

FOOD SECURITY FOR SOUTHERN AFRICA



Edited by
Mandivamba Rukuni and Carl K. Eicher

University of Zimbabwe UZ/MSU Food Security Project

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CHAPTER SIX

THE ELUSIVE PEASANT : ZIMBABWE AGRICULTURE POLICY, 1965-1986

Malcolm J. Blackie

THE CONTEXT

The prospect of attempting to analyse agricultural policy in Zimbabwe over the years 1965 to 1986 is daunting. The period includes some of the most dramatic political and natural shocks absorbed by the Zimbabwe economy this century. The year 1965 marks the illegal assumption of independence (UDI) by the previous Rhodesia government. UDI preceeded the most intense phase of the liberation war; a war which was largely fought over, and in, the farming areas of Zimbabwe. Between 1965 and 1980, the economy had to withstand the economic sanctions imposed against the Smith government, and the inflationary shocks of the massive oil price rises in the 1970s. Agriculture was severely hit by these combined blows with whole farm gross margins declining by 22 percent in real terms between 1973 and 1979 (Chavunduka, 1982). In 1980 came legal independence and a total reversal of government political ideology. A series of droughts, including an almost unprecedented three year drought from 1982-83 to 1984-85, put further pressure on the agricultural sector.

Real GDP growth over the period 1965 to 1986 was somewhat less than 2 percent. Growth in total agricultural output was around 4 percent during the UDI period and little less than this since independence. In per capita terms, total agricultural production has remained virtually static over the twenty-one year period. In a typical year, nearly half of Zimbabwe's agricultural production is exported, with agricultural exports consistently accounting for around 40 percent of total exports. The aggregate picture is thus one of per capita stability, rather than growth

in the agricultural sector. This is remarkable given the very difficult period through which the farming industries have passed.

The significance in policy terms is that this picture contrasts markedly with the evidence from the SADCC region and sub-Saharan Africa generally. Data from SADCC show a decline of around 2 percent annually in per capita agricultural production over the past 20 years. A similar picture emerges from aggregate sub-Saharan Africa figures. Thus, despite major political upheaval, drastically reduced terms of trade, and drought, the Zimbabwe agricultural sector has performed significantly better than the average over the past two decades. However, given that agriculture is the lead sector of the Zimbabwe economy, its performance has been insufficient to generate the level of growth necessary for a developing country facing a high population growth rate. The following review, therefore, is intended to enable a better understanding of the peculiar strengths and weaknesses of the Zimbabwe agricultural economy. From this disaggregated perspective, policy options to relieve critical areas of constraint can then be discussed.

LAND DISTRIBUTION AND ACCESS

Land distribution and access has dominated national policy since the first European settlement at the end of the last century. The reader interested in details of, and the debate over, land in Zimbabwe has an ample source of materials to choose from (see, for example, Hazlewood, (1985); Palmer (1977); Mupawose (1980); or Riddell (1979). The foundation for racial access to land was laid by the 1930 Land Apportionment Act and was strengthened by the Land Tenure Act of 1969. The subsequent repeal of the land Tenure Act in 1979 and black majority rule in 1980 has still left agricultural land use predominantly racially segregated.

Given the prominence of land issues in the politics of

pre-Independence Zimbabwe and the clearly discriminatory manner in which land quality had been allocated between the two major racial groups in Rhodesia (see Chavunduka, 1982), the slow implementation of a more equitable land policy seems surprising. Pre-independence statements from senior figures in the current Zimbabwe government indicated a policy of radical land reform including land nationalization, collectivisation and communal village production units (Riddell, 1979). The reality has been different; the immediate post independence land reform plans envisaged the resettlement of 162 000 smallholder families on 9 million hectares of land transferred from the large-scale sub-sector over a three year period. By 1986, some 36 000 families had been resettled on 2 million hectares with plans to increase this to a total of 80 000 families on 4.6 million hectares by 1990 (Anon, 1986).

The reason for this remarkable gap between intentions and implementation of land redistribution lies in the direct relationship between agricultural expansion and the growth rate of the Zimbabwe economy. Table 1 illustrates this relationship since independence. Although agriculture's share of GDP is no more than 15 percent of GDP, as opposed to industry's 25 percent, the close linkages between agriculture and industry result in the dominance of the agriculture sector in determining the health or otherwise of the Zimbabwe economy. There are four key elements to agriculture's strategic importance (Hawkins, 1986):

- (1) As an exporter providing 40 percent of total exports annually.
- (2) As the largest employer of labour with a quarter of the total workforce being directly employed in agricultural production.
- (3) As the manufacturing sector's main supplier of raw material inputs.
- (4) As the largest purchaser of industrial consumer goods and input items.

Table 1: Zimbabwe: Growth Rates of Agriculture Output and GDP

Year	Agricultural Output	GDP
1980	3.1	11.3
1981	8.3	13.0
1982	1.0	0.0
1983	- 6.4	- 3.4
1984	12.8	1.0
1985 (Estimate)	25.0	6.0

Source: CFU

Many of the pre-independence promoters of radical reform chose to ignore the interaction between agriculture and the economy. Their analyses typically assume that the role of the agricultural sector would become primarily one of providing national requirements of traditional foodstuffs.

While the formal resettlement program is running behind schedule, this should not be interpreted as suggesting that land redistribution is diminishing in importance as a policy issue. The slow pace of resettlement is a direct result of the appreciation by the Zimbabwe government of the extremely tight constraints within which the resettlement programme must operate. Zimbabwe's basic policy document remains Growth with Equity and it:

".... is based on a strong belief that growth and equity are complementary tools needed for achieving real economic development... For meaningful growth to happen, there is a need for equitable distribution of the major factors of production and that to have equity, there should be significant growth" (Mahachi, 1986).

The production implications of land redistribution are the subject of inconclusive debate. For a review of the options see Chavunduka (1982); Kinsey (1983) and Munslow (1985). One common theme emerges; under conventional dryland smallholder practices, even with improved productivity, the arithmetic does not hold. Either resettlement needs to be slowed to allow time for the resettled farmers to achieve adequate productivity levels,

or else highly optimistic and improbable assumptions need to be made regarding potential productivity of the resettled communities. This theme echoes the analysis done by Hume (1978). Hume initially considered two principal types of land reform; one in which equity in landholding was the sole consideration and the other, a 'selective' approach, in which consideration was given to other objectives and factors (specified target groups, total production impact, ecological factors, regional differences etc.). He then considered variations on both these approaches to obtain a reasonable representation of the range of practical land reform packages. Hume acknowledged the simplistic nature of his model. However, the results showed clearly that it was most possible to meet equity and productive objectives of land reform with a package that retained a core of intensive large-scale farming. The outcome from this strategy is one in which productivity gains were achievable both immediately and in the long term. Such gains could be achieved over a range of situations in which 5 to 8 million hectares were transferred from large-scale commercial farming to resettlement. However, he pointed out that this process required some 200,000 hectares to be settled under some form of intensive settlement such as irrigated agriculture.

AGRICULTURAL CHANGE 1965-86

The period 1965 to 1986 saw a steady widening productivity gap between smallholder farmers in the communal farming areas and the large-scale commercial farmers. While some of this productivity difference may be attributed to land quality factors, the overall picture is more complex. The period following World War II was a watershed in Zimbabwe's agricultural history (Blackie, 1982). During this post-war period, the effects of racially segregated land ownership patterns became an overwhelming factor in agricultural development, with the peasant sector becoming progressively more disadvantaged. The productivity of this last sector

was rapidly overtaken by settler farmers who came into Zimbabwe in large numbers during the early 1950's. The agricultural production mix also changed substantially, with the emphasis of production shifting from livestock to tobacco. By 1960, tobacco accounted for 76 percent of marketed agricultural output.

By 1965, many of the institutions that currently form the framework of the Zimbabwe agricultural sector were in place. To understand the implications of this framework, it is necessary to comprehend the close relationship between the Rhodesian government and the large-scale commercial farmers. The government and civil service were dominated by agricultural personalities. Political power was held by the commercial farming community in both the effective settler political parties - the United Federal Party and the Dominion Party. As importantly, two major farmers' organisations had emerged; these remain in existence and are currently named the Zimbabwe Tobacco Association (ZTA) representing the tobacco farmers, and the Commercial Farmers' Union (CFU), representing the large-scale commercial farmers generally. Both organisations were modelled on the powerful farm lobbies of Britain and the United States and included a strong central professional staff to provide both policy and technical support to members. The financing of the Unions was from statutory levies on all commodities sold through the parastatal marketing boards or the tobacco auction floors. Thus state involvement in the marketing of major commodities and the financing of the large-scale farmers' unions were directly linked.

The test of the resilience of this government/commercial farmer cartel came at UDI in 1965. Table 2 shows the remarkable transformation that took place within the large-scale commercial sector in the period 1965 to 1980. In anticipation of sanctions, tobacco farmers had been encouraged to move into other crops even before 1965. In

value terms, tobacco output fell from 52 percent of total agricultural output in 1965 to 20 percent by 1980. Tobacco had been replaced by crops such as cotton, wheat, soyabeans and coffee; commodities either virtually unknown to commercial farmers or which were not grown at all. By any standards, this change was remarkable. It was the direct result of active and positive cooperation between the government and the commercial farming sector.

The national agricultural policy objectives that were set during that period remain intact in 1986. In essence, these objectives required the country to be self-sufficient in all significant food commodities, including products which could be regarded as luxuries, such as coffee, tea and wine. Agricultural exports remain important foreign exchange earners, with the emphasis on high value, low bulk products. The achievement of these policy objectives was the result of the well-targeted provision of marketing, research and financial services from government to the commercial farmers, based on frequent and effective dialogue between the two groups.

Table 2: Zimbabwe: Composition of Marketed Agricultural Output, by Value

Product	1965		1980	
	Value (Z\$m)	%	Value (Z\$m)	%
Tobacco 1/	67.6	52.6	97.4	19.8
Cattle 2/	19.5	15.2	85.7	17.4
Sugar	13.9	10.9	73.9	15.4
Maize	13.5	10.5	71.8	14.6
Milk	5.3	4.1	27.2	5.5
Pigs	2.9	2.3	7.0	1.4
Groundnuts	1.2	0.9	4.6	0.9
Cotton	2.6	2.0	71.4	14.5
Wheat	0.3	0.2	22.2	4.5
Soyabeans	-	-	14.9	3.0
Coffee	-	-	11.9	2.4
Other	1.7	1.3	4.8	1.0
TOTALS	128.5	100.0	492.8	100.0

1/ Flue-cured

2/ Slaughterings

Source: Central Statistical Office

Two fundamental changes have taken place since 1980. The first is that it is now government policy to work with all the farmers of Zimbabwe, with particular emphasis on redressing the imbalance in access to public services and infrastructure on the part of communal farmers.

The second is the corollary of the first; the issue with respect to communal production is not one of diversification from a largely monoculture production system but of encouraging a quantum leap in productivity of smallholder mixed farming systems. The basis for diversification has already been laid during the UDI period. Cotton producers have shown, Zimbabwe smallholders have the capacity to capitalize rapidly on appropriate new technologies (Blackie, forthcoming). Yet the most effective means of intervening in the small-scale sub-sector remains elusive. Hyden (1986) has clearly documented the high degree of autonomy that African smallholders enjoy from other groups and institutions in society. His analysis shows that:

"... African governments are structurally less well-placed to influence agricultural development than governments in Asia or Latin America. Access to the peasant producer is limited and often must be accepted on the latter's terms. The notion that agricultural productivity can be markedly enhanced by 'fine-tuning' the organisational instruments of government... is a costly illusion in most parts of Africa today (Hyden, 1986, p56)."

Hyden advocates what he terms the 'greenhouse approach' to the transformation of African smallholder production. The basis of such an approach is to focus on factors that encourage the growth of local institutions and mechanisms. The objective is to accelerate progress on the basis of what the community already offers.

AGRICULTURAL CHANGE: 1987-?

Thus it appears that for the immediate future, agricultural policy in Zimbabwe must be dominated by the issue of

productivity with particular emphasis on smallhold farming systems. As the preceding section has shown, although previous policy has given the country a well diversified and stable agricultural sector, this picture must be balanced by an appreciation of remaining inequities with respect to access to factors of production and of the inadequate growth in overall agricultural productivity. The bulk of poverty in Zimbabwe, in common with most developed and developing countries, lies in the rural areas with a two to threefold difference between per capita urban and rural incomes (Schuh, 1986). Schuh comments that:

"... The challenge to policy-makers in the decade ahead will be great. The labour adjustment problems as we look to the next decades will be enormous in most countries, with the severity of the problem directly associated with the success in the agricultural research programmes unless international trade should take up the slack (my emphasis). The challenge will be to deal with this problem in such a way that labour does not have to bear all the adjustment costs and so that negative externalities are not imposed on rural areas. This will require incentives for the decentralisation of the industrialisation process into areas where labour is abundant, and training, education and relocation programmes to promote labour mobility" (Schuh, 1986).

Thus the two critical areas of future agricultural policy are those of agricultural research and agricultural trade. Schuh finds common ground with Hyden (1986) in that the policy issue facing Africa governments is as much an urban as a rural problem. Zimbabwe is no exception to this general case. There is no simple and obvious solution to the conundrum of simultaneously increasing agricultural productivity and painlessly generating the requisite industrial employment to absorb displaced farm workers.

Agricultural Research and Yield Increasing
Technology in Europe and Asia

While the outlook is gloomy, the current situation is not without precedent. A review of the agricultural history of North America and Europe in the late 19th century, and of Asia in the mid 20th century, suggests that today's policy problems in African agriculture are neither unique nor insoluble. From 1825 to 1910, the output of the American economy grew at an average rate of 1.6 percent per capita, giving the United States the fastest economic growth rate in the world. Fundamental to this growth was the rapid increase in agricultural output. The contribution of low cost agricultural production from virgin lands, particularly in the prairies, together with dramatic improvements in transport, enabled the United States to raise the volume of, and create new markets for, agricultural products. This was not without its effect on the European agricultural economies. In Britain, for example, the impact of cheap American wheat on the incomes of English landowners resulted in the imposition of import duties on wheat under the 1815 Corn Laws. A series of disastrous harvests in Britain, and consequent severe shortages of food staples, led to the Corn laws repeal in 1846. To the politicians' surprise, the coming of free trade to the British agricultural economy brought an era of high prosperity. The growing size of the urban consumer market was reflected in rising demand for meat, butter and cheese, rather than cereals. The successful British farmers were those that met this demand by increasing their output of livestock products within a mixed farming system. British agriculture entered the era of capital intensive high farming, based on intensively fed livestock and the use of purchased inputs such as fertilizer. The groundwork for many of today's familiar agricultural technologies - high yielding varieties, fertilizers, improved livestock systems - was laid as the result of the flood of low cost food staples from America and Russia into Europe. Three

critical factors were involved - crisis (the famines preceding the 1846 Corn Laws Repeal), rising real urban incomes (as the result of a significant decline in staple food prices following 1846), and the effective use of science to generate improved agricultural technologies to meet the growing (and changing) urban market for agricultural commodities. These factors combined to induce the quantum leap in agricultural productivity that differentiates the Western farming systems of the mid 20th century from those of a hundred years earlier.

A similar congress of crisis, urbanisation and agricultural science is perceived in the Asian Green Revolution of the 1960s. In the early 1960s, widespread and continuing famine in the absence of perpetual food aid appeared to be becoming the norm. Borlaug (1985,1986) has documented the dramatic turn around in this situation over the past two decades. The debate on the ethics of "triage" - the controversial concept of regarding the agricultural problems of some regions as insoluble - has faded into obscurity in Asia as the rapid adoption of high-yielding varieties has generated a major jump in agricultural productivity. India, for example, which imported 10 million tons of wheat in 1966 now has a current grain stock exceeding 30 million tons, including stocks held both for food security and public distribution (Swaminathan, 1986). More productive Asian farming systems have led to the development of new rural industries and employment. Again, as in Europe, lower real food prices have both stimulated aggregate demand and enabled the diversification of agricultural production into a wider range of commodities. The basis of agricultural policy in Asia, as in Europe, is one of merely maintaining national food supplies in the face of growing populations. Rather, agricultural policy involves substantially increased agricultural productivity as the leading edge of the development process. One common feature emerges from analysis of the European and Asian agricultural revolutions. Cheap food, based on low cost,

high productivity agriculture, has been the driving force behind rural transformation. This change has not been costless; in particular, the technologies that fuelled the European and Asian agricultural revolutions displaced some categories of rural worker and altered the economic and social status quo in the countryside. They have also increased the dependence of agricultural producers on purchased inputs. These effects are inherent in the process of change itself and the available evidence suggests that they are neither as detrimental, or as widespread, as some development theorists suggest (Borlaug, 1986, Swaminathan, 1986).

Agricultural Research in Zimbabwe

Returning to Zimbabwe, therefore, the preceding historical analyses affirm the need to push food prices down; not through direct food subsidies but by agricultural productivity gains generated by a combination of improved technology and policy incentives. A strong and well funded national agricultural research system is, therefore, a fundamental component of agricultural policy. It is worrying to see Zimbabwe starting to follow the African trend of declining real budgets for agricultural research systems, and rising proportions of research budgets committed to salaries as opposed to other expenses (Chigaru, 1986). Chigaru also points out that in Africa, national research systems absorb a higher proportion of agricultural output than those in Asia. While most have larger staffs and infrastructure than 20 years ago, their effectiveness has declined.

Doubtless there are less favourable opportunities for African agricultural researchers to replicate the yield gains of Asia and European agricultural revolutions. This, as Binswanger (1986) observes, is related to the types of technology likely to be attractive to farmers under land abundance, as in much of sub-Saharan Africa, compared with

the situation in the land scarce environments of Europe and Asia. Further evidence in this regard can be found in the different uptake of yield improving technology between land scarce Japan and Europe and land abundant North America in the first quarter of this century (Binswanger and Ruttan, 1978). In Zimbabwe, appreciable areas of the country have already experienced the closure of the land frontier and the data suggest that, by the end of this century, regardless of land redistribution, Zimbabwe farmers will be operating in a land-scarce environment (Chavunduka, 1982; Hume, 1978). It is essential that the research groundwork be commenced today to meet anticipated farmers' demand for yield increasing technology over the next two decades. In this regard, it is pertinent to observe that the diversification into cotton from tobacco after UDI in Zimbabwe was made possible by an investment in cotton research dating back to the 1920s but whose payoff only came in the 1960s (Blackie, forthcoming).

Agricultural Input Supplies for High Yielding Agricultural Technologies

The scenario developed so far suggests that agricultural policy in Zimbabwe will continue to be based on the assumption that agriculture is the lead sector of the economy. To support this policy, substantial investment will need to be made in yield-improving technologies to drive food prices down and to increase the spending power of the consumer. From this spending will arise greater rural and urban employment and a more diverse economy. History and logic tells us that the yield improving technology will be input intensive and that important inputs such as fuel and fertilizer will need to be imported. Thus the allocation of foreign currency to the agricultural sector will be critical in determining the success or otherwise of agricultural policy in Zimbabwe.

Fertilizers: Opinion within the agricultural industry varies considerably on the volume of fertilizer requirements towards the year 2000. Some authorities suggest that the only significant change that is likely to occur is for a change in the market share from large-scale to that of small-scale agriculture, largely as a consequence of increased access to credit by smallholders. Other industry estimates suggest that the large-scale commercial sector will expand at a rate of approximately 3-4 percent and the communal sector at a rate of approximately 10-15 percent per annum. This would leave the market evenly divided between large-scale and small-scale farmers at about the year 2000, with total demand in excess of 1 million tonnes. The international Fertilizer Development Centre estimates a conservative ten-year expansion path for the industry (see Table 3).

At present, foreign exchange allocations for fertilizer have been sufficient to meet national demand. On the basis of forecast demand figures for fertilizer, it is likely that adequate supplies will continue to be made available to the industry.

Machinery and Associated Imports: A rather different situation pertains in the case of machinery and associated imports. At independence, Zimbabwe inherited, as the result of continuing import restrictions during the UDI period, a heavily depreciated agricultural machinery fleet. Various estimates have been produced, some showing the average age of the Zimbabwe tractor as being as old as 14 years. A comprehensive survey undertaken for the Zimbabwe Seed Co-op in 1980 showed that the average age of tractors owned by seed maize producers was 7 years. Given that seed producers are a small group, probably in the top quartile of Zimbabwean large-scale farmers, this suggests that machinery replacement in Zimbabwe has been running well below normal levels. Since independence, the situation has worsened.

Table 3: Zimbabwe: Ten-Year Forecast Committee, Second Forecast, December, 1980
(000' million)

		N	P ₂ O ₅	K ₂ O	Total Nutrient	Remarks
1969/70,	Actual	47	28	20	95	
1970/71,	Actual	52	29	22	103	
1971/72,	Actual	67	34	25	126	
1972/73,	Actual	66	35	25	126	Drought
1973/74,	Actual	65	37	28	130	11-month year
1974/75,	Actual	73	42	32	147	(anticipation of price
1975/76,	Actual	55	32	25	112	increase) rationing of AN
1976/77,	Actual	60	35	27	122	No rationing of AN
1977/78,	Actual	61	35	26	122	
1978/79,	Actual	61	37	28	126	Drought
1979/80,	Actual	60	43	27	124	Drought
1980/81,	Estimate	90	38	23	156	Increase in corn price
1981/82,	Forecast	77	38	20	135	AN rationing
1982/83,	Forecast	78	39	21	137	1,48% forecast increase
1983/84,	Forecast	79	40	21	139	1,46% forecast increase
1984/85,	Forecast	80	41	21	141	1,43% forecast increase
1985/86,	Forecast	81	41	22	144	2,13% forecast increase
1986/87,	Forecast	82	41	22	145	0,69% forecast increase
1987/88,	Forecast	82	41	22	145	0% forecast increase
1988/89,	Forecast	82	41	22	145	0% forecast increase
1989/90.	Forecast	82	42	22	146	0.69% forecast increase

Source: International Fertilizer Development Center

Note: Product actuals and estimates for 1980-81 are supplied by Windmill of Zimbabwe. Grade D formula was to change from 8-14-10 to 8-14-7 in 1980-81. Forecasts were made by the committee using two units of measure: compound and AN. In converting forecasts, the compound used average 7-15-8, and the AN was 34.5%. Numbers were rounded off to the nearest thousandth.

Foreign currency allocations for both replacement agricultural machinery, and for spares, have been reduced dramatically since 1980, resulting in critical shortages in both new machinery and spares (Anon, 1986). Although some Z\$22 million is reported by the CFU to have been allocated for tractors and spares during 1985, levels of availability of these items are well below minimum desirable levels. Current shortages are a result of a combination of reduced foreign exchange allocations for spares (a drop of 53 percent in the period 1980-85), depreciation of the Zimbabwe dollar (a drop of 61.4 percent against the US dollar in the period 1981-85) and increased procurement costs in the country of origin (a rise of approximately 20 percent in the period 1980-85).

At present, the machinery/spares issue is perceived mainly as a large-scale farming sector problem. However, this is almost certainly a misrepresentation. Economic studies of communal land farming systems in recent years have consistently identified lack of draught power and transport as major constraints on increased production. Arable land has been expanding at the expense of grazing areas and while cattle numbers have increased, this has been at a slower rate than the number of farmers. Thus ownership of cattle has been declining. In 1981, Collinson found that, in the Chivi communal area, less than 50 percent of farmers owned cattle and he confirmed the declining trend indicated above. Even in the more favoured communal farming areas, less than about 75 percent of farmers own cattle (see Table 4). Both Ministry of Agriculture and University of Zimbabwe surveys show that cattle owners have significantly higher production levels and incomes than non-owners.

Table 4: Availability of Draft Power in Some Communal Lands

Date of Survey	Communal Land/ Province	% of Households w/o Draft Power	Sample Size Households	Source of Information
1971	Gutu	27	n/a	Loxton and Ministry of Internal Affairs
1976	Matshetshe	27	96	R. Theissen-Rural TTL Development Resources Programme
1976	Gutu	36	102	R. Theissen op. cit.
1976	Chiweshe	41	110	R. Theissen op. cit.
1976	Masvingo Province	44	n/a	Ministry of Internal Affairs
1981	Chibi South	52	96	Dept of Land Management, University of Zimbabwe
1982	Gutu	37	50	Dept of Land Management, University of Zimbabwe
1984	Wedza	77		Agritex

=====
 Source: Rukuni (1984)

While draught animals will remain a major input into smallholder farming systems in Zimbabwe, their relative importance will decline. The competition for arable land will mean that the present encroachment of cultivation into grazing areas will continue. Thus purchased draught power, at least in part in the form of tractors, will become increasingly important in the small-scale sector.

With respect to small-scale producers, the cost of transport is substantial. Table 5 presents data from three groups of smallholder maize growers in Murewa during the 1982-83 season. In all three cases, hired mechanised transport is a major cost of production. Murewa is an area with good road access to Harare; in remoter, less accessible areas, transport costs of both inputs and outputs can be expected to be even higher.

The current critically low levels of foreign exchange for agricultural mechanisation also leads to the inefficient use of allocated foreign exchange. Emergency imports of single items (often by air) to deal with breakdowns of individual tractors and machines is wasteful of foreign exchange and adds substantially to the costs of machinery operation. To guard against the unavailability of spares, farmers and transport operators carry larger stocks than they would do normally. This increases shortages at the national level while adding to inventory costs at the farm level.

With respect to fuel, lubricants and tyres, the CFU estimate that the foreign currency requirement for the agricultural sector in 1985 was about Z\$100 million and in 1986 about Z\$130 million. Current estimates are that the sector uses about 25% of the fuel, lubricants and tyres imported. There have been periodic shortages of fuel due both to logistical constraints and to late provision of foreign currency. Lubricants and tyres have been in critical shortage over the past year largely due to inadequate currency allocations. Although the situation has improved, there remains a serious backlog of orders. Foreign currency, particularly for new machinery and spares, is therefore a major constraint on both the large- and small-scale agricultural sectors. Over the past few years, much of the currency that has been allocated for spares has come via various aid, soft loan and barter deals. But instead of being in addition to previous levels allocated locally, it has become part of the total.

Table 5: Transport and Other Production Costs for Maize Growers: Murewa Communal Land 1982

	Sample		
	A	B	C
Number of households	28	53	121
Average area cropped (ha)	1.99	1.89	1.78
Labour costs/ha	31.49	186.49	23.88
Seed costs/ha	10.64	11.94	9.40
Fertilizer cost/ha	86.75	102.12	95.74
Crop Chemical costs/ha	0.46	0.67	0.29
Transport costs/ha			
Hired scotchcart	1.25	1.16	4.58
Hired lorries	24.50	28.04	27.30
Other hired transport	1.72	0.95	0.19
Total Variable Costs/ha	156.81	331.37	161.38
Total Sales/ha	478.79	542.37	568.13
Total Cash Gross			
Margin/ha	321.97	211.00	406.75

Source: de Swardt

Preceding paragraphs have shown that machinery, spares, lubricants and tyres that have borne the brunt of foreign currency restrictions. It is also apparent that improved allocation to the agricultural sector of these items would benefit directly both large- and small-scale agriculture in Zimbabwe.

Agricultural Trade

Finally, in this analysis, we turn to agricultural trade. Zimbabwe is currently self-sufficient in most food commodities and has been so for many years. The maintenance of a high degree of food self-sufficiency remains an important objective of national agricultural policy, particularly in view of the emerging economic isolation of South Africa. Yet the preceding section has shown that this self-sufficiency requires the continuing use of imported inputs by large- and small-scale farmers alike. Abernethy, Bunting and Kassam (1986) show that Zimbabwe is in that group of Africa nations that can technically meet their food needs at intermediate levels of inputs for the foreseeable future. Although Zimbabwe has

been a remarkably successful agricultural exporter, little analysis has been done on the reasons for this success. Neither the Zimbabwe Agricultural Policy Paper (Anon, 1986) or the paper by Muchena and Murphy (1985) deal in any detail with the future prospects for agricultural trade by Zimbabwe.

The reasons for this reticence to deal analytically with trade issues are twofold. Firstly, the UDI experience and the associated clandestine trading mechanisms have built up a tradition of secrecy regarding Zimbabwe's agricultural trade. Secondly, responsibility for trade issues is split amongst several public sector agencies. However, it is important that, in the future agricultural policy involves a more considered look at trade issues. This is not only because the income generated by increased trade will be needed to support the rural adjustment consequent upon Zimbabwe's forthcoming agricultural transformation but because the world trading environment is very different from that existing in the early 1960s. The nature of world trade has altered dramatically in the last quarter century. Schuh (1986) identifies the following critical changes:

- 1) The rapid growth in international trade, resulting in an international food and agricultural system,
- 2) the emergence of a large, well-integrated international capital market,
- 3) the introduction of bloc-floating exchange rates in 1973, and
- 4) the emergence of a great deal of monetary instability starting in 1968.

Schuh concludes that these changes have substantially altered the international economic order. In the 1960s, the international dimensions of agricultural policy were primarily concerned with ensuring the efficient delivery of appropriate commodities into selected markets. Floating exchange rates alone have today made the exchange rate the single most important price in the economy: Schuh (1986) comments on the implications of these changes on agricultural policy as follows:

"What we see are enormous changes in the economic environment in which world agriculture finds itself. These changes broaden the agenda for agricultural policy, with monetary and fiscal policies, exchange rates and exchange rate policy, international capital markets, and trade policy generally now being far more important than the more familiar domestic commodity programmes".

Regional Trade:

Zimbabwe, over the remaining part of this century will face a substantially altered trading environment. This is not only due to the factors outlined above, but also because of the changing relationships with South Africa and other countries in the region. South African trade continues to dominate Zimbabwe's trade patterns. Some 18 percent of all exports from Zimbabwe go to South Africa although this is a significant drop from the 25 percent before independence. The recent financial and political problems of South Africa will mean a continuing decline in trade with that country. Its significance, as a transit country for Zimbabwean trade, should not, however, be underestimated. Zimbabwe has made strenuous efforts, both within the SADCC framework and bilaterally, to expand regional trade outside of South Africa. Table 6 reports trade patterns within the SADCC region. Zimbabwe is both the largest exporter within the group with 44.5 percent of total SADCC exports and the largest importer with 37.5 percent of total SADCC imports.

Table 7 is an FAO projection suggesting a continuing deficit in food products for the remainder of the century. FAO (1984) has produced two scenarios to indicate the parameters around which SADCC economies could move to higher levels of national income. The 'improved performance' scenario assumed an annual growth in GDP of 4 percent (per capita 1.1 percent) and agricultural growth of 3.2 percent/annum (per capita 0.3 percent). The high performance scenario is based on 5.8 percent annual growth in GDP (3 percent per capita).

Table 6: Trade Within SADCC Region, 1981 (US\$ millions)

Destination Origin	Angola	Botswana	Lesotho	Swaziland	Malawi	Mozambique	Tanzania	Zambia	Zimbabwe	Total Exports
Angola	-	-	-	-	-	0.5	-	-	-	.05
Botswana	8.94	-	.03	.01	.10	6.60	.01	1.21	21.74	38.64
Lesotho	-	.02	-	-	-	.11	-	-	.01	.14
Swaziland	-	.07	-	-	-	5.10	.11	-	4.34	9.62
Malawi	-	.57	-	-	-	1.58	.05	4.22	22.11	28.53
Mozambique	.79	.01	-	-	3.05	-	3.98	-	24.49	32.32
Tanzania	-	.01	-	.34	.17	3.99	-	1.88	.26	6.65
Zambia	-	.52	-	-	5.01	.08	3.99	-	35.57	44.57
Zimbabwe	1.16	40.25	1.74	2.02	20.81	10.23	1.54	51.04	-	128.79
TOTAL IMPORTS	10.89	41.45	1.77	2.37	29.14	27.74	9.08	58.35	108.52	289.31

- : No trade
Source: FAO (1984)

Table 7: Trends in Agriculture: Total and by Commodity Groups

	Annual Growth Rates %				% Self Sufficiency by year 2000
	Demand		Production		
	1966-81	1979-81 to 2000	1966-81	1979-81 to 2000	
Total					
Total Agric	2.9	3.5	1.9	1.1	72
Per Capita	0.1	0.6	-1.7	-1.5	
Cereals	3.1	3.4	1.6	1.0	52
Basic Food	2.7	3.5	1.7	1.8	62
Livestock products	3.3	4.3	2.3	1.7	74
Other Food	2.7	3.1	2.1	1.5	57
Total Food	2.9	3.5	2.0	1.5	64

Source: FAO (1984)

Agricultural growth is 4.8 percent per annum (1.9 percent per capita).

Under both scenarios, the region remains in overall food deficit although the high performance scenario generates greater self-reliance in all food categories except Table livestock products. Total agricultural exports, however, would be sufficient to finance imports and to contribute to a sector surplus in the balance of trade.

Regional trade in food appears a promising avenue for Zimbabwe. The country is already performing at the 'improved performance' level of production and with appropriate investment in the agricultural sector, should be able to achieve the 'high performance' levels. Over recent years, Zimbabwe has been able to negotiate "triangular" trade deals with agencies such as the World Food Council, EEC, Australia and USAID. Such deals involve the export of Zimbabwe maize to a SADCC maize deficit country in return for a matching supply of overseas wheat. While currently such deals are on a government/donor agency

basis, it is entirely foreseeable that comparable commercial arrangements could be made if economic conditions in the region improved. These arrangements appear to make better use of scarce transport and foreign currency resources than conventional food aid programmes.

International Trade:

With respect to international trade, Zimbabwe has for years followed a strategy of exporting high quality exports and establishing a record of reliable production. The location of the country, and the nature of its export routes, mean that only low bulk, high value exports are normally likely to be competitive on the world market. The export of bulky food products out of the region has rarely been profitable for Zimbabwe (see Table 8 for an analysis done by the Zimbabwe Tobacco Association). The major international export commodities remain tobacco, cotton, beef, sugar and coffee.

Table 8: Export Values/Railway Wagon

	Tonnage/Wagon	Average Export price/tonne (Z\$)	Value/Wagon (Z\$)
Tobacco	17	2 770	47 090
Cotton	20	1 330	26 600
Maize	39	125	4 875

Source: ZTA

With respect to tobacco, Zimbabwe has recovered some of the world market share lost during UDI. However, since independence, input costs have risen sharply, especially labour. It is unlikely that there will be major expansion of tobacco production in the absence of a significant increase in auction price. Although world production is now close to annual consumption, over 10 000 tonnes of tobacco are in storage. Demand is increasing consistently but slowly. Any increase in tobacco production will be at the expense of other crops rather than being derived from an acreage expansion.

Cotton production in Zimbabwe is expanding, through an increase in per hectare yields, and in area planted, in the small-scale and the large-scale farming areas. In Zimbabwe dollar terms, cotton exports increased 56.7 percent in 1984 over the previous year, the greatest percentage increase in any commodity export except gold and beef. Continued expansion of this crop relies heavily on the ability of Zimbabwe to maintain the integrity of its current production and marketing system. Internationally, cotton production exceeds substantially world demand and there are large stocks overhanging the market. Zimbabwe has been able to expand its exports on the basis of its ability reliably to supply accurately graded cotton lint. This lint is primarily used for the production of quality, high value cotton goods for sale in specialized markets. Thus, Zimbabwe's cotton does not compete directly with the bulk of world production but rather is confined to significant but specialised market niche.

Some 60 percent of Zimbabwe's land area is defined as being primarily suitable for ruminant livestock production. The country has a long history of beef exports, primarily to Europe and South Africa. The beef export trade over the last decade has been erratic, largely as a result of war and drought. Beef exports in 1984 rose to Z\$36.9 million, an increase of 106.1 percent over 1983. The final conclusion of the agreement with the EEC for an annual quota of 8 100 tonnes of beef under ACP Lome terms can be expected to lead to continuation of beef exports into the future. Prices for beef in Europe are about twice those in the Middle East which is possibly the best major alternative market for Zimbabwe's meat exports. Under Lome II, the combined access of Botswana, Kenya, Madagascar, Swaziland and Zimbabwe was 38 100 tonnes of beef. Only some two thirds of this quota has ever been taken up. Zimbabwe, together with Botswana, is potentially well placed to utilize some of the unclaimed quota. The Cold Storage Commission and the Botswana Meat Commission have

been working in close collaboration over the past few years. Both countries have the necessary size of national herd and the ability to maintain foot and mouth disease-free zones. These are essential to being able to take significant advantage of ACP access. Internationally, beef prices are likely to continue to decline with the EEC moving to a projected export surplus of 660 000 tonnes by 1990. The outlook for Kenya's beef export potential outside the ACP agreement is gloomy. A similar situation would appear to apply to Zimbabwe (Schluter, 1984). On the other hand, the Middle East does offer an important potential market for sheep and goats. Exports to the Middle East of these products from Zimbabwe started in mid-1985. The Middle Eastern consumer prefers locally slaughtered fresh meat derived from range-fed, lean animals. Live African sheep and goats thus sell at a premium against frozen or chilled meat and against fat Australian or New Zealand lambs. In Kenya, export markets for sheep and goats offered a 70 percent premium over local markets. Thus Zimbabwe is well placed to remain a significant exporter of meat. ACP access to the EEC provides the main outlet for beef while new market development in the Middle East for goats and sheep appears promising.

During 1984, sugar exports increased by 5.6 percent to Z\$55 million. Internationally, largely as a consequence of the CAP and protectionism in major Western markets, the sugar market is depressed. Further growth in sugar exports will require that Zimbabwe reduce production costs. With little prospect of increases in international sugar prices, the potential for increasing sugar exports from Zimbabwe is gloomy except possibly along the lines of the triangular arrangements already discussed for maize. Other commodities, such as coffee and horticultural products, are relatively small, but important, components of Zimbabwe agricultural export strategy.

Reliable communications with the outside world will be

critical to returning Zimbabwe's reputation as a reliable supplier of high quality agricultural commodities. Although considerable effort has been made to shift reliance away from South African ports, South Africa remains the dominant route for many of Zimbabwe's exports.

EPILOGUE

The period 1965 to 1986 has been one of major change in Zimbabwe. Superficially, it would appear that this change has brought about only marginal shifts in agricultural policy. The post independence resettlement programme is smaller and more cautious than originally planned. The major agricultural institutions remain in place with an expanded mandate to serve all the farmers of Zimbabwe as opposed to a previous bias towards large-scale producers. The country is regarded as an agricultural success in African terms. In spite of both war and drought, Zimbabwe has managed to maintain per capita agricultural production.

This review has concentrated on three areas of agricultural policy - land reform, agricultural research and agricultural trade. The Zimbabwe government commitment to land redistribution is politically inevitable and consistent with its equity objectives. However, population growth and the closing of the land frontier require the adoption of higher yield agricultural technologies not only to resettle an acceptable high number of smallholders but also to push food prices down, and consumer demand up in the economy generally. History has shown that this last effect is an essential prerequisite to the labour readjustment necessary for agricultural transformation. Thus, agricultural research, land reform and economic growth are closely inter-linked. Without economic growth, land redistribution achieves little except short term gains for the minority of resettled farmers.

There are disturbing signs that the importance of investing in agricultural research is insufficiently appreciated. Yet unless these investments are made today, the prospects for sustained economic growth are poor. In spite of Zimbabwe's considerable achievements, per capita growth rates in agriculture are insufficient to generate the surpluses necessary for rapid economic growth and to enable labour to move out of agriculture in a reasonably painless manner. Agriculture is, and will remain into the medium term, the lead sector of the economy. Efficient, low cost agricultural production is essential both for national food supplies and to maintain and expand agricultural exports. High quality market-oriented agricultural research and the more direct involvement of both agricultural researchers and policy makers in trade issues will be required in the rapidly changing trade environment of the last part of this century. There is no simple answer to the agricultural policy dilemmas facing Zimbabwe. Available evidence suggests that not only is change necessary and inevitable but it will also be difficult to manage. This review suggests that Zimbabwe has much of the institutional structure and capacity to nurture its coming agricultural revolution. To achieve this, however, will require important shifts in investment and perceptions.

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