of high demand, particularly from the ever-expanding urban population. The high cost of meat and fish has also meant that people eat more of vegetables which are cheaper. The high nutritive value of fruit and vegetables cannot also be over-emphasized.

Table 4 shows estimates of vegetables production in the 1985/86 and 1986/87 seasons for which data are available. It can be seen from Table 4 that the four major type of vegetables which are grown in Zambia are cabbage, tomatoes, rape and onions, all of which are mostly for the domestic market.

In preparing this document our attention focussed on examining the marketing channel for fruit and vegetables in Lusaka and the surrounding areas. Information was obtained using an

Table 4: Estimates of Vegetables Production
1985/86 and 1986/87 Seasons
(metric tonnes)

Crop	1985/86	1986/87	Percentage change
Green Beans	411	362	-11.9
Cabbage	529,945	735,272	+38.9
Cucumber	510	266	-47.8
Carrots	3,381	5,563	+63.5
Kale	2,663	2,476	-7.0
Okra	2,948	4,107	+39.3
Onions	11,825	11,104	-6.1
Peas	145	85	-42.1
Rape	23,153	23,753	+2.5
Tomatoes	77,547	75,452	-2.7
Eggplant	5,700	7,260	+27.4
Cauliflower	3,740	2,897	-22.5
Swiss chard	712	971	+36.4

SOURCE: NCDP, Economic Report 1987, p.112

open-ended questionnaire (Appendix 1) combined with informal interviews with growers, traders and consumers. Also interviewed were people who are involved in the day to day running of markets in Lusaka, particularly Party and District Council officials. The survey findings are reported below.

Production

Most of the fruit and vegetables sold in Lusaka urban markets come from places such as Makeni, Chongwe, Kabwe Road, Mumbwa Road and Great East Road, all of which are within a 50 kilometre radius of the city centre. But it was quite evident that the nearer the point of production, the greater the chances of reaching the market as the perishable nature of vegetables can be quite a problem. The survey also revealed that the production of fruit and vegetables is clearly an established economic activity for both large and small farmers.

Investigations revealed that the farmgate price for cabbages ranged between K25 and K30 per 50kg bag; that for rape ranged from K15 to K25 per pocket; the price for tomatoes ranged between K15 and K90 per box and that for onions between K20 and K90 per pocket. However, since Lusaka prices are higher than farm prices, nearly every farmer prefers to sell his produce in Lusaka.

As most farmers have to bring their own produce to Lusaka, the general complaint was that transport costs are very high especially that they have to hire private transporters. A full bag or pocket of vegetables normally costs between K7 and K10 to be transported from places as far as Chongwe and Mumbwa.

Wholesale Trade in Fruit and Vegetables

The most significant trading point for fresh fruit and vegetables in Lusaka is the Soweto market situated a stone's throw on the western side of the city centre. It is at Soweto where producers, wholesalers and retailers converge from very early in the morning to conduct their daily transactions. All major roads from leading producing areas converge on Soweto market. Every single day of the week is business day, and there is no sabbath.

Soweto market was established as an official marketing point in the mid 1970's beginning with only rudimentary structures. There are now about 1,000 approved stalls, but the number of people who trade there daily is more than double that (conservative estimate). There is one toilet for males, and one for females. There are also two water taps located at strategic points in relation to the market. There is no electricity supply to the market. The general supply sanitary conditions leave much to be desired. The two toilets are often blocked and sewage runs uncontrolled along the

Note

In May this year the Government ordered the Police and Paramilitary to erase all illegal structures at the market. Since then the Lusaka Urban District Council has allocated marketers plots on which to build proper stalls. Construction work has begun.

breadth of the market. The small enclosure reserved for meat sales is heavily littered with house flies. During the rainy months of November to March, the market is literally flooded with rainy water. During the dry months the opposite seems to be the case, Soweto market gets covered in a cloud of dust. Without any exaggeration these are the deplorable sanitary conditions under which fresh fruit and vegetables are marketed at Soweto. The conditions are not very much different at other markets visited except those located at the city market, Longacres and Northmead .

Deliveries of fresh fruit and vegetables at Soweto market begin to arrive as early as 05.00 hours early in the morning. Most farmers usually prefer to sell their produce directly to marketeers, who are mostly women. However, a system has developed whereby a group of mostly unemployed youth, locally known as Bekaponya, buy the bulk of the produce cheaply from farmers and later resale, within a short time, to helpless women marketeers at inflated prices. It was observed one early morning for example that, pockets of rape which were selling at R15 per pocket were readily snapped by the young men who within minutes resold them at R25 per pocket. Such practices go on unabated largely because there is no large-scale wholesaling facility at the Soweto market.

Further investigations revealed that prices are arrived at through hard bargaining on both sides and that they are largely influenced by the supply situation. That is, if the market gets flooded with

fruit and vegetables, the lower the prices become and vice versa. For most fruit and vegetables, the period from May to August is the in-season and November to April is the off-season. Table 5 gives some indication of the variation in prices between the two seasons for selected commodities.

Table 5: Variation in prices between in-season and off-season, 1987/88

Commodity	Unit	In-season	Off-season
Cabbage	Bag	K30	K60
Rap	Pocket	K10	K40
Tomatoes	Box	K15	K60
Onion	10 kg	K65	K125
Okra	Tin	K7	K12
Potatoes	20 kg	K50	K65
Oranges	10 kg	K60	K100

Note

- a) A bag normally denotes a 90 kg bag
- b) A pocket normally denotes a 50 kg bag
- c) Box weighs about 20 kg
- d) Tin is approximately equal to 10kg

Table 5 shows that for most commodities price differentials between in-season and off-season can be as much as 50 per cent. This situation inevitably distorts both the pricing and marketing structure and needs to be addressed urgently. One possible solution is that farmers should learn to sow small areas of vegetables successfully in order to produce a harvest that is spread more evenly, as demand for consumption is continuous and only small quantities are required daily in fresh condition by each household.

Another important observation made with regard to wholesale marketing is that this year's prices for most fruit and vegetables are higher than those charged last year. For instance, a box of tomatoes which cost about K50 at this time last year is now going for between K60 and K70 wholesale. This is an increase of over 50 per cent within a year. Most producers explained this increase in price in terms of increased input and transport costs.

Retail Trade

In addition to the Soweto market there are several retail points for fruit and vegetables within Lusaka. Most of these are based at officially approved market centres in each of the main residential areas of Lusaka. Examples include the City Centre market, Luburna market at Kanwala, Matero, Libala, Lilanda, Mtendere, Kaunda Square, and so on. At these markets fruit and vegetables

vendors are required to pay a daily levy of 50 ngwee to the Lusaka Urban District Council. Although marketeers pay daily fees to the Council, the market structures in terms of construction, the services provided and the general sanitary conditions are no better than those described for Sowato market. There are also several other unauthorised marketing centres distributed throughout the city, but these are mostly in the open or along shop corridors.

Retail marketing of fruit and vegetables mostly involves selling commodities in smaller quantities or measures. Apart from the City Centre, Northmead and Longgroves markets, the remaining markets do not use weighing scales when selling. Hence commodities are sold in small bundles or per heap, as the seller sees fit. But there seems to be a general rule to the trading as most fruit and vegetables are sold in multiples of 50 ngwee, K1, K2, K5 and so on. This system of selling seems to be suitable especially for consumers in low-income categories who cannot afford to buy in bulk. And as for wholesale prices, retail prices fluctuate according to season. But the most common practice of price manipulation is that of adjusting the quantities sold according to season. That is the price charged remains the

same but one gets more or less, depending on whether the commodity is in-season or not. One observable fact however is that the quantities sold for most fruit and vegetables have tended to get smaller and smaller over the years. In other words, one needs to spend extra in order to get the same quantity got a year or so ago.

One other strong feature of retail trade in fruit and vegetables is that it is dominated mostly by women and the youth. Most of these are engaged in the marketing of fruit and vegetables on a full-time basis. There is no doubt that the selling of fruit and vegetables offers an essential economic means to women and the youth.

IMPROVED MARKET STRUCTURES

No matter who one talks to, be it a marketer, street vendor, council official or consumer, all are agreed that marketing facilities in Lusaka are grossly inadequate and that most lack services such as water, sewage, electricity, storage and display areas.

Most of the people we talked to attributed the widespread in street vending to lack of proper marketing facilities at established markets. This view was re-inforced by those who said that established markets do not have enough space for everyone who might want to own a stand. It was not surprising, therefore, that

most of the marketeers interviewed said that they would be more than willing to pay modest amounts for the improvement in present marketing facilities. After all, they said, they already pay daily to the Council for occupying tiny stalls which are poorly serviced. Thus any project intervention aimed at improving established or new markets would be more than welcome. In our view, Soweto market in Lusaka would be a good starting point as it caters for both wholesalers and retailers and is so far the biggest.

TRANSPORTATION

Both producers and marketeers of fruit and vegetables identified lack of transport to and from sources of supply as a major constraint. The most common mode of transport used to ferry fruit and vegetables from farms to the markets are hired private trucks and/or vans. But these are in short supply and are often unreliable as a form of transporting agricultural products. Occasionally farmers use public transport, that is, buses to ferry their fruit and vegetables to the markets, but again, given the current poor state of public transport throughout the country this mode of transport is not adequate. Apart from the fact there are few vehicles on Zambia's roads, most of them are not road-worthy due to lack of spares, tubes and tyres.

For the transportation of agricultural products over a relatively short distance, say, under ten kilometres, possibilities exist for the use of bicycles, motor-cycles, wheelbarrows, hand-and-ox-carts. The local demand for these items at present is very high and there are not many institutions engaged in their production. In order to meet the high domestic demand the Zambia Co-operative Federation (ZCF) is planning to set up a factory in Lusaka to manufacture ploughs, hoes, scotch carts and other agricultural implements. If the intended project is to pull through, ZCF might need some form of external assistance. For more information on modes of transport that might be appropriate for use at the local level see the Eastern Province case study (Appendix II).

DISTRIBUTION OF INCOMES

Within the small-scale farming sector in Zambia there exists a wide divergence in the level of production and income achieved by individual farming households. Such differences could be explained by variations in the resources available to households and partly by the level of services which farmers receive.

A number of studies (Marter and Honeyboas, 1976 and Mwila, 1986) have established the existence of marked income differences between the more favoured regions of Central, Southern and Eastern Provinces (C.S.E.) and the less favoured areas of Copperbelt, Luapula, Western, Northern and North-Western (OTHER). A comparison between the two broad regions readily reveals that relatively more farmers in the C.S.E. region are in the high income categories than are farmers in the OTHER region. This is particularly the case with crop incomes as opposed to total estimated household income which would seem to suggest that non-crop activities form an additional and important source of household income in both regions. In the 1985 study, for example, Mwila found that crop sources of income were particularly significant for households in high income categories and less for those in the low income categories. It was found that in the case of farmers making less than K200 per year, the reliance on crop income was much less and averaged about 20 per cent only. In contrast, households with gross incomes of over K1,000 earned almost three quarters of their incomes from crop sales. This was true for farmers in both regions.

The main sources of non-agricultural or off-farm income in most cases include beer brewing (an economic activity exclusively undertaken by women), fish and handicraft sales, seasonal paid employment and cash and goods from relations in paid employment.

in towns. However, whereas beer and fish sales are more common among people of both regions, seasonal employment is more prevalent in the C.S.E. region where it is possible for one to obtain seasonal employment on commercial farms and the modern sector. To some extent, it would appear that off-farm incomes do compensate for low farm incomes.

Further analysis of the 1986 data reveals that rural income distribution is highly skewed between and within the two geographical regions. Analysis shows that the top 20 per cent of the households receive close to half of the total household income, while the bottom 40 per cent of the households get less than one-tenth of the total household income. In particular the survey data show that farmers' crop incomes in the lowest income bracket on average contribute less than a quarter to total household income. In contrast, crop income constitute a large part of total household income in the middle and upper income brackets, this distinction being more marked in the C.S.E. region than in OTHER.

In general, it appears that those who obtain incomes from farming rely more on non-agricultural activities to supplement their total income and this to a certain extent moderates the overall income disparities within and between the two regions.

Nevertheless, the opportunities for income from off-farm activities are very limited, hence the overall importance of agricultural sources of income for the majority of rural households.

PARTICIPATION

An issue of great importance in the Zambian situation is that of participation by potential beneficiaries in identifying what needs to be done. A number of strategies, mainly capital-intensive and centrally managed "special projects" have been tried in Zambia before. But these have been condemned for being insensitive to the particular needs of ordinary Zambians. A preferred strategy therefore would be one which relies on people to decide their own projects. It should be a strategy which provides proper incentives and basic services, but allows the people themselves to initiate and implement projects. This is because it is almost impossible for government, or indeed any development agency, to decide in each and every case what the priority should be; some people might want a road but not a market shed. Many projects have not been implemented in the past mainly because people were not motivated enough as they considered such projects as not theirs but for the "outsiders".

In the Zambian context, it is obvious that the Party must play a leading role in ensuring greater participation by the majority of the people in satisfying their own needs, through the establishment of self-reliant and self-governing social and economic groups and organizations at the local, regional and national levels. But it is important that the interaction between the Party and the Government service units, **especially** at the local level be coordinated so as to minimize areas of conflict.

SUMMARY ASSESSMENT

The study of oil expelling from sunflower seed and the marketing of fruit and vegetables discussed above has demonstrated that with the necessary support services, such as effective transportation, Zambia can meet its vegetable oil and fruit and vegetable requirements. It has been shown that although operating under very difficult and trying circumstances, the Zambian private entrepreneurs, especially the producers and marketers of fruit and vegetables strive to make their small-scale enterprises into economically viable entities. Above all, however, the results of the study seem to suggest that given the right social, political and economic environment,

small-scale private entrepreneurs can go a long way in meeting the demands of the consumer.

Thus based on the overall assessment of the socio-economic context of the Zambian situation, the proposed ZAMS project may need to consider the following issues:-

- 1) First and foremost, it should be realized that the Zambian community is not an homogeneous group, but one which is made up of many distinct groups operating under different socio-economic conditions. For instance, it should be realized that the particular needs of the large-scale commercial producer are different from those of the small producer.
- 2) Whereas there is a huge demand for vegetable oils, this demand is not concentrated in one specific area. Thus any processing facilities that are to be set up will need to take into account the distribution of production oilseeds and the concentration of population.

- 3) With regard to improving the marketing of fruit and vegetables, the project team should carry out feasibility studies to determine what facilities are required by local institutions in general and marketeers in particular.

- 4) Lack of adequate transport facilities poses a major constraint on the operation of both the producer and the marketeer. This is one area therefore which the project might want to address seriously.

Finally, if the proposed project has to achieve any considerable measure of success, it should be area-specific, and ensure that both local people and institutions participate fully in the decision-making process.

APPENDIX I

ZAMS SOCIAL ANALYSIS STUDY- FRUIT AND VEGETABLES

CHECK LIST

INSTRUCTIONS

- i) The purpose of this study is to trace the marketing chain of the fruit and vegetables in and around Lusaka District.
- ii) It is intended primarily to seek/assess public opinion of both producers and consumers of fruit and vegetables with regard to production, pricing, transportation and market structures.
- iii) Information to be gathered should be done through Informal interviews with farmers, traders/sellers, consumers and Party and Council officials.
- iv) Please observe and note everything you hear and/or see. Every bit of information will be useful.

QUESTIONNAIRE: FRUIT AND VEGETABLE MARKETING

Area of Survey/Market _____ Date: _____

Section A: Producers

1. What type of fruit and vegetables do you grow?
 - i) Fruits (specify)
 - ii) Vegetables (specify)

2. Where do you sell your fruit and vegetables?
.....
.....

3. How do you transport your fruit and vegetables to the nearest market?
.....
.....

4. Who buys your fruit/vegetables?
.....
.....

5. What price do you get per kg/bag/box?
.....
.....

6. i) What time of the year do you get the highest price for your produce? why?
.....
.....
ii) How much per kg/bag/box?

7. i) What time of the year do you receive the lowest price, and why?
.....
.....
ii) How much per kg/bag/box?

-

Section B: Traders/Wholesalers

8. Where do you buy fruit and vegetables from?

Fruit
Vegetables

9. At what price do you buy?

<u>Last Year (1987)</u>	(Unit)	<u>This Year (1988)</u>
Fruit
.....	
Vegetables
.....	

10. What mode of transport do you use to transport produce to the market?

.....

11. Where do you sell the produce you buy?

.....

12. To whom do you sell?

.....

13. At what price do you sell?

<u>Last Year (1987)</u>	(Unit)	<u>This Year (1988)</u>
Fruit
.....	
Vegetables
.....	

14. What time of the year do you receive:

i) the highest price?
ii) how much per kg/bag/box?

15. i) lowest price?

ii) how much per kg/bag/box?

Section C: Retailers

16. Where and from whom do you buy fruit/vegetables from?

Fruit
Vegetables

17. At what price do you buy?

<u>Last Year (1987)</u>	(Unit)	<u>This Year (1988)</u>
Fruit
.....	
Vegetables
.....	

18. To whom do you sell your fruit and vegetable?

.....
.....

19. At what price do you sell?

Fruit kg/bag/box
Vegetable kg/bag/box

Section D: Consumers

20. What fruit/vegetables have you just bought?

.Fruit.....
Vegetables

21. At how much did you buy these fruit/vegetables?

Fruit per kg/bag/box/bundle
Vegetable per kg/bag/box/bundle

22. From whom did you buy?

.....

24. How much money do you spend on fruit/vegetables per week?

Fruits K..... Vegetables K

Section E: General Questions

25. What marketing problems do you face in marketing fruit/vegetables?

.....
.....

26. What transportation problems are there?

.....
.....

27. What do you think of the present marketing system for fruit and vegetables?

.....
.....

28. Would you prefer to be selling your fruits and vegetables at permanent market structures (Discuss with reference to water, electricity, storage and display areas).

.....
.....
.....

APPENDIX II

USAID/ZAMBIA

ZAMS SOCIAL ANALYSIS STUDY: EASTERN PROVINCE

1.0 OIL SEEDS

Oil Seeds Production

The Eastern Province has been a major producing area of sunflower, groundnuts and cotton. However, as Table I below shows hectarages under sunflower and groundnuts production, and hence production figures and sales of these oil seeds have been gradually declining over the past five or so years. Attention was focused on sunflower and groundnuts and not on cotton. A number of factors are responsible for the lack of increased production and sales of these two types of oil seeds. Private buyers pay farmers promptly and slightly more for the crops. In addition, the pricing system is currently biased in favour of the maize producer and not the sunflower and groundnuts producers. Hence, the shift away from oil-seeds production towards maize.

Oil Production

There is one big oil processing plant in Katete owned and ran by the Eastern Province Cooperative Union (EPCU). This is meant to serve the whole Province. The plant which was installed in 1984

and commissioned early 1985 can take 4,000 kg. of sunflower per hour. (5 kg of sunflower can produce one litre of cooking oil).

Thus if the plant was working at fully capacity it would need 80 x 50 kg bags an hour, about 600 bags a day, 3,000 bags a week and 156,000 bags a year, i.e. more than twice this year's estimated total sunflower production. Working at full capacity the plant would produce more than 30,000 litres of cooking oil per year. From interviews carried out, an average household of six people normally requires 30 litres of cooking oil in a year. At this rate, slightly more than 1,000 of the estimated 1000,000 households would have enough cooking oil in a year; that is, if there was enough sunflower and the oil processing plant was working at full capacity. In other words if all the estimated 100,000 households in the province had access to cooking oil and the plant was working at full capacity each household would consume only 0.30 litres of cooking oil per year; i.e. almost a hundred times less than required.

As things are, however, the plant has never worked at full capacity. In the first place, the province has never grown enough sunflower to feed the plant. The plant can in theory use groundnuts but has in fact not done so. More importantly, the plant has had so many breakdowns that it has not been able to utilise all the sunflower currently being produced. Hence, the potential cooking oil shortage persists.

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Smaller hand-driven or diesel oil powered oil processing plants are extremely rare. Officials in the Provincial Planning Unit, the Provincial Agriculture Office, Marketing and Cooperative Office, and so on, could only recall one such small plant at Chikowa Catholic Mission in the Luangwa Valley, Chipata District.

Time did not allow the research team to go and talk to the Catholic Priest running this plant nor the local people who make use of the facility. However, it was learnt that the plant is very popular in this area where sunflower is a major crop. Payments are made in kind; a fifth of the oil produced is returned by the Parish as payment for the services.

Actual Requirements for Oil Processing

Katete oil mill has never satisfied the oil requirements of the Province. It is rather costly to transport sunflower from the far corners of the Province to Katete. Hence, the strong suggestion by many interviewers especially consumers that small hand-driven or diesel powered mills be introduced, in much the same way as hammer mills. The oil plants should ideally be owned by either private businessmen and women or by the multipurpose cooperative societies which are doing a commendable job regarding hammer mills. Such small oil processing plants would readily benefit the local populations as it would make the much needed cooking oil available to them while at the same time providing

Table 1: No. of Farmers, Hectarage, Production Figures & Sales of Sunflower & Groundnuts

Year	Sunflower				Groundnuts			
	No. of Farmers	Hectarage	Production figures	Sales	No. of Farmers	Hectarage	Production figures	Sales
1981/82	10,893	10,258	98,575*	96,208	23,032	9,517	23,932	9,517
1982/83	27,909	10,000	299,000	293,607	20,074	18,745	20,974	18,745
1983/84	24,136	72,090	225,752	224,928	39,240	14,583	39,840	14,583
1984/85	23,813	30,549	222,560	218,193	32,493	13,932	80,469	23,502
1985/86	10,268	7,120	71,265	68,587	33,259	14,001	113,528	-
1986/87	Figures not available				Figures not available			
								68,000**

Note: * 50 kg bags

* 80 kg bags

** Estimate for 1988

SOURCE: Information from the 1986 Eastern Province Agricultural Annual Report and from discussion with PAQ and his staff

a good market for their sunflower. There is no reason why sunflower prices should remain depressed as they now are. Once the prices improve, sunflower growing will also increase, so will oil production.

As these products are not marketed by any identifiable marketing agency, it is not possible to get even estimate production figures on them. The most one can do is to visit and talk to some of the farmers who produce them and to see for oneself the sizes of the orchards and vegetable gardens.

Most of the fruits and vegetables sold at markets are grown by small scale commercial producers who live within fairly easy reach of the Urban (Katete and Chipata) markets. Most of these vegetables and fruit producers grow them in addition to the other, oftentimes main, farming activities of general cultivation as well as livestock rearing. There are, however, a sizeable number of fruit growers whose sole economic activity is fruit-production. Four of the more prominent ones of these are around Katete Boma.

Vegetable and Fruit Sales

Most of the vegetables grown around Chipata and Katete are sold at the official markets in these two towns. The markets leave much to be desired. They need a real upgrading. Permanent structures which will accommodate most, if not all, of the vendors are required. These structures should have somewhere

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to display the commodities being sold; cleanliness must be assured. Most of the toilets are not working since they are blocked. At the Chipata town market people use the open bush area adjacent to the market as their toilets, thus spoiling the whole area with unpleasant smells and sights. Water at this market is drawn from a tap located in the same fouled-up open-bush toilet area. There is no electricity at any of the markets. One may argue that all business take place during the day and hence there is no need for electricity at least at the moment.

As if these deficiencies in the infrastructure of the markets were not enough, there are also the political party vigilantes who refuse entry into Chipata's main (Kapata) market and sometimes also the town market to all those without party cadres demand that vendors reduce the prices they charge for their commodities to absurd and uneconomic levels.

It is in this milieu that most of the vegetables and fruit are sold at Chipata and Mutema markets. The two markets in Chipata were visited very early in the morning and again later in the evening. In the morning there were full with produce of all kinds: cabbages, rape, green beans, shelled beans and groundnuts, tomatoes, onions, carrots, sweet and Irish potatoes, pumpkins, (no okra). The only type of fruit sold were bananas, oranges and tangerines. In the evening most of the commodities had been

sold. The few vendors who had not finished selling their commodities spent the night at the market, if they happen to have come from far away. Then the following morning they finished selling everything.

Prices were very low in comparison to Lusaka prices. In the first place, Chipata markets like the majority of the markets in the country do not have scales. Hence prices are determined according to the visual size of the commodity. A head of cabbage which cost K3.00 in Lusaka cost K0.50 in Chipata; a heap of sweet potatoes going at K5.00 in Lusaka cost K2.00 in Chipata, Katete and also Nyimba.

Prices fluctuate according to season. May - July is the season of plenty while December to February are hit with big shortages in supply of market goods. The head of cabbage which currently sells at K0.50, we were told, goes at K3.50 during the December-January period. The four or five pieces of tomato that is selling at K0.50 sells at K3.00 in December - February. A heap of Irish potatoes which go at K2.00 in May-July goes at K5.00 in December-February, if at all it is available. Most of the other products experience similar price-fluctuations. Some of the rare exceptions being okra and green pumpkin leaves. The latter are in plentiful supply during the wet December-February months and almost non-existent in the dry months.,

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Most of the vending at the markets is done by women. Access to formal employment is more difficult for women than it is for men. On the other hand entry into market vending does not pose a problem to anyone, except for the requirement of a UNIP party card which in most cases be obtained without difficult, either financial or otherwise.

"Large" Scale Fruit Sales

This section deals with those fairly large fruit producers who cannot find a market for their fruits in the Province. These include the four or so fruit-growers in Katete. In order to better grasp the issues involved here we will give a few details regarding one of these farmers and his operations. We have chosen not the largest or smallest producer of fruits but the one somewhere in between to represent the group. Presently the farmer has 10 hectares under fruit cultivation (largest farmer has twice this amount of land). His main crop is oranges, but he inter-crops with pine-apples and vegetables. Currently he has 4,300 orange plants about half of these are already productive. He hopes to have a total of 8,000 orange plants by the end this year when he will have finished covering all the 10 hectares with fruit trees. He will then continue to extent his fruit-farm. The 2,000 or so plants that are currently productive give him 50 tonnes of oranges which he, like all the other fruit-farmers of his category, ferries his oranges the whole way to Lusaka where he sells it mostly to Munn Enterprises. He does not have his own vehicles and hence hires a truck to bring his oranges to Lusaka.

The two major problems this farmer and his colleagues see are:

- i) late payments for their produce
- ii) transporting produce over a stretch of 500 kilometres from behind Katete to Lusaka.

On the issue of late payments the research team was told that often times the fruit-farmers are tempted to shift to cotton or even maize where payments are not as late as the six or so months wait that they experience with their fruit sales. Occasionally they sell to Sunquick Bottlers Limited who pays them promptly although the prices are not as good. The pine-apples, vegetables and any other mine crops the fruit-farmers produce find easy markets in the Provinces especially among the various institutions (Army barracks, schools, hospitals, etc.) around Chipata and Katete.

Recommended Improvements in Fruit and Vegetable Production and Sales

Need to improve the physical infrastructure as outlined in 2.1. above.

- Need to create a favourable social, political as well as economic environment under which the market vendors should operate.
- Need to investigate the possibility of bringing into the province facilities into drink; Sunquick, or the multi-purpose cooperatives, or other businessmen could do this.

The impression one gets while visiting the province is that there is a great demand for orange-juice, and if

these were produced within the province their supplies would be assured, prices might be low and some employment generated for the otherwise employed youths who tend to flock to the towns. Such an exercise will benefit:

- (i) the fruit producers as they will not have to travel the whole way to Lusaka to sell their produce.
- (ii) the local populations who will be assured of drinks hopefully at more favourable prices.
- (iii) the few people who will be employed to process the fruit into drinks.

NON-MAIZE CEREALS

Some rice, sorghum, cassava and soyabeans are grown in the provinces. Rice is grown especially in Chana district in the north while sorghum is the staple food of the Luangwa Valley people. However, except for rice and soyabeans production and sales figures are not available for the other crops. Soyabeans production is currently showing an increase in terms of numbers of farmers who grow it, hectareage that is being put into soyabean production each successive year, and the annual yields. Productivity in the case of the other crops is either static or going down: the latter case supplies especially to sorghum and cassava. This is partly due to lack of price incentives for

crops. The research team was also told that sorghum production in the valley was going down because of available processing facilities like hammer mills and other hand driven machinery tend "to favour" maize at the expense of sorghum and probably also cassava. The result of this, so Chipata based officials and other informants claimed, eating habits in the valley are changing from sorghum to maize, because the latter can very easily be processed by the various mills scattered in the predominantly sorghum eating region.

As information on these non-maize cereals was rather scattered and second-hand, and there was no time to go down to the valley or to Chama to see the hard facts for ourselves, no further attention was paid to these crops.

TRANSPORT OF AGRICULTURAL PRODUCTS AND INPUT

The following are what are being currently being used.

- i) hired trucks to ferry fruit from Eastern Province to Lusaka, as already discussed above.
- ii) bicycles to ferry one or two or at most three 50kg bags of vegetables from the producers or whole-sellers to the markets.
- iii) "On the head" Women and sometimes, though very rarely men carry farm produce (maize, groundnuts, sunflower, vegetables and fruit from the farm home or to the market

on their heads, or, in the case of men, on their shoulders. Cereal farmers who depend on this type of transport to bring their crops from the farm home can only produce for home consumption. Lack of transport militates against commercial productions.

- iv) Wheelbarrows, although these are manufactured by the Karyats Agricultural Engineering services and by a few other Small Scale Entrepreneurs their use in ferrying market commodities or farm produce was not so obvious. One hardly saw a wheelbarrow as a means to ferry farmers' crops in the province. In view of the fact that less appropriate and convenient methods of transport (On the human hand, shoulders, and to an extent bicycles) are used, one may postulate that wheelbarrows are not widely used because they are not widely disseminated very few people own them.
- v) Ox-drawn Scotch Cart. This is a very popular mode of transport, especially for the ferrying of produce from the farm to the home. A number of people do own carts; many more hire them from those who own them. There is a great demand for these carts but their supply is beset by the following problems.
 - a) Shortage of spores to manufacture scotch-carts; in particular wheels - both round and type and tubes, and also wheel-bearings.

- b) Scotch-cart manufacturers mostly concentrated around Chipata. Except for the Penzance Small Scale Enterprises who have taken over from Rucom Industries, there are hardly any manufacturers whose primary and exclusive purpose is to manufacture farm implements generally and scotch-carts in particular. The two institutions in Chipata, namely the GRR-SIDA sponsored, Katopola Agricultural Engineering centre and the FAO sponsored Eastern Province Farm Mechanization Services' main functions are training and not manufacturing. These centres train in maintenance and repair of machinery. Some of the trainees are District Agricultural Engineering Officers, out of school youths. The latter are trained with a view to go out and set themselves up (in groups of three) and produce on their own the farm implements they have been taught to manufacture. Interviews with the personnel at Katopola revealed that very few, if any such groups have survived. The three that were looked at by the present author in May 1983 have since folded up.

Some of the informants regarded the fact that most of the trainers at Katopola are urban school drop-outs to be a major contributing factor to the lack of success in this venture.

More Small Scale Enterprises do produce farm implements including ox-carts. These are more successful, but here again the emphasis is on training and not on production. All the three institutions mentioned do sell some of what they produce but does not meet the demand.

Hence, the need to set up, or encourage those small scale enterprises working around markets and out in the remote areas to produce ox-carts. Once again, an inquiry into the possibility of some of the multipurpose cooperatives societies undertaking or draw scotch-cart manufacturing as one of their commercial ventures. Some of them have already their ability to run commercial ventures successfully.

c) Prohibitive Prices of the Scotch-cart

It was felt by the interviewees contacted that the oxcart was presently beyond the financial reach of the average farmer. Some people felt that this was partly due to the fact that producers are urban (Chipata) based and cater mainly to the fairly well-off farmers around Chipata and Katete who can afford these prices (K3,000 being the average).

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The Cooperative Credit Scheme as well as Lima Bank should be more open to farmers who need to purchase oxen and ox-drawn equipment.

SUMMARY

In order to improve production and sales of the various crops discussed above some kind of DECENTRALISATION is urgently required. Thus, there is a need to move away from the large Katete oil mill to smaller ones scattered throughout the province. There is need to have small workshops, like the one in Petake who will produce farm implements, especially wheelbarrows and Ox-drawn carts. Processing of orange into orange drinks may more profitably be carried out at smaller plants scattered through the province. The Eastern Province Cooperative Union, instead of trying to do all these by itself could encourage its primary multipurpose cooperative societies to undertake some of these ventures on a commercial basis. Private entrepreneurs, district councils and others can also be encouraged to embark upon these commercial ventures. Hammer mill should also process other cereals thus encouraging increased productivity of the cereals thus and continued diversification of the Zambian chief crop, i.e. maize and the other cereals.

The overall effects of such readjustments are obvious. Farmers will be more productive; transport bottlenecks will be reduced. Local populations of all income groups will have more food, drinks and services easily available to them, thus improving upon their quality of life.

APPENDIX III

SOCIAL ANALYSIS - TERMS OF REFERENCE

OBJECTIVE

To obtain a written report (30 pages) which provides background social analysis for the ZAMS project design

SCOPE OF WORK

Relying on secondary materials and interviews in the Lusaka area, the contractor will provide a report with the following major sections:

Social-Cultural Content

This section should review the main social and institutional characteristics of Zambia as a whole insofar as they shed light on questions of commodity production and marketing. It is intended as background and introduction to the analytic sections which follow.

Distribution of Benefits

In preparing this section the contractor will do the following:

- The contractor will review the brief report on this question prepared by Fleuret, making changes and additions as necessary in the light of fuller knowledge and reading. A special attempt will be made to provide quantitative support for the general trends and processes identified.

- The contractor will in particular analyze the distribution of benefits on a provincial and/or District basis; on the basis of the producer categorization used by MAWD (large-scale commercial, institutional (i.e. schools, state farms), emergent commercial, traditional); and on the basis of gender.

- The contractor will also provide a complete discussion of the social and institutional organization of marketing for each of the major crops under consideration, identifying information gaps as precisely as possible for further study at a later point.

- Finally, the contractor will provide a quantitative analysis of the distribution of benefits among consumers, e.g. high and low-income urban dwellers, rural consumers, industries etc. As with the section above, it is recognized that this analysis will be hindered by lack of information but the intent is to point the way to needed studies which might be funded by the ZAMS project.

Participation

This section discusses provisions for ensuring that the views and needs of planned beneficiaries feed into the process of project implementation. Appropriate approaches might include

a project steering committee with representation from producers and marketing organizations, special provisions for monitoring and feedback, end-user studies, and the like. The contractor will make practical recommendations based upon his/her understanding of the Zambian institutional environment.

Social-Cultural Feasibility

Based upon the material presented in Sections above, the contractor will make an assessment of the overall feasibility of the project, taking into account patterns of social organization and institutional performance in Zambia. The contractor will make a special effort at providing recommendations for improving the feasibility of the project if serious issues are identified.

Impact

The contractor will make a summary judgement regarding the likely impact of the planned project, being careful to distinguish differential impacts on the basis of region, socio-economic category, gender, and so forth. Where and possible, the contractor will formulate recommendations aimed at broadening and sustaining the impact of the project.

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Relationships and Responsibilities

The contractor will be responsible to the contracting officer, USAID/Zambia, for performance of the work outlined in this Terms of Reference. The contractor will also be required to discuss findings and recommendations with the ZAMS project design team when they arrive in country.

APPENDIX IV

DOCUMENTS CONSULTED

- AFRICARE/RDSB (1988), Kabompo Maize Mill Study: A Alternatives to increasing mealie output, Lusaka.
- AGMMARK, (1988) Zams Minor Crops Study, Lusaka
- CHILIVUMBO, A & KANYANGWA, J (eds.) [1984], Strengthening Women's Participation in Food and Agriculture Marketing, Rural Development Studies Bureau, Occasional Paper No.21.
- CHINGAMBO, L.J [1982] Sun-Drying of Fruit and Vegetables at the Village and Household Level, RDSB/UNZA (1987)
- COLIJN, A [1987] Sunflower Processing and its Use, RDSB/UNZA
- GAYLIARD, H.C.J.J. [1987] Socio-Economic Feasibility and Extension of the kit sunflower oil Processing Unit, Eindhoven, CIGR, Netherlands
- HONEYBONE, D & MARTER, A [1979], Poverty and Wealth in Rural Zambia, Communication No. 15. IAS/UNZA
- ILO/JASPA [1981] Zambia: Basic Needs in a Economy Under Pressure, Addis Ababa
- JANSEN, Doris J [1986] Comparative Study of the Political Economy of Agricultural Pricing Policies, Lusaka, Draft.
- KANYANGWA, J & SHULA, E.C.W [1985], Peoples Participation Project: A Baseline Study, RDSB/UNZA
- LOMBARD, C.S. & IWEEDIE, A.H.C. [1972], Agriculture in Zambia since Independence, Lusaka, NECZAM
- MAIMBO, J.M. [1981], Constraints of vegetable Marketing in Lusaka Province and surrounding Areas, in Farming in Zambia Vol. 13, No.4.
- MAIMBO, J.M. & EVANS, D [1976] The Supply and Marketing of Vegetables in the Lusaka Area, RDSB/UNZA
- MARTER, A & HONEYBONE, D [1976] The Economic Resources of Rural Households and the Distribution of Agricultural Development, RDSB/UNZA

- MWILA, C [1986]. The Adoption of Improved Agricultural Technology on Farms in Zambia, Unpublished Ph.D. Thesis, University of Bradford.
- NCUBE, P.O. (ed) [1983], Agricultural Baseline Data for Planning, NCDP/UNZA, Vol. 1.
- NKANZA, D.K. [1987], Considerations in the Design and Manufacture of Low-cost oil expelling equipment for sunflower seed, TDAU/UNZA.
- TDAU/UNZA, [1986] Feasibility Tests of Hand-operated sunflower seed process in Zambia
- TDAU/UNZA, [1987], Hand operated sunflower seed processing in Zambia
- USAID/Zambia [1988], Zambia Agricultural Marketing Support Project (PID)