2 Agricultural Policy Since Independence

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By African standards Zambia is a highly urbanised country with over 40 percent of its population living in towns. Mining dominates the economy and the nation's exports. Nevertheless, agriculture has an important role to play as the source of livelihood for the majority of the 3.5 million people in the rural areas and in related activities for a growing number of urbanites. In recent years, with the impact of world recession upon copper mining and its far-reaching consequences upon the Zambian economy, agriculture represents one of the few economic areas with good prospects for growth. Consequently, agricultural policy, generally a Cinderella area throughout the country's history, has assumed critical importance in national economic planning and development.

Policy-making—Political/Institutional Context

Since independence, agricultural policy has received little attention in Zambia's development planning. Although each national plan has emphasised the importance of diversifying the economy and has noted the role for agriculture in this process,

(ILO/JASPA 1977, 10).

The neglect of agricultural policy has been partly due to the political weakness of the rural areas which, despite majority rule, have been unable to wrest a share of investment from the government proportional to their population (Ollawa 1978). A second cause has been the conflicts and contradictions in policy formulation resulting from the plethora of institutions and organisations involved in this process. The number of institutions has increased progressively since independence as the government bureaucracy has expanded and as agriculture has been seen as increasingly important. Currently, these institutions include government ministries such as Agriculture, Finance, and the Office of the President; a number of committees of the sole political party, the United National Independence Party; and several other organisations, including the Bank of Zambia, donor country embassies, and multilateral organisations such as the World Bank and IMF.

Confusion and conflict in agricultural policy have also resulted from the wide range of ideological viewpoints espoused within the party and government by people concerned with policy formulation, partly a phenomenon of the one party state which, from its establishment in 1972, has sought to keep criticism within the party. These ideological perspectives range from the right of centre, which stresses the advantages of the free-market system and the need for economic considerations to dominate policy-making, to the left of centre, which emphasises social and socialist ideological considerations (Elliot 1983, 163). As a result, agricultural policy has fluctuated from perspectives that seek maximum production at minimum cost to those emphasing social considerations with control of capitalist tendencies and the process of differentiation.

Agricultural Policy and Performance To the Early 1980s

Objectives and Policies

The major aims of Zambian agricultural policy from independence to the present, have been political and economic: securing the urban food supply at a reasonable price without recourse to imports (Klepper 1980, 130). However, two major social goals were introduced at independence in line with the rural society. One of these goals, the social diversification of production, sought to increase the participation of African farmers in marketed agriculture, both to reduce reliance upon the still predominantly European commercial farmers and to improve the standards of living of the bulk of the rural population. The second related aim was to increase involvement in market agriculture by farmers in the less agriculturally advanced provinces, thus redressing the economic imbalance between regions and reducing outmigration to the towns on the Copperbelt and the line of rail. This may be called the spatial dispersion of production (GRZ 1966; GRZ 1971; GRZ 1979b; Fair 1983).

From 1964 to 1982 the government tried to achieve its food production goal by encouraging a variety of production forms, including socialist forms, such as cooperatives, state farms, and parastatal enterprises, that were strongly supported by the more ideologically motivated members of the party and government. At the same time, capitalist forms of production, such as large-scale commercial farmers and individual small-scale producers with customary tenure or in settlement schemes, were supported notably by producer and input price policies and through services provided by various government departments and parastatal companies. These individual farmers have continued to dominate agriculture since independence.

The Zambian authorities sought food self-sufficiency in this period by intensifying the colonial policy of maize production, a continuation of the government monopoly of the trade in maize and state control of producer and retail prices of maize. Increased maize production to meet the rapidly growing urban demand was sought through guaranteed producer prices, subsidies on farmers' inputs (notably fertiliser), an expansion of the network of input supply and crop collection depots, and a range of other institutional support services to farmers, such as research extension advice, farmer training, credit provision, and subsidised land preparation by government mechanisation (tractor) units.

While most policies sought to increase crop production per se, some specific measures were introduced to encourage the progression of subsistence farmers towards market-oriented production and to spread market agriculture into areas where subsistence farming dominanted before independence. Most important, in 1964 the Agricultural Rural Marketing Board began expanding the network of agricultural depots outside Central, Eastern, and Southern provinces, establishing depots in "non-

viable areas, i.e., where the value of agricultural produce was insufficient to cover marketing costs without unduly depressing producer prices (Ocran 1971, 154, quoted in Dodge 1977, 82). These depots were later taken over by the National Agricultural Marketing Board (NAMBOARD), which was originally responsible for running depots only in the more accessible, and market-oriented, parts of the country. Thus a nationwide network of input supply and crop collection depots was created under one monolithic parastatal organisation.

The second major policy associated with the government's social and spatial objectives in agriculture was the introduction of uniform pricing in the 1974–75 crop season. This ensured that farmers received the same price for their produce whatever their location relative to the market and required the state to meet the transport costs to market which, in the case of non-line-of-rail, surplus-producing provinces, had previously been passed on to the farmers (Dodge 1977, 94–105).[1] Other policies with spatial emphases included the provision in specific rural areas of projects to help farmers commercialise their agriculture (Siddle 1971b), a trend that emerged again in the late 1970s as foreign aid projects proliferated support for such initiatives (Smith and Wood 1984).

Policies with social implications included the liberal policies of the Credit Organisation of Zambia (COZ), which encouraged subsistence producers to increase their production to market levels, and a variety of grants given to small-scale farmers who formed agricultural producer cooperatives (Lombard 1971; Siddle 1971a; Quick 1978). Mechanisation units and other institutional assistance, such as agricultural extension camps and Farmer Training Centres, were established across the country following independence in order to remove the overtly discriminating policies in agricultural support services and to encourage market production by farmers in all districts (Klepper 1980, 132). Fertiliser subsidies, which increased considerably in the 1960s and early 1970s, while primarily encouraging maize production, also had some spatial implications by reducing the disadvantages of maize farmers in high rainfall areas where particularly heavy fertiliser inputs are needed because of the soil acidity (McPhillips 1983).

1. The introduction of uniform pricing was a debatable measure for social reasons as it led to a decline in the price of maize in deficit areas. Prices in those areas had formerly been well above those on the line of rail in order to encourage local production and so achieve regional self-sufficiency (Dodge 1977, 102-5). Uniform pricing has also been criticised for economic reasons as it ignores differing production costs and the comparative advantages of regions. In particular, it has been criticised for causing increased inter-provincial transportation of maize which, with the cheap urban food policy, has required these to be heavily subsidised by the government (GRZ 1983a, chapter 3).

Constraints

Many of these policies introduced following independence to help achieve the government's social and spatial objectives in agriculture were hindered by a variety of institutional, environmental, technical, and economic problems. Small-scale farmers, especially in remote areas, were most seriously affected by these problems, although, medium- and large-scale farmers also suffered.

Institutional Constraints

Government crop pricing proved the most serious institutional problem, being rather erratic with frequently late announcements of producer prices, these often laging behind rising production costs (Roberts and Elliot 1971, 278; Dodge 1977, 94–105; Woods, 1984). These problems partly resulted from the complex structure of agriculture where farmers' costs of production vary greatly. The lowest cost producers are the small-scale semicommercial cultivators who use ox-drawn ploughs. They are followed by the large-scale, commercial producers, while the recently mechanised small- and medium-scale producers tend to have the highest production costs. With political considerations making it desirable to assist all African producers but not allow the still predominantly European commercial farmers to make excessive profits, determining crop prices was a difficult operation (Dodge 1977, 92; D. Wood 1979). The consequently erratic changes in producer prices led to some loss of confidence amongst farmers and to doubts concerning the prospects for a sound pricing policy that would encourage agricultural production. Prices for maize were so low in the late 1970s that many large-scale commercial farmers reduced their maize acreages, especially in areas where yields were not high (Woode, Condliffe, and Wood 1982), while small-scale farmers outside the most ecologically suitable areas found maize unattractive given the risks in its cultivation (Marter 1978, 8; Klepper 1980, 133). At the same time government prices for sorghum and millet remained little altered for many years and

fell progressively behind the free-market price. As a result, official purchases of these crops declined to negligible amounts by late 1970s, and apart from a small local trade farmers had little incentive to produce surpluses (Pottier 1983, 14). Consideration of the relative prices of different crops was neglected and became an additional source of uncertainty. While maize prices were adjusted annually, others were not so despite relatively low maize prices small-scale producers tended to concentrate increasingly upon maize. This development seriously affected production and foreign exchange earnings, leading to reduced crop rotation and potentially dangerous monocropping.

Problems also occurred with the operation of government and parastatal services to farmers. The quality of these is particularly important for the government's social objectives; research increasingly shows that such services are crucial prerequisites for the progression of farmers from subsistence to commercial production (IRDP/SMC 1983). With the exception of The Lint Company of Zambia (LINTCO), which provided a good service for cotton growers, parastatal service organisations were both inefficient in their operations and irresponsible towards farmers. Marketing services were frequently poor with depots opening late and farmers experiencing considerable delays in receiving payment for their crops. The late distribution of fertiliser and its unavailability at some depots were particularly serious for the cultivation of hybrid maize (Stollen 1983, 350). The principle of restitution, or subsidies, to cover operating losses removed the incentive for increased efficiency from parastatal organisations, while their monopoly positions enabled them to keep their customers despite their poor services. These marketing services experienced increasing difficulties from the late 1970s as the worsening recession led to reduced government spending, severe foreign exchange shortages, and cash flow problems (Roberts and Elliot 1971, 281; Dodge 1977, 84–89; A. P. Wood 1984a, 10–12; Kydd 1987).

The need for purchased inputs to grow hybrid maize also meant that small-scale farmers became increasingly dependent upon credit. Unfortunately, repayment by beneficiaries of COZ during the 1960s was poor and this organization collapsed in 1970 with debts of K22m[2] (Lombard and Tweedie 1972, 78). Its successor, the Agricultural Finance Company (AFC), consequently operated with stricter regulations, originally requiring recipients to show evidence of their ability to cultivate

ten hectares, an area exceeding that cultivated by over half the rural population (Klepper 1980, 136; GRZ 1974). As a result, small-scale farmers received a small share of AFC loans (less than 5 percent of the total funds in the 1975–76 crop season), and the recipients in this category were concentrated in Southern and Central provinces. Thus AFC effectively supported existing commercial and semicommercial producers in established farming areas, rather than assisting subsistence farmers make the transition to market-oriented production (Marter and Honeybone 1976, 24–25; Due, 1978a, 1983). Access to credit became more difficult in the late 1970s as government funding of AFC failed to keep pace with the growing financial requirements of farmers, while in some cases the credit worthiness of small-scale farmers declined because late payment for their crops (as a result of government cash flow problems) prevented timely repayment of loans (Stollen 1983, 346).

The research and extension services also contributed little to the social and spatial diversification of agricultural production before the late 1970s. Both tended to concentrate upon the already commercialized small-scale producers, again continuing the colonial policy of reinforcing successful producers in established areas of market production. Research work tended to focus upon plant breeding and selection for commercial, mechanized farms, where crops receive good management and high levels of input provision. Research Branch recommendations passed to the Extension Branch were directed to commercial and semicommercial farmers, who have access to inputs and resources well in excess of those of the average rural household. Although the extension service was reoriented away from large-scale commercial producers soon after independence, staff tended to concentrate upon *farmers*, those households producing appreciable surpluses for sale, and almost completely ignore *villagers*, or subsistence producers. Extension advice concentrated on maize rather than traditional staples grown by subsistence producers, especially in areas outside Central, Eastern, and Southern provinces. Attention was also focused on raising yields per unit area rather than yields in relation to labour, a scarcer factor of production for subsistence households in most areas (Marter and Honeybone 1976, 21–25). Farmer Training Centers (FTC), although established in most districts, also appeared ineffective in stimulating increased agricultural production among trainees (Honeybone and Marter 1975).

The economic circumstances in which farmers found themselves from the late 1960s to the early 1980s also discouraged the development of small-scale commercial farming in a variety of ways. Rural-urban terms of trade deteriorated considerably for farmers. Between 1965 and 1980 the price of agricultural goods generating income for the rural population declined by 65 percent relative to the price the rural population had to pay for urban-produced goods (ILO/JASPA 1981, 7). As a result, farming became increasingly less attractive as a way of earning a cash income. Increased agricultural output might have been expected to develop after independence in the less agriculturally developed provinces as rural-urban labour circulation and remittances, which had previously been major sources of cash, declined. However, evidence suggests that increased crop production, especially of maize, proved unattractive in many of these outlying provinces (Marter 1978, 8), and that petty trade, beer brewing, and the cultivation of some minor crops, such as beans, were more popular and profitable strategies (Pottier 1983, 15). In fact, the utility of cash in the rural areas declined in the late 1970s as the foreign exchange problems caused by the recession led to shortages of essential commodities. These were particularly severe in the rural areas where government attempts to enforce price control legislation left traders with insufficient profit margins and forced many stores to close (van den Berg 1981).

The economic difficulties caused by the impact of the world recession upon Zambia affected agriculture in many ways. Foreign exchange for spare parts made mechanised production increasingly difficult, while declining government revenue disrupted many support services for farmers, such as marketing, credit, and extension. Production by parastatal organisations, such as the Tobacco Board of Zambia, and by small-scale farmers on settlement schemes was also reduced as government cash flow problems affected operational funds.

Environmental Constraints

The physical environment in several parts of Zambia has also made the progression to commercially oriented production difficult, especially through maize production. Hybrid maize varieties available in Zambia in the 1960s and 1970s were suitable for less than half the country (see Fig. 2.1). They gave poor yields in many of the southern and western areas because of areas prolonged maize cultivation led to soil acidity and the ne for heavy fertiliser provision, which is rarely achiev (McPhillips 1983). Soils in Zambia are in general not well suit for permanent cultivation and probably as little as 10 percent the country is suitable for maize production without maj constraints (Roberts and Elliot 1971, 271). Rainfall a temperature patterns, combined with disease problems, al make the cultivation of some crops, such as wheat, difficult Zambia, necessitating high cost irrigated production. Tset infestation and the lack of a tradition of oxen cultivation furth prevented some farmers from considerably expanding the cultivation and surplus production.

Household Resource Constraints

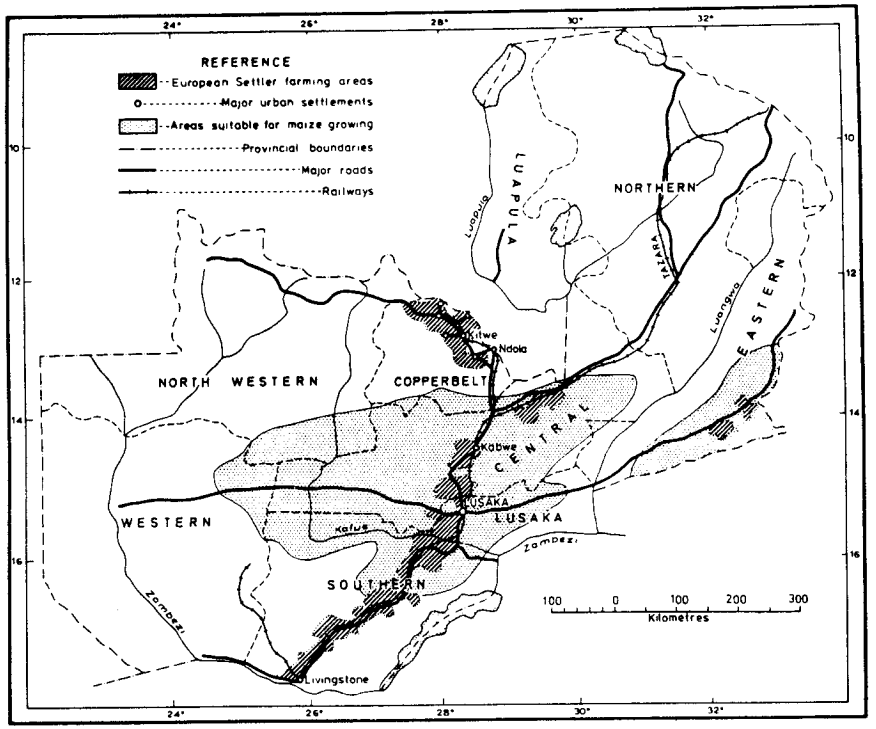
The social and spatial diversification of agriculture prov difficult in the 1970s because of the resource constraints of ma rural households and the inappropriateness of the vario government services in helping these producers increase the output. A national study undertaken in 1975 showed that as result of the long tradition of rural-urban labour migration, t majority of rural households, especially in the less agricultural advanced peripheral provinces (the non-Central, Eastern, a Southern region) suffered from labour shortages that constrain their production (see Table 2.1). These disadvantages we reinforced by the more limited access to equipment in the households. With the agricultural policies existing at that tim only a minority of rural households throughout the country cou progress to higher levels of marketed production, while in t non-CES provinces most households were almost condemned remain at subsistence levels of production (Marter a Honeybone 1976, chapter 2).

Performance

Food Self-Sufficiency

Since independence, maintenance of food self-sufficiency h been erratic. Although the country has been able to produ sufficient maize to meet its needs, production has fluctuat considerably with exports of over 50,000 metric tonnes of mai

Fig. 2.1. European Settler Farming Areas, Urban Markets, and Maize Growing Areas



	Household Central Category[1] (Percentage of Households in Category)				
	a	b	c	d	Total
CES Region[2]	16	20	34	30	100
Non-CES Region[3]	3	11	38	48	100
Total	*9*	*15*	*36*	*41*	*100*

1 Household Categories are characterised as follows:

a) With above average resources—labour, draft power, finance, equipment, high degree of managerial ability, and nonagricultural sources of income.

b) With slightly above average resources—wider range of occupations, benefit from some initiative of own or enterprise of others.

c) Typical 'subsistence' households, with membership limited to nuclear household. Produce a small surplus for sale, and engage in other activities for additional cash income.

d) With specific disadvantage, usually shortage of labour, and often draft power. Inadequate food and cash income from farming and so dependent on nonfarm sources for survival, often through petty trade or light manual work.

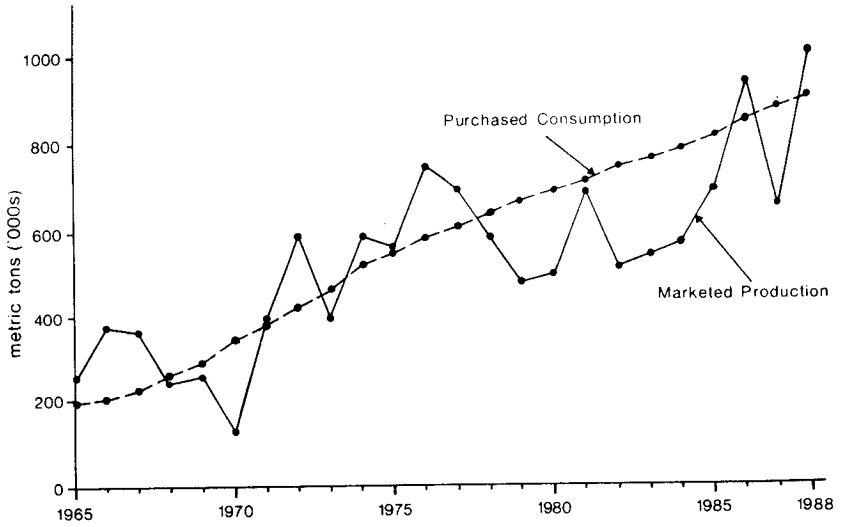
2 CES Region refers to Central, Eastern, and Southern provinces, including Lusaka province which was excised from Central province. This includes the most agriculturally advanced areas.

3 Non-CES Region refers to all other provinces: Copperbelt, Luapula, Northern, North-western, and Western. These are the peripheral and least agriculturally developed areas.

Source: Honeybone and Marter 1979, 25–27.

in 1966, 1967, 1973, 1974, and 1976, and imports in excess of this figure in 1971, 1980, 1981, and 1983 through 1985 (Lombard and Tweedie 1972, 23; GRZ 1982a, 39, 43) (see Fig. 2.2 and Table 2.2). Food imports rose rapidly during the 1960s and by 1971 they had reached four times their value at independence imports of meat, dairy produce, oilseeds, and cereals, especially wheat, grew particularly rapidly during this period. In the mid-1970s food imports were somewhat lower, approximately three times their value at independence which, with the impact of inflation, represented a major decline from the 1971 peak. While this resulted partly from the country regaining self-sufficiency in maize production, it also resulted from increasingly strict import

Fig. 2.2. Maize Production and Consumption



in the price of copper in 1974. However, the poor performance o
the local dairy industry and the high cost and limited productio
of local wheat led to increased imports of these products sinc
local demand was stimulated by the continued growth of th
urban population and government controls over consumer price
(A. P. Wood, 1982, 108–12).

The most serious food production problems occurred in th
late 1970s and first half of the 1980s when maize self-sufficienc
was lost and imports were needed in all but one year between 197
and 1985. While poor rainfall and reduced yields, especially i
Southern Province, were the major cause of this shortfall in 198
and 1984, in 1980 and 1981 it was a combination of th
constraints outlined above which led to inadequate production.

Table 2.2. Marketed Maize Production and Consumption and Maize Imports (Thousand Metric Tonnes)

Year	Marketed Production	Purchased Consumption (Estimated)	Import (Approx
1964	189	171	
1965	c252	198	
1966	378	207	
1967	369	225	
1968	243	261	
1969	252	288	
1970	126	342	31
1971	396	387	261
1972	589	420	63
1973	400	460	–
1974	589	520	–
1975	560	550	–
1976	751	580	–
1977	697	610	–
1978	582	640	23
1979	467	665	43
1980	490	690	200
1981	693	710	200
1982	511	730	60
1983	531	750	200
1984	571	780	130
1985	678	810	80
1986	954	840	–
1987	653	870	–
1988	c1007	900	–

Social Goals

Some progress towards the related goals of social diversification and spatial dispersion of agricultural production has been achieved since independence, although slow and not evenly distributed across the country. At the same time, inequality has increased in Zambian rural society as progress towards commercial production has led to economic differentiation of the small-scale farming population (Marter and Honeybone 1976; Honeybone and Marter 1979; Cliffe 1979).

Data from a model of the changing economic characteristics of rural households between 1969 and 1980 suggest that an increasing proportion of the population is now found in the small- and medium-scale farmer categories, while the subsistence and large-scale commercial farmers have declined in importance (Table 2.3).[3] Across the country as a whole during this eleven-year period small- and medium-scale farmers grew from 23.2 percent to 36.4 percent of the rural population, while subsistence households declined from 75.0 to 62.3 percent of the rural population.

The growing importance of medium- and small-scale producers is reflected in their share of marketed maize production (Table 2.4). Whereas in 1969 large-scale commercial farmers still produced over 57 percent of the nation's marketed maize, by 1980 this had declined to only 26 percent.[4] The greatest

3 The data used in this section and in the tables are drawn from a background paper for the Food Strategy Study (Harteveld, 1982). In this paper an attempt is made to model the changes in both the structure of the farming population and the *expected* sales of each category of farmers, assuming that *normal* rainfall, input supply and credit conditions existed in the years considered. The data used in these calculations were obtained from NAMBOARD, Provincial Agricultural Offices, and the Crop Forecasting Section of the Ministry of Agriculture and Water Development. These data were fragmentary and several interpolations and assumptions have been employed in developing the model (Harteveld, personal communication).

The details of the farmer categories used in this study are given in Table 2.3. These are subject to much debate and the division between categories two and three is rather arbitrary. It should be noted that in association with the size categories used here, there are also variations in the size of household/number of dependents, degree of commercialisation, and source of motive power.

4 The share of marketed maize production produced by commercial large-scale farmers has probably never fallen as low as the 23 percent quoted in this model. The lowest estimated actual production from commercial farmers of this category was around 30

Table 2.3: Distribution of Farming Population by Farmer Category, 1969 and 1980

	Farmer Category[1] (Percentage of Farming Population)				Total Pop.
	One	Two	Three	Four	(m)
1969	1.7	4.5	18.7	75.0	1.865
1980	1.2	6.3	30.1	62.3	3.239

1 Farmer Categories : One = large-scale commercial (+40 ha)
Two = medium-scale commercial (10–40 ha)
Three = small-scale semicommercial (1–10 ha)
Four = traditional/subsistence (1–5 ha)

Source: Calculated from Harteveld 1982, Tables 3 and 23a.

increase came from the small-scale producers, whose share of the market rose from 14 to 42 percent in this period. These figures may slightly overemphasise the social diversification of agricultural production as other estimates suggest around 35 to 40 percent of maize sales coming from large-scale commercial producers in 1980 (GRZ, MAWD, Planning Division staff, personal communication 1983). Progress towards this social goal is being made, albeit slowly, although in the early 1980s this trend did suffer a setback when revised maize prices and other reforms in agricultural policy (see below) led to a resurgence of large-scale commercial arable production, especially of maize, but also of wheat, soya beans, and horticultural crops.

Spatial Dispersion

The greater participation of formerly subsistence farmers in market-oriented agriculture has not been evenly spread across the country. This progression has occurred primarily in the already more agriculturally advanced Central, Eastern, and Southern provinces (the CES region), while farmers elsewhere have found it more difficult to make this transition (Table 2.5 and Fig. 2.3). The decline in subsistence producers has been concentrated in the CES region, where their relative importance fell from 52 percent of the rural population in 1969 to 35 percent in 1980 (Table 2.6). Elsewhere the decline was only from 95 to 91

percent in 1979. Since then their share has risen and was 46 percent in the 1983 harvest (GRZ 1984a).

Table 2.4. Marketed Maize by Farmer Category, 1969 and 1980

	Farmer Category[1] (Percentage of Marketed Maize)				Total Sales
	One	Two	Three	Four	(90 kg x m)
1969	1.7	4.5	18.7	75.0	1.865
1980	1.2	6.3	30.1	62.3	3.239

1 Farmer Categories : One = large-scale commercial (+40 ha)
Two = medium-scale commercial (10–40 ha)
Three = small-scale semicommercial (1–10 ha)
Four = traditional/subsistence (1–5 ha)

Source: Calculated from Harteveld 1982, Tables 3 and 23a.

Table 2.5 . Distribution of Farming Categories by Region, 1969 and 1980

	Category of Farmer[1] (Percentage of Farm hHouseholds)				Total Rural
	One	Two	Three	Four	Pop.
1969					
CES Region[2]	100.0	96.8	84.7	31.4	45.5
Non-CES Region[3]	0.0	3.1	15.2	68.7	54.5
1980					
CES Region	100.0	96.7	83.7	26.0	47.5
Non-CES Region	0.0	3.3	16.1	74.1	52.4

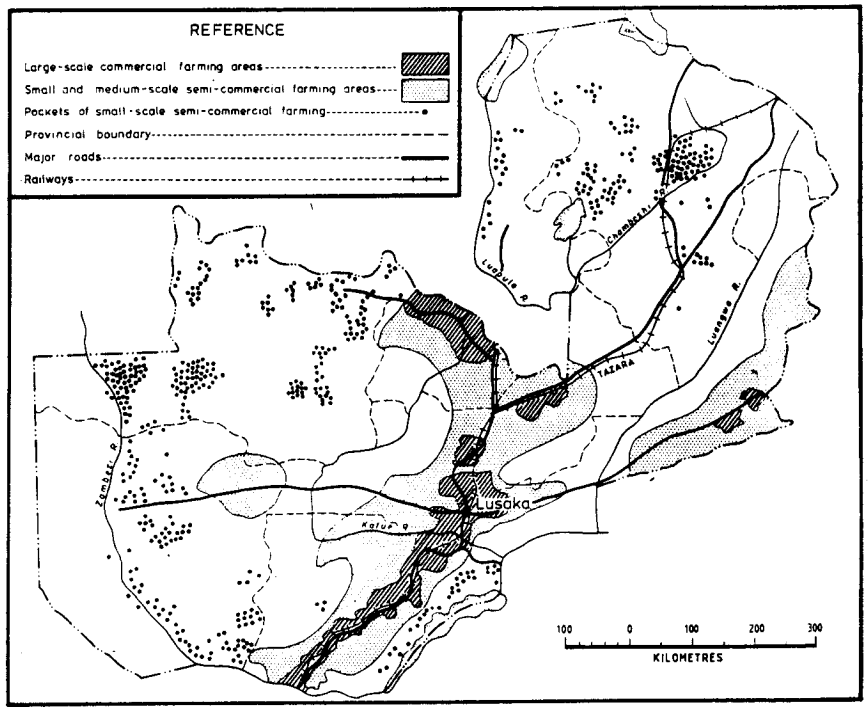
1 Farmer Categories : One = large-scale commercial (+40 ha)
Two = medium-scale commercial (10–40 ha)
Three = small-scale semicommercial (1–10 ha)
Four = traditional/subsistence (1–5 ha)

2 CES Region refers to Central, Eastern, and Southern provinces, including Lusaka province which was excised from Central province. This includes the most agriculturally advanced areas.

3 Non-CES Region refers to all other provinces: Copperbelt, Luapula, Northern, North-western, and Western. These are the peripheral and least agriculturally developed areas.

Source: Harteveld 1982, Tables 3 and 23a.

Fig. 2.3. Distribution of Agricultural Development, c. 1975



scale commercial producers has been concentrated in the CES region, their relative importance increasing from 45 to 63 percent. Comparable figures for the non-CES region show only a little growth from 6 to 9 percent of the rural population in this eleven-year period.

Table 2.6. Regional Distribution of Farming Population:rural by Farmer Category, 1969 and 1980

	Farmer Category[1] (Percentage of Farm Households)				Pop.
	One	Two	Three	Four	(m)
CES Region[2]					
1969	3.8	9.7	34.8	51.7	1.402
1980	2.4	12.7	49.9	35.0	1.543
Non-CES Region[3]					
1969	0	0.3	5.2	94.5	1.563
1980	0	0.4	8.8	90.8	1.696
Zambia Total					
1969	1.7	4.5	18.7	75.0	2.865
1980	1.2	6.3	30.1	62.3	3.239

1 Farmer Categories : One = large-scale commercial (+40 ha)
Two = medium-scale commercial (10–40 ha)
Three = small-scale semicommercial (1–10 ha)
Four = traditional/subsistence (1–5 ha)

2 CES Region refers to Central, Eastern, and Southern provinces, including Lusaka province which was excised from Central province. This includes the most agriculturally advanced areas.

3 Non-CES Region refers to all other provinces: Copperbelt, Luapula, Northern, North-western, and Western. These are the peripheral and least agriculturally developed areas.

Source: Harteveld 1982, Tables 3 and 23a.

Measured in terms of the proportion of marketed maize produced in the two regions, the model suggests progress towards the spatial diversification of production was slightly greater (Table 2.7). Between 1969 and 1980 the share of marketed maize produced in the CES region declined from 96 to 92 percent, while 87 percent of the overall national increase in marketed maize production during this period came from this region. Similarly, over the longer period from 1964 to 1982 the share of maize

although it had fallen below 93 percent in 1970 and 1971 and f
below 94 percent in 1980 and 1981. This trend accelerated in 19
and 1984 when, with drought seriously reducing production
Southern Province, the CES region produced only a little over
percent of the officially purchased maize, although with bett
rain in 1985–86 the figure rose to 87 percent for the CES regio
The major contribution to the increase in non-CES mai
production has been Northern Province, where Integrated Rur
Development Programmes (IRDPs) have shown that wh
farmers are provided with high quality services, and when acce
to credit is provided, a considerable increase in production for t
market can be achieved from a wide range of farmers (IRDP/SM
1983).

Table 2.7. Regional Marketed Maize by Farmer Category, 1969 and 1980

	Farmer Category[1] (Percentage of Total Marketed Maize)				Tot Sal
	One	Two	Three	Four	(90 kg x
CES Region[2]					
1969	3.8	9.7	34.8	51.7	1.40
1980	2.4	12.7	49.9	35.0	1.54
Non-CES Region[3]					
1969	0.0	0.3	5.2	94.5	1.56
1980	0.0	0.4	8.8	90.8	1.69

1 Farmer Categories : One = large-scale commercial (+40 ha)
Two = medium-scale commercial (10–40 ha)
Three = small-scale semicommercial (1–10 h
Four = traditional/subsistence (1–5 ha)

2 CES Region refers to Central, Eastern, and Southern provinc
including Lusaka province which was excised from Central provinc
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3 Non-CES Region refers to all other provinces: Copperbelt, Luapul
Northern, North-western, and Western. These are the peripheral ar
least agriculturally developed areas.

Source: Harteveld 1982, Tables 3 and 23a.

While the share of marketed maize coming from the non-CE
region has increased since independence, there is as yet litt

evidence of a spatial dispersion in the production of cotton and sunflower, two newly introduced cash crops suitable for small- and medium-scale farmers. Over 98 percent of the marketed production of these crops came from within the CES region in 1986, and while there is evidence of a slight increase in the share of cotton production coming from non-CES region, sunflower production in these areas appears to be declining.

The Reform of Agricultural Policy

Background

The agricultural problems during the late 1970s developed into a crisis because of the difficult economic situation that the country faced at that time. Rising agricultural subsidies and growing food imports might have been sustained had the Zambian economy been stronger. However, with its heavy dependence upon copper both for government revenue and for foreign exchange, Zambia was badly hit by the world recession in the 1970s and the associated collapse in the price of copper in 1974. During the last half of the 1970s, with the price of copper at approximately one-third of its real value in the late 1960s and early 1970s, government revenue plummeted leading to a serious budget deficit, while foreign exchange earnings declined, creating severe balance of payments difficulties. In this situation the rising level of both agricultural subsidies,[5] (to 19 percent of government revenue in 1980) and of food imports (to a level equivalent to 10 percent of the country's foreign exchange earnings) could not be tolerated, and some alteration in agricultural policy appeared increasingly necessary.

The agricultural sector clearly had to perform better and more efficiently for a number of reasons. First, Zambia could not afford to use its increasingly scarce foreign exchange to import foodstuffs that could be produced locally and thereby reduce the importation of raw materials and commodities not locally available. Financial problems threatened to disrupt food imports on several occasions with the consequent threat of urban unrest, a continual worry that the government wished to remove.

5 The subsidy was particularly high in 1980 because of the high cost of maize imported from abroad. The major components of the subsidy were maize price, differential 33 percent; fertiliser price, differential 18 percent; NAMBOARD and cooperatives handling costs, 38 percent (GRZ 1983a, Table 37).

increased foreign funding, which in turn led to recourse to the International Monetary Fund (IMF) with its harsh conditions for loans, it became desirable to reduce spending on agricultural subsidies, both to meet loan conditions and in the long run to restore national economic independence. Third, agriculture became of increasing importance in economic planning as the 1970s drew to a close. With the poor prospects for copper and the limited opportunities for developing manufacturing industry in Zambia, agriculture and agro-industries were two of the few potential growth sectors in the economy that might generate employment, foreign exchange, and government revenue to replace that which the copper industry had previously provided. In particular, the creation of employment opportunities in agriculture developed a greater political significance in the late 1970s as urban unemployment increased because of the recession and government retrenchment (ILO/JASPA 1981, 29–31; A. P. Wood 1983, 96–99).

Attention was also increasingly directed to the agricultural sector at this time as the implications and failure of several aspects of government policy received critical analysis. Studies of rural conditions noted the decline in rural-urban terms of trade and the process of socio-economic differentiation. By 1978 average rural incomes had declined to only one quarter of urban incomes (GRZ 1978b, 4), while the benefits of existing agricultural policies appeared to be received by only a small number of farmers, and the majority benefited little or even saw their circumstances deteriorate (Marter and Honeybone 1976; Honeybone and Marter 1979; Klepper 1979; Cliffe 1979; Hedlund 1980).

Research also pointed out problems with the policy of concentrating upon maize as the major cereal staple (e.g., Marter 1978). Emphasis upon hybrid maize, with its heavy fertiliser requirement, much of it imported, placed major demands upon the country's foreign exchange resources. Similarly, the extensive use of fertiliser subsidies to encourage maize production in low-yield areas unsuited to this crop created a burden upon the government budget. The emphasis upon maize also made the country more prone to fluctuations in marketed production, partly because hybrid maize is not well suited to over half the country and, as a result of adverse weather, its yields in these areas vary considerably. Fluctuations in production also occur because of the sensitivity of maize to management. Disruptions in farming—late sowing, late application of fertiliser and untimely cultivation—which occurred due to the decline in

after the mid-1970s, all contributed to lower output. Further, it appeared that because of this management sensitivity of maize, its limited regional suitability, emphasis upon this crop had not facilitated the progression of subsistence producers to semicommercial levels of production as rapidly, or as widely, as had been hoped.

Questions were also being raised about the impact of fertiliser subsidies, uniform pricing, and transport cost subsidies upon the spatial dispersion of production. Although by the late 1970s the only major increase in maize production at some distance from the urban markets had been in Eastern Province, there was concern that subsidies would encourage an inefficient pattern of production, with growing output in relatively remote locations. Further inefficiencies in national resource use occurred as the political influence of the urban population led to subsidies reaching 50 percent of the economic cost of maize meal. This cheap food policy encouraged rural-urban migration to continue despite the decline in employment opportunities. It also created unnecessary strains upon the national transport services and grain storage facilities, where farmers sold much of their subsistence production and purchased milled maize to benefit from subsidies.

Finally, existing agricultural and food policies placed serious constraints upon agricultural development given the difficult financial conditions. The possibility of increasing maize production to recover self-sufficiency by improved producer incentives (either through increased producer prices or reduced input costs) was limited by the cheap urban food policy and the financial constraints upon increased subsidies. With the hybrid maize policy, the major rural beneficiaries of improved producer incentives under the conditions in the late 1970s (with poor support services to small-scale producers) appeared to be the large-scale commercial farmers and a few of the established small-scale producers in the areas best suited for maize. Thus a conflict existed between the economic and foreign exchange saving goals of increasing food self-sufficiency and the social objectives of cheap urban food and increased production from small-scale producers. The prospects for increasing production by improving the support service for small-scale producers were also limited by the financial situation. Indeed with the decline in the quality of services to farmers and doubts about the extent to which transport cost and fertiliser subsidies could be maintained to make hybrid maize attractive in low-yield and remote areas, it appeared that total maize production might fall further. Thus, policy, this time between increased maize production on the one hand, and the goals of reduced budget deficits and socially diversified and spatially dispersed production on the other.

Policy Goals and Their Support

Given the range of ideological perspectives within the various government and party agencies concerned with the formulation of agricultural policy, this production crisis was inevitably viewed in different ways with a range of contrasting and conflicting solutions. Nevertheless since the late 1970s planners and policymakers from a wide range of perspectives have identified several common goals:

- the achievement of food self-sufficiency and food security,
- the generation of increased growth in the agricultural sector,
- the development of small-scale African commercial farming,
- the reduction in dependence upon imported inputs in agricultural production, and
- the achievement of a degree of regional balance in agricultural development.

In the party and government there has been widespread support of these goals, though often for differing reasons. The need for food self-sufficiency and food security is supported by those towards the right of the party and government for economic reasons because the opportunity cost of foreign exchange when used for food imports is seen as unacceptable, especially when it leads to costly subsidies and the need for foreign loans. For those towards the left of the party and government this first goal is more important for political reasons, to make Zambia independent of foreign sources of food and finance. Support for this goal also comes from throughout the party and government as the need for secure, regular food supplies for the urban areas, at acceptable prices, is widely recognised as crucial for maintaining political peace.

There is widespread support for the second goal of increasing growth within the agricultural sector. Not only is this considered vital for producing the food required by the nation and thereby achieving self-sufficiency, but it is also seen as important in generating employment, government revenue, and foreign exchange earnings and savings, and producing raw materials for industries. However, a debate exists on how agriculture should develop, with support for socialist and capitalist forms of production and policy measures varying among planners and

policymakers depending upon their political and economic persuasion.

Support for the expansion of production by small-scale producers is also widespread in policy-making circles. The failure of earlier attempts to broaden participation in market agriculture makes the reiteration of this goal necessary for those concerned with the social consequences of agricultural policy. Those planners who regard economic aspects as most important stress the potential of small-scale producers to increase marketed production at relatively low costs, especially in terms of foreign exchange requirements. But how should small-scale farming develop? Some sections of the party and government support socialist forms organised around cooperatives to check the process of socio-economic differentiation; while others want a more individualistic and capitalistic development.

The goal of reducing foreign exchange inputs into agriculture is widely supported these days, making a major change from the view established at independence that agriculture could only progress through the adoption of modern inputs and technology. Increased use of oxen rather than tractors and the choice of crop varieties with relatively low fertiliser needs have been growing elements in thinking about agricultural development since the late 1970s. These ideas have been supported on grounds of economic efficiency by the right wing, while those on the left value the technology as applicable to many small farmers without increasing the nation's external dependence.

The final widely supported goal, regional balance in agricultural development, although less important as a positive goal, is a major constraining factor in policy formulation. In a country where agricultural development was so spatially restricted during the colonial period and where many of the more costly policies since independence have been concerned with reducing disparities in agricultural development, regional considerations remain important in reforming agricultural policies. Strong regional political groupings seek to obtain maximum protection for farmers in their areas. Given the relative youth of the nation and concern for national unity, these interest groups cannot be ignored. This policy goal has been supported by the left wing, who believe that marketed agricultural production needs to be encouraged for equity reasons in those parts of the country neglected during the colonial period. Those on the right wing caution against excessive emphasis on this goal, seeing regional self-sufficiency in crop staples as the present goal for peripheral provinces prior to the development of high-value, low bulk cash crops that can bear the cost of transport to market from these areas without subsidies.

Other more contentious policy goals have been suggested as vital in Zambia's reform of agricultural policy, including the reduction of the cost of agriculture to the nation (through the reduction of subsidies and greater efficiency in use of national resources) and the improvement of rural-urban terms of trade in favour of rural dwellers. Support for these two goals comes mainly from the donor community and those in government with an economic and right-of-centre perspective while those in the party and government who have greater concern for social and political considerations criticise them. A major debate concerns the extent to which urban social and political considerations will permit consumer subsidies to be reduced and rural-urban terms of trade to be moved in favour of rural dwellers. Doubts also exist about the rural equity implications of reducing farm input and collection subsidies, and of emphasising the need for lower resource costs in agriculture.

Agricultural subsidies have grown tremendously since independence, rising fortyfold in the twenty years from 1964 to 1985. This expenditure could be afforded in the 1960s when government revenue was rising and subsidies were seen as the cost of modernising agriculture. By the late 1970s the situation was different, with subsidies worsening the budget deficit and the country's balance of payments and necessitating foreign borrowing to finance such deficits.

Those to the right within the party and government see subsidies as central to agricultural policy reform. They feel that subsidies are too large both in real terms and in opportunity costs. They dislike subsidies because they distort the economy, especially the regional comparative advantage of different crops. Those towards the socialist end of the political spectrum strongly support subsidies, seeing them as crucial both for assisting small-scale producers, especially in remote areas, to commercialise their farming and for protecting the urban poor from rising food prices at a time when incomes are being restrained and eroded by inflation. This latter aspect concerning the impact of subsidies upon the urban population does lead to some unity within the party and government as it is widely recognised that major increases in urban food costs will make Zambian produce less competitive on the world market (assuming wages rise accordingly) and could lead to urban unrest if food prices rise while wages are held back, as happened at the end of 1986.

The more socially minded in the party and government have been concerned about declining subsidies and attempts to reduce

involvement in market-oriented agriculture in the peripheral areas and a concentration of production in the more accessible areas, they would effectively favour the large-scale producers. Right-of-centre economists counter by arguing that this concentration would help raise efficiency in national food production and reduce resource costs sufficiently to hold down food price increases to acceptable levels if consumer subsidies were reduced. Others question whether food self-sufficiency can be maintained in years of poor rainfall without the marketed contribution of peripheral provinces.

Although changing rural-urban terms of trade is widely supported for its impact upon production and reducing the potentially hostile urban unemployed, opinions differ on the speed with which this change can be achieved. Those on the left are concerned about the impact of such a policy upon the urban poor, and fear that support for the primarily urban-based party could be seriously jeopardised. By contrast, those on the right take a longer-term view, believing that political support can be maintained only if economic conditions are improved. To accomplish this requires a critical review of government spending, including a reduction of subsidies to ensure that the most economically productive results are achieved from these funds. Even among this group, however, the realpolitiks of staying in power, even in a one-party state, must temper enthusiasm for reducing subsidies.

Policy Measures

The debate over the policy goals for Zambian agriculture has led to a range of solutions. Documents have been produced from within the Ministry of Agriculture, the National Commission for Development Planning, and the party, proposing a variety of actions but these have not been coordinated into a coherent set of measures nor for the most part acted upon. Often the major actions seem to be last ditch responses to growing political, economic, or donor pressures—a crisis management approach to Zambia's difficulties.

Nonetheless, during three major periods these measures had certain elements in common. From the late 1970s to the early 1980s changes within the established system and policy framework for agriculture were sought. From the latter part of 1982 until the break with the IMF in 1987, reforms involved major changes in the framework for agriculture rather than

reform policy has been developed which represents, in general move back towards the acceptance of the old system with o limited reforms.

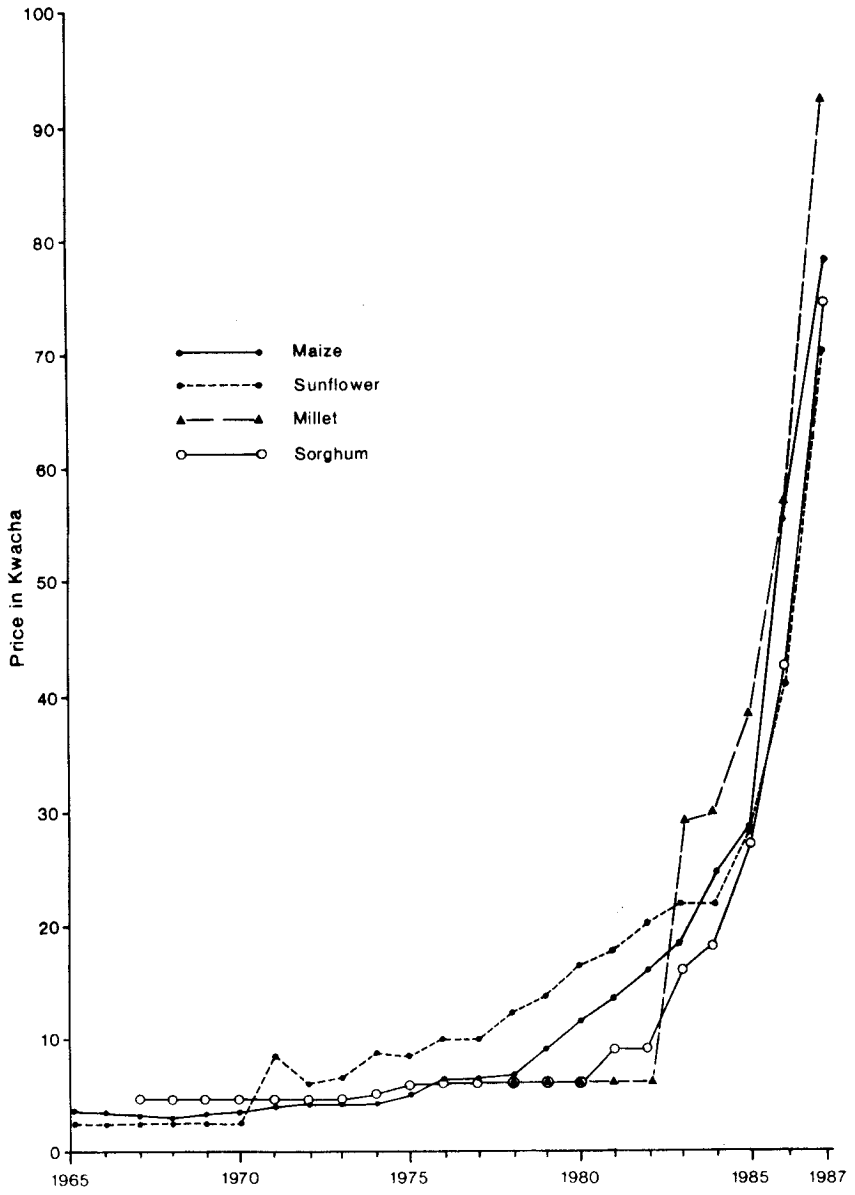
Internal Reforms—Late 1970s to Early 1980s

The initial response to the major shortfall in ma production in 1979 came from economists in the Ministries Agriculture and Finance and the Bank of Zambia. Together th saw improved incentives to producers as the best way of solvi the problem. Consequently, a major change in crop pricing a agricultural tax policies began in 1979 in an attempt to rapi increase production. Producer prices increased considerably real terms in 1979 and in most years since then have risen fas than inflation and the rate of increase in production co (Fig. 2.4). In 1980, income tax on farm incomes was drastica reduced, from a progressive rate which reached 75 percent incomes over K15,000 to a separate flat rate of 20 percent whi was reduced in the following year to 15 percent. As a furth incentive to increased production, foreign exchange payme were also introduced for the larger producers of maize, so beans, and wheat if they were non-Zambians.

These measures were primarily addressed to the establish medium- and large-scale commercial farmers, with so measures specifically benefiting the very large-scale produce and others, such as price changes, also assisting small-sc producers. The logic behind these changes was that the quick way of obtaining increased production was to create incentiv for those farmers who already had the resources and skills increase their marketed surpluses rapidly without relyi heavily upon state services.

This initial response from the predominantly right of cen economists within the government bureaucracy did not unchallenged by the more ideologically and socially sensiti group within the party and government. Partly out of a fear th the improved incentives would only encourage production large-scale commercial farmers and established emerge producers, and partly in order to outline an ideologically sou solution to the shortfall in production, the socialist members the party and government drew up a series of proposals. The were outlined in 1980 by the President in a speech entitl "Operation Food Production" (GRZ 1980b). While recognising t goals of food self-sufficiency, expanded agricultural exports, a increased employment in agriculture and agro-industrie

Fig. 2.4. Producer Prices of Major Crops



forms of production as the major ways to achieve these goals. The key proposal of the speech was the establishment of two 20,000 ha state farms in each of Zambia's nine provinces, with foreign donors contributing much of the capital needed for these. Other major forms of production to be expanded were Zambia National Service Farms, Rural Reconstruction Centres, and producer cooperatives, all of which had only recently received heavy criticism for their inefficiency (Dumont 1979; Quick 1978). After these, small-scale farmers were placed fifth in the order of priority of the forms of production to be expanded, with the advice that they should cooperate and regroup around government provided services. Private commercial farms were placed last in the list and noted primarily for their role in technology transfer to small-scale producers. The need for improved producer prices was recognised in the speech, but with the overriding imperative of avoiding the "disastrous consequences of arbitrary high prices of staple foods for our masses." The solution to this conflict in pricing appeared to be sought in increased producer subsidies, especially on fertiliser. Little in fact emerged from this initiative and although some trials were begun at two state farms, one was eventually handed over to parastatal companies for limited production and the other has donor assistance for rice production.

In contrast to the specifically socialist aims of Operation Food Production and the capitalist and large-scale producer bias of the improved economic incentives, a series of reforms and new measures were introduced from the late 1970s that sought to help small-scale producers contribute to solving the country's agricultural problems. While some measures were specific responses to the crisis situation in 1979, others were the result of policy formulation discussions dating back to the mid 1970s, which in some cases originated in the failures of policies begun in the 1960s. Many of these measures were introduced by technical departments with donor support and were not the result of major policy decisions.

The reorganisation of crop marketing and input supply and the alteration of crop purchasing policies were specific responses to the post 1979 situation. The reorganisation of crop marketing occurred in 1981 in response to mounting charges of inefficiency against the monolithic parastatal NAMBOARD and to increasing concern over good marketing and input supply services to stimulate market production by small-scale producers (IRDP/SMC 1983). The reform took the task of running rural depots away from NAMBOARD and handed this over to

provincial cooperative marketing unions, leaving NAMBOARD responsible for interprovincial and international crop and input flows.[6] This reduction in the size of the marketing organisations, combined with decentralisation and cooperative society formation, was seen as a possible way of making agricultural input supply and marketing more efficient and responsive to local needs. In the long run it was also envisaged that primary cooperative societies would take over the running of rural depots, leading to reduced servicing costs, thus allowing subsidies to be cut. It was also proposed that other agricultural support services would be channeled through unions and their societies, improving the coordination of farmer services.

The major shortfall in food production in 1979 also stimulated a review of the emphasis upon maize as the major marketed starch staple. The neglect of millet and sorghum since the mid-1960s had led their official marketed prices to fall way below those on the limited open market and so discourage surplus production of these crops. In 1982 there was a major revision in the price of these traditional staples and the introduction, for the first time ever, of an official price for cassava (Fig. 2.4). These developments appear to have heralded a major change in government crop purchasing policy away from maize as the almost exclusive staple for official purchase and urban consumption. While this policy change probably stemmed initially from the desire to achieve maize self-sufficiency as rapidly as possible by substituting other crops for maize in certain uses, such as beer brewing and stock feed, the policy may reflect other aspects of the goals outlined above. In particular, it was hoped that the replacement of hybrid maize by improved varieties of sorghum or cassava in areas where maize is unsuited could help reduce annual fluctuations in the size of the marketed surplus and so improve food security for the nation as a whole and the population of these areas. Also, by introducing attractive official prices for these three crops, the government hoped to create a relatively secure market to encourage farmers to produce surpluses of these crops for sale and so progress to semicommercial levels of production.

Other reforms directed towards small-scale producers include the Lima programme, with its attempts to provide inputs, seeds, and advice in packages suitable for these farmers, and the Adaptive Research Planning Team, which seeks to understand the entire farming systems of small-scale producers and undertake on-farm trials to give more appropriate technical advice. Crop breeding has also developed greater sensitivity to small-scale producers, breeding maize for low-input conditions and seeking to improve varieties of traditional starch staples such as sorghum, millet, and cassava (GRZ 1983e). A number of these initiatives directed towards the small-scale producers were taken up by Western donors in the late 1970s and 1980s with support for nationwide research and services, or more often specific area focused projects.

Changing the System—Early 1980s to 1987

From the early 1980s there has been discussion of the need for more radical reforms of Zambian agriculture by changing the major characteristics of the political economy of farming. The increasing discussion of such changes has been closely associated with the growth of donor interest in Zambian agriculture, which has become particularly influential as aid funds have grown in relation to government funding, especially following the increased involvement of the IMF in the country's economic affairs (Smith and Wood 1986). Donors have been struck by a number of characteristics of the Zambian food and agricultural system and with predominantly monetarist, free-market perspectives they have been more critical than most Zambian officials raising these issues:

- the role of the government in managing and servicing agriculture, especially fixing producer prices and taking responsibilities for marketing;
- the potential for increased private sector involvement in the provision of services, especially marketing, to increase efficiency and reduce costs;
- the equity pricing policy and its implications, especially in inhibiting the development of locationally favoured producers near to markets and the line of rail;
- the cost of agricultural subsidies in terms of the alternative investments foregone, the impact upon transport and storage needs (when farmers sell some of their subsistence crop and purchase milled grain to benefit from the consumer subsidies), and the impact upon urban residence (where subsidies encourage rural-urban migration);
- the need to reduce the total resource cost of agriculture (which is hidden by subsidies) in order to make Zambia more

6 NAMBOARD also underwent some streamlining in the late 1970s when its responsibility for cotton and vegetables were removed and handed over to newly established organisations, LINTCO and ZAMHORT (see chapter 21).

competitive in some crops in the international market, and to hold down consumer price rises as subsidies are reduced;

- the adjustment of exchange rates to make agricultural exports more competitive;
- the potential role for foreign investment in agricultural development; and
- the development of cost-recovery systems for some government services to agriculture.

These areas of debate closely reflect many of the issues raised by the World Bank in its 1981 analysis of sub-Saharan Africa (World Bank 1981b) and show the considerable influence that this thinking has had among the donor community.

While donor influence has kept these issues on the agenda of policy dialogue, economically minded officials with right-of-centre views within Zambian institutions have recognised some of these issues as well. Additionally, while on the one hand major changes in the nature of the system for agriculture have been discussed, donors and Zambian officials have also attempted reforms within the existing system.

The first indication of a move towards more liberal economic principles came in 1980 when price control was removed from nonbasic consumer goods to reduce the losses of the parastatal manufacturing companies and to get commodities back into rural stores in the hope of encouraging farmers to produce surpluses for sale. These ideas were applied directly to agriculture from 1982 as part of the government's approach to the IMF. The measures sought to reduce agricultural marketing costs and increase their efficiency. In December 1982 the government recinded its control over the producer price of all crops except wheat and maize but offered a floor price for crops for which it had formerly set the price. The monopoly powers of the parastatal marketing agencies were also removed, and they became nominally "buyers of last resort." With their legal monopoly removed, other marketing arrangements could now be established. This competition from private traders was seen as critical in encouraging greater efficiency among the parastatal and cooperative marketing agencies and as offering an alternative system of crop marketing for farmers.

A similar move to introduce competition in the supply of fertilizer was sought through the reduction of subsidies over the period from 1984 to 1987 and the development of regional pricing for these inputs to reflect transport costs. Combined with the liberalisation of marketing it was hoped that this would provide a complementary enterprise for private traders, with crop collection providing a return load for fertiliser delivery lorries so leading to more efficient use of transport.

Liberalising maize marketing has been difficult because of heavy subsidies on its collection, processing, and marketing, and because it accounts for 70 percent of the country's marketed agricultural produce. Equity pricing was increasingly recognised to be expensive because of the subsidies required for collection from remote depots and because it encouraged maize to be grown in ecologically unsuitable areas. Subsidies upon collection also reduced the need for the marketing organisations to be efficient, while subsidies on processing discouraged on-farm storage, local trade, and village level processing. Donors especially have suggested major gains to be achieved from reforms in marketing that would not only lead to a more competitive situation but would also encourage village level storage, trade, and processing and the adjustment of crop choice to reflect comparative advantage. Such reforms could thus greatly reduce the overall costs of the nation's food production system. However, the precondition for such gains is seen by many to be the difficult reduction of subsidies.

An early suggestion for reform was the introduction of regional pricing within a controlled marketing system, with prices set to encourage regional self-sufficiency and so reduce the major inefficiencies caused by long haulage between surplus and deficit provinces. As further liberalisation came to be favoured by the donors, the Zambian authorities were forced to consider developing a free market system with private traders encouraged to operate in competition with the established government agencies.

The results of measures to liberalise marketing have been negligible as private traders have been unwilling to enter into maize marketing given the low commission on crop handling, delays in receiving payment, and problems of obtaining guarantees from the government concerning reimbursement of the subsidy that covers the differential between producer prices far above the sale price to the millers. Various solutions have been suggested to overcome these difficulties, including the issuing of maize quotas to traders and the concentration of the subsidy on maize at the milling stage with no subsidies on collection (Kydd 1986, 265). As yet the potential gains to the nation from a competitive marketing system remain distant dreams.

The only attempts to hold down costs in marketing at present are government efforts to "squeeze" the parastatal marketing agencies by setting the level of funds available for restitution

(subsidies for their transport costs) at below their requirements. This has only led to increased costs as the marketing organisations have had to borrow until revised restitution has been agreed, and imports have to replace locally produced crops that are not collected (Kydd 1986, 257).

The crucial problem with the maize subsidy is the political power of the urban population, who have become used to cheap, subsidised food. Attempts by the government to stimulate production by raising producer prices by more than enough to compensate for the removal of fertiliser subsidies have meant that the level of subsidy on maize has risen in recent years, reaching 131 percent of the mill price by 1985–86 (Kydd 1987, 16). IMF requirements for the government to maintain subsidy spending at the budgeted level caused a 50 percent price increase in maize meal in 1985, while a 100 percent increase was introduced in December 1986 on the higher-grade meal, the only type available at that time. The latter move led to serious riots in the Copperbelt and Lusaka and forced the government to recind the price increase, a move that contributed to the break with the IMF in May 1987.

These problems with liberalising the maize marketing system have meant that farmers growing maize in the more remote locations continue to be protected, and indeed in recent years these producers, especially in Northern Province, have been expanding production more rapidly than those close to the line of rail. Urban consumers have also been protected, although with the devaluation of the Kwacha forced upon Zambia by the IMF, urban costs of living have soared.

While clearly major problems with market liberalisation remain, some benefits of the changes to date can be seen, although the precise causal processes are unclear. Maize self-sufficiency was regained in 1986, partly due to favourable weather and partly to increased production, especially by small-scale farmers who accounted for around 60 percent of marketed production in that year. Devaluation and removal of fertiliser subsidies are also reported to have affected farming practices, encouraging farmers at all scales to move away from import-dependent technology towards more appropriate forms, i.e., changing from fertilisers and tractors to manure and oxen draught power. Agricultural exports also expanded dramatically, exports by Zambia Horticultural Products Board growing twenty-seven fold in the year 1984–85 to 1985–86. With slow lead times this is seen by some as an indication of the considerable potential for agricultural exports. Foreign investment in agriculture is reported to be growing although to date the actual inflow of funds has resulted (in the Gwembe Valley) has been subject to much criticism (see chapters 6 and 25).

Post-IMF Period—May 1987

The liberalisation phase came to a halt in May 1987 when Zambia broke with the IMF and decided to try to develop its own economic reform programme. This was formulated in the New Economic Recovery Programme (NERP), which provides the most recent indication of new directions in the country's agricultural policy and suggests how some of the problems outlined above may now be addressed. By reducing interest payments on its overseas debt, the government has attempted to give itself more room to manoeuvre in the process of adjustment. However, rather than using the greater financial freedom to finance and facilitate major changes in the agricultural and food production system, the extra funds now available have been earmarked for increased subsidies, presumably to protect the government from further urban unrest. Subsidies are projected to almost double from 1986 to 1987 and by 1988 they are expected to account for 31 percent of government revenue, being equivalent to 87 percent of the proposed current account deficit (GRZ 1987b, 10).

The programme recognises the need for greater dynamism in the agricultural sector, stressing particularly the need for food self-sufficiency, increased agricultural exports, import substitution of agricultural products and inputs, and the expansion of rural employment among emergent farmers. The means to achieve these goals are still being debated, and the policy statement typically includes a wide range of measures with some potentially conflicting approaches. The programme does not completely break with the reform process as it includes three major emphases that reflect the discussions in the early 1980s:

- the use of appropriate technology packages for small-scale producers, such as oxen draught power, in order to reduce dependence upon imports;
- the recognition of regional comparative advantage to encourage regional self-sufficiency and to reduce resource costs in food production; and
- the overall reduction of resource costs in agricultural production to make export crops more competitive.

The other goals include the usual platitudes of improving credit provision, encouraging the development of market-

oriented agriculture by subsistence producers, and the expansion of export crops by large-scale commercial farmers.

The means to achieve these goals and the precise measures the government will introduce to support these objectives are unclear but the greatly increased subsidy figures indicate that the state will continue to be involved in marketing and to use subsidies to protect consumption. This marks a return to former policies and as such will slow any adjustments for marketing along the lines discussed above by protecting the peripheral producers and encouraging further development of a food production system seen by many as inefficient. How long this return to a heavily subsidised agricultural system can be sustained is debatable. If foreign interest payments were resumed in 1988 at their 1986 level and subsidies were at the level proposed in NERP for that year, only 4.8 percent of the expected government revenue would remain to fund all other government commitments.

Conclusions

Zambia faces the challenge of agrarianisation, of reorienting its economy for the first time towards agricultural production and agricultural exports (Kydd 1987). Copper will produce a declining proportion of foreign exchange over the coming years, and by 2010 there will be little earned from this source. The urban economy will contract and the rural economy must expand to provide both production and employment for the country.

This transformation of the economy will not be easy given the ingrained attitudes favouring urban residence and employment, attitudes reinforced by government policies, notably food subsidies. There is a growing awareness of the sorts of changes needed to achieve agrarianisation, some of which have been explored over the last decade, helping identify the major constraints in implementing the various policy reforms. Most important among these is the political power of the urban population, which requires food subsidies to be maintained and so diverts scarce resources to consumption and away from investment which could assist agrarianisation. Technical solutions have been developed to overcome a number of the traditional problems facing small-scale producers, and many ways of raising efficiency in resource use have been identified that would help Zambia achieve self-sufficiency at minimum cost and gain international competitiveness in some crops. Progress in these areas could be more rapid if greater resources were available.

Adjustment is also not going to be easy in the rural areas if a more efficient food production system is sought. This will inevitably raise the recurring question of what crops farmers in remote locations can produce profitably if they have to bear some or all of the costs of marketing their produce. Low-bulk, high-value crops must be sought. So far only coffee and cashew nuts might fulfill this role, but they are not suited to all the peripheral regions and require skills and long-term investment that may further restrict their utility. To some extent any adjustment process that tries to reduce the inefficiencies of the Zambian food production system and reduce the need for subsidies will inevitably involve some attrition of market-oriented production in the areas remote from the markets.

A further problem in the agrarianisation process, related to the focusing of marketed production in the more accessible areas, is the pressure upon land that will occur in these areas. The population pressure that for a number of years has been a problem in some of the established small-scale farming areas in Southern and Eastern provinces has grown in recent years, and soil erosion has been a major problem, probably contributing to the increased impact of recent droughts in Southern Province. With the urban economy declining, urban-rural migration growing, and the rural areas having to absorb all of their own population increase (now above 4 percent per annum) pressure upon land will intensify in areas where market-oriented farming is possible, leading to serious land degradation problems where the size of holdings declines and the use of land intensifies without any conservation measures. The situation may well worsen where only traditional tenures exist and insecurity of access to land develops as chiefs, who allocate such land, come under growing pressures to distribute land to returning urban residents and new rural households.

Another doubt concerns the potential of the agrarianisation strategy to produce the level of foreign exchange earnings sought to replace those from copper. Situated in the centre of the African continent Zambia faces major transport costs to get its produce onto the world market. With few agro-ecological advantages over its major competitors in the region it seems unlikely that Zambia's agricultural exports will be significantly cheaper than those of countries such as Zimbabwe and Malawi, who already have the benefit of well-established international marketing links.

The prospects for Zambian agriculture in the foreseeable future are far from bright. Major political and economical difficulties are faced in trying to develop a coherent package of policies that will provide the conditions to encourage dynamism in this sector of the economy. Even if appropriate policy measures are introduced, major structural problems will be faced as a result of the demographic and locational characteristics of the country. Food self-sufficiency can be achieved and the resource costs of production can be reduced, but the prospects for major agricultural exports seem limited. The consequences of reducing subsidies upon crop collection in order to reduce the costs of food production seem likely to mean an attrition in market-oriented agriculture in the peripheral areas, while the intensification of competition for land and agricultural resources within the areas where commercial farming is economically attractive will only lead to increased differentiation and assist the already established commercial producers to further entrench their position.

TWO

Natural Resource Management

Zambia, with its relatively low rural population density (seven persons per square kilometre) and a moist savanna climate over much of the country, might be thought to have few natural resource management problems. This, however, is not the case and over this century natural resource problems have increased as farming systems have changed and as local areas of population pressure have developed. Problems include soil erosion and the decline in soil productivity, while damage to the soil structure