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REPORT ON THE IMPACT OF

SANYATI COTTON GIN

MAY 1986

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THE IMPACT OF SANYATI GIN ON SMALLHOLDER COTTON PRODUCTION

Report

to

United States Agency for International Development

and

Cotton Marketing Board Zimbabwe

Agriserve (Private) Limited, Harare, Zimbabwe

and

Ronco Consulting Corporation, Washington DC, USA

May 1986

ABSTRACT

Summary Findings

Cotton production in the small-scale farming and communal areas has steadly increased since Independence. In the area that serves the Sanyati Cotton Gin this rate of increase has been slightly less than elsewhere, suggesting that the Gin has not had a direct effect in increasing production. The siting of the Gin per se at Sanyati was the result of production in the area, not its cause. As production in the Sanyati area was already at a relatively high level there was a lesser scope for increased production.

While there has been no quantifiable difference in production and producer trends since the establishment of the Sanyati Gin, its effect on the town have been profound, which has benefitted from the Gin in the increased spending power of the wage earning workers, and in the effect the Gin has had in attracting both businesses and service organisations to the town.

The establishment of Collection Depots have had a direct effect on the viability of the farmers and have resulted in increased production.

The amount of cotton produced in the Sanyati catchment area, already exceeds the capacity of the Gin by almost twice. This justifies a double ginning capacity in the area.

Summary Recommendations

The establishment of depots has a direct effect on farmer viability. This is strongly recommended, as the first step to increased cotton production.

Increase in cotton production will result from strengthening of all factors effecting the farmer; marketing infrastructure, credit, research and extension and the development of alternate enterprises. It is recommended that this overall approach to development be continued.

Finally it is recommended that cotton is given special support in the small-holder and communal sectors as cotton has unique attributes that will improve rural profit, provide employment, and earn foreign exchange.

INTRODUCTION

To determine the impact of the Sanyati Cotton Gin upon smallholder cotton production in the Sanyati/Gokwe area, USAID hired as consultants:

(i) Ronco Consultancy Corporation of Washington DC, USA, and,

(ii) Agriserve (Private) Limited of Harare, Zimbabwe. (1)

The consultancy was done cooperatively, with assistance from the Zimbabwe Cotton Marketing Board.

The report is based on information gathered from 123 individually interviewed officials and farmers, plus a collection of statistics, most notably from the extraordinarily detailed archive of the Cotton Marketing Board Producers' Registry. We consulted individuals from a wide range of organizations; although, more than half of the 65 interviewed were from the Cotton Marketing Board, the Ministry of Lands, Agriculture and Rural Resettlement and the Central Statistical Office. (3) In these interviews we sought data and opinion as appropriate on:

Price and pricing

Marketing arrangements

Transport

Manner and history of cotton growing

Supply of inputs

Credit

Extension and training

Research

Planning and policy

We attempted to frame up a sound random survey of farmers but this proved not feasible given the time and resources at hand. We did interview 58 farmers individually, about half at CMB depots, a third on their farms and the remainder at meeting places near their farms. (4) We interviewed 56 of the farmers using a standard interview guide developed during the first session of field work. (5) In addition to the individual

interviews we did two with groups, one a Village Development Committee and the other a District Council, both in Sanyati DC.

All interviews with officials were in English and all with farmers in Shona, except two.

We worked in the field from a base in the Agricultural and Rural Development Authority Resthouse in Sanyati, travelling outward, mostly on gravel roads, sometimes on scotch cart tracks for nearly 2 000 km as follows:

Field Trips to

Gokwe District Council	1180 km
Sanyati District Council	416 km
Chitenderano Rural Council	352 km

During the consultancy we were generally given enthusiastic assistance from officials and farmers, many of whom set aside pressing tasks to help us find data or to guide us in our inquiry. We are deeply thankful for this generous help; any failings herein are ours alone.

We hope the report is useful to USAID and the Cotton Marketing Board in developing Zimbabwe's cotton sector, particularly its dynamic small farmers who are truely growers of foreign exchange.

(1) See Appendix 1 for terms of reference.
(2) See Appendix 2 for allocation of work-days.
(3) See Appendix 3 for a breakdown of interviews by organization and location.
(4) See Appendix 4 for a breakdown of farmer interviews by location and type of farmer.
(5) See Appendix 5.

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Quotes From Farmers

On Cotton

"All farmers here grow cotton to get cash. We all grow maize for food and sell any surplus, but not at a particularly good price."

"Nowadays people are more and more money conscious. That is why they grow cotton."

"Because I can grow cotton I am happy to stay in the country and plough, even if I would make more money in the city."

"Sanyati boys are not caught stealing. They can grow cotton."

"Cotton is the sole redeemer for people who lose their maize crop in drought."

On the CMB depot in Sanyati

"When the depot came in 1976, it steamed up our desire to grow more cotton."

"We used to spend too much money to transport our cotton to Kadoma and it was a waste of time to go there. Now we have a depot next door so time is not wasted and we get lots of production done."

On the CMB Gin at Sanyati

"When you go back to Harare, tell them they have done a marvellous work."

"The ginnery is a very great thing because it brings jobs to the people instead of people to the jobs."

"Our sons get employment there."

The impact of the Sanyati cotton gin on smallholder cotton production in the Sanyati/Gokwe area comes from two completely distinct effects. The first effect is from its nature as an enterprise set in the community. The second, and much stronger effect, is from the ginnery being one essential element among many which together are allowing and encouraging the remarkable increase in cotton production taking place in the area.

Page 4 Summary Conclusions and Recommendations

As an enterprise in the community, the strongest impact of the gin is the jobs it creates and the effect of the wages paid as they spread out in the economy of the area. There is also no doubt that it inspires enthusiasm on all sides. Peasants are pleased to see Government's policies of decentralization, and of rural development in communal areas being put into effect in such a tangible fashion. Leaders and intellectuals hope that the gin can be used as a base to induce associated industry, textiles and oil expressing in particular. The ginnery has not been a cause for providing infrastructure to the area as a whole, but was established essentially on a pre-existing base.

We know no direct measurable effect of the gin on increasing cotton production in the area. It provides no more direct services to the producer than an equally well run and supplied depot, without a gin. The farmers of the area were very clear in their appreciation of the effect of the depot in transferring transport costs and risks from them to CMB and in declaring this a profound incentive to increase production.

The Sanyati ginnery opened in June 1984, since then production in the area has risen. However, this rise commenced a considerable time previously and we know no way to identify any contribution that the ginnery might have made in the relatively short time since it opened. Further, parallel rises are occuring in other communal areas of the country which do not have a ginnery.

The ginnery came to Sanyati because of growth in cotton production in the smallholder farming areas of the nation, of the Sanyati/Gokwe area specifically, and as one expression of a sensible policy of rural development. The gin's strongest effect on cotton production in the area is indirect. Without ginning capacity the sector could not expand profitably to the producer or to the nation. In fact, viewed simply from the standpoint of a ginning enterprise it would be true that increasing production could be discouraged so that established capacity could operate at the maximum level of return per unit intake. However, if ginning is viewed as is the case in Zimbabwe in terms of its return to the producers and the nation and not strictly as a single enterprise, capacity should expand, in effective steps, as proven production increases. This is what is happening and represents a national as contrasted with an enterprise viewpoint. However, the main truth is that ginning capacity normally follows increase in production. It does not lead or attempt to induce production.

The forces causing increase in cotton production in the smallholder sector, or in the Sanyati/Gokwe area, are varied. They are reflected in a general increase in commercial production by small farmers, and do include the rural development policies and investments of Government. We have not had the resources or time to analyse these causes in the detail they merit. Nevertheless at hand is an example of successful rural development which deserves careful description and publication to the world.

The bulk of this report is a rough account of the trend of increase in cotton production from the Sanyati/Gokwe area and a cursory and description of some of the elements that have contributed to cotton production in the area.

Page 5 Summary Conclusions and Recommendations

Our most specific strong recommendation is that the number of depots in the area be increased because of their incentive effect on production. We appreciate that a transfer of transport costs from small producer to CMB would happen and that this would put downward pressure on producer price, but we believe CMB is in a better position to negotiate the cost of transport than small farmers and a considerable net benefit would occur. We do not have data to prove it.

Second, we do believe there is no touchstone to increasing smallholder cotton production. It will increase as investments to increase agricultural production in general in the communal areas take place, that is: marketing support (depots, roads, transport sector development); credit, because cotton is an expensive crop to grow; extension and the research to back it; a more flexible and nimble system of input supply; livestock development, and support to alternative drought risk reducing crops.

We are concerned with the risks to the smallholder of growing cotton but believe these can only be addressed by strengthening the smallholder farm system as a whole (Appendix 6).

Finally we recommend that the cotton sector deserves exceptional support because it is uniquely positioned to benefit the smallholder and the nation by the contribution it can make to rural profit, employment and foreign exchange, and thus to the ultimate national aim of growth with equity. (1)

(1) See Appendix 7 for general background issues.

COTTON IN ZIMBABWE

Cotton is indigenous to Zimbabwe. Commercial cropping began as early as 1919. A cotton research institute opened in Kadoma in 1920 and a ginnery in Harare in 1921, but the industry was unable to sustain growth until the early 1960s, when availability of suitable varieties and biocides allowed higher yields at lower risk, albeit requiring sound management and substantial inputs. Production of seed cotton rose rapidly to 20m kg in 1965 from a level of 1m kg/year characteristic of the 1950's.

A cotton marketing board was founded in 1979. (1) The linking of successful research, leading to increased production, with astute pricing and marketing resulted in a lint out turn during the 1970s of roughly 55 million mt/year of which better than 70% was exported, becoming Zimbabwe's second largest agricultural export and its fourth largest export overall.

Almost all of Zimbabwe's cotton results from strains of a locally bred medium staple variety known as Albar. (2) A very small amount of a long-staple variety (Delmac) is also grown. A small amount of cotton is grown in the Beitbridge border area with South Africa for export raw to South Africa. Otherwise all cotton is sold by farmers into a series of 17 Cotton Marketing Board depots, 8 of which are immediately linked to a ginnery.

About 40% of the area planted to cotton is irrigated on large-scale commercial free-hold farms or on parastatal farms of the Agriculture and Rural Development Authority. Yields on such large-scale operations are some 2,5 mt/ha irrigated and 1,6 mt/ha dryland.

Since independence in 1980 and the pursuit of a policy to extend commercial agriculture capability into communal lands, small farmers are playing an increasing role in cotton production and are the major source of increase in production. At present their yields are about half those achieved on large-scale dryland farms but are generally better than comparable results elsewhere in the world.

More than 90% of the Zimbabwe cotton crop is handpicked and all is especially carefully graded and classified. As a result the lint is marketed at a premium. Although some three-quarters of the lint is exported, the remainder stays in the country, being absorbed by the textile and clothing industries which also produce for export.

Some seed is set aside for processing into plant seed, most goes to oil mills which produce: a) linters for processing into cellulose, rough yarns and cotton wool; b) oil for cooking or processing into margarine, soap, glycerine, fatty acids; c) cake/meal for animal feeds; d) hulls for animal feed, fibre and fuel. The end products include a vast array as diverse as clothing, explosives, insecticides, paper, plastic and tyre cord. The

cotton seed oil contributes about half of the edible oil production of the nation. Most of it is consumed locally but significant amounts are exported.

Otherwise, a small amount of the long staple variety Delmac is grown on a few large-scale commercial farms for supply to local firms producing cotton thread. Around Beitbridge a limited number of large commercial farms grow Deltapinc, a USA variety with a high ginning percentage, for export raw to South Africa.

In Zimbabwe cotton is a product controlled by law. Cotton growers must be registered with the Cotton Marketing Board and sell only to it. The CMB pays each grower who delivers to a depot by check, by post, according to weight and grade determined at the depot, and at fixed prices for each delivery which is not encumbered by a stop-order. All cotton stalks must be burned off the land by a set date and new planting is not permitted until a set date. Producer prices for raw cotton, cotton seed and cotton oil are determined annually by Government through a complex set of deliberations and are announced at the beginning of the seed cotton intake season.

The catchment which supplies the Sanyati ginnery is remarkable in containing only small farmers, excepting one irrigated Government Estate which grows some 650 ha of cotton each year. Most of the small farmers grow cotton to get cash. All of them grow maize for food and sell whatever is excess to consumption. (3)

(1) See Appendix 8 for more information concerning the Cotton Marketing Board of Zimbabwe.

(2) Two locally bred medium staple varieties presently account for more than 95% of cotton grown in Zimbabwe. These are Albar G501 (released 1981/82) and Albar G602 (released 1983/84). The former is grown throughout the middleveld under dryland and irrigation. The latter variety is irrigated in the lowveld. Both have bacterial blight resistance. G501 is more tolerant to alternaria leaf spot disease and more resistant to Jassid. K602 is short, early maturing and IS determinate in growth. As grown the two Albar varieties have a staple length of 1 1/16" - 1 3/32", a fibre bundle strength to 95 000 lb/sq inch and a micronaire between 4.0 and 5.5.

(3) See Appendices 9, 10 and 11 for descriptions of the Sanyati ginning depot, Sanyati town and the Agriculture and Rural Development Authority irrigated farm in Sanyati.

INCREASE IN COTTON PRODUCTION

The trend of cotton production in Zimbabwe has risen markedly since growing year 1978/79 (Table 1). Set backs occurred in the drought years 1981/82 and 1982/83, and off-peak output is predicted for 1985/86 on the evidence of seed sales, farmer reports and field inspection.

TABLE 1 (1)

SEED COTTON GINNED ('000 MT)

Harvest Year

1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
164	162	134	146	173	163	185	200	155	168	250

(1) Sources: Agricultural Marketing Authority. Cotton Situation and Outlook Report 1985-86 for years 1974-83; Cotton Marketing Board, Annual Report 1984/85 for 1984.

Considerable evidence indicates that the principal source of this increase is production from many small farms in communal areas of the nation. Hard evidence for this is available in the breakdown of seed cotton deliveries to the CMB for years 1982/83 - 1984/85 (Table 2).

TABLE 2 (1)

SEED COTTON DELIVERIES ('000 MT)

Crop Year

Source	1982/83	1983/84
Large-Scale Commercial Areas	108 (64%)	139 (55%)
Communal Areas	43 (20%)	81 (32%)
Small-Scale Commercial Areas	2 (1%)	8 (3%)
ARDA Estates	15 (9%)	23 (9%)
TOTAL	168 (100%)	250

(1) Sources: Cotton Marketing Board, Annual Report 1984/85.

Further hard evidence is available in the tabulated records of the Cotton Marketing Board (Table 3 and Appendix 12).

TABLE 3 (1)

TOTAL NATIONAL COMMUNAL AND SMALL-SCALE COMMERCIAL FARMER DELIVERIES OF SEED COTTON TO CMB

Crop Year	Deliveries ('000 mt)
1984/85	141
83/84	102
82/83	58
81/82	49
80/81	78
79/80	37
78/79	34
77/78	43
76/77	37
75/76	33
74/75	44
73/74	39
72/73	N/A
71/72	40

(1) Source: Cotton Marketing Board Producer's Registry tabulated to February of year following - computer runs CM09 and CM07 (deliveries by district for small-scale commercial and communal area growers).

These data indicate a four-fold increase over 1978/79 in the six years 1979/80 - 1984/85. Aside from the bumper year of 1980/81, this increase in production continued even during the drought years.

More evidence exists in the annual crop estimates of production, area and yield compiled by the Central Statistical Office. These indicate a similar increase in communal area output but the data are soft. For commercial area farms the data are much harder. It suggests increase on the order of one quarter, largely achieved by increase in yield (Appendix 13).

Cotton growing in Sanyati and Gokwe began with trials with cotton in farmers' fields in 1963. Production grew rapidly into the 1970s with a second sharp upward trend strongly expressed in the bumper year 1980/81 and in 1983/84 and 1984/85 which were back to back record years in both the study area and the small scale farming areas of the nation as a whole (Appendix 13).

Generally, seed cotton received by CMB from the communal area and small-scale commencial farmers of Gokwe, Sanyati and Chitenderano councils has for many years been about 45% of all cotton produced by small farmers in Zimbabwe and broadly shows a trend of increase similar to that occurring in the small farm sector as a whole (Table 4).

TABLE 4 (1)

SEED COTTON RECEIVED BY CMB FROM GOKWE, SANYATI AND CHITENDERANO FARMERS

Harvest Year	Deliveries ('000 mt)
1985	66
84	45
83	24
82	24
81	44
80	19
79	15
78	24
77	20
76	17
75	20
74	17
73	N/A
72	18

(1) Source: Cotton Marketing Board Producers' Registry records - computer runs CM09 and CM07.

Four cotton receiving depots lie within the Sanyati/Gokwe area:

Sanyati, which opened as a transit depot in 1976 and as a full ginning depot in 1984;

Nemangwe, a transit depot opened in 1981;

Manoti and Tchoda, both transit depots which opened in 1982.

To these depots come some deliveries from completely outside the area. From north to south we have noted supply from Hurungwe, Rengwe, Omay, Siabuwa, Nanjolo, Busi, Nzola, Dandanda, Lupane and Nkayi; however these are so limited as to have only a minor

effect on the throughput of the depots. On the other hand, considerable production from within the area is trucked to Kadoma or Chegutu for delivery.

Strictly speaking only the Tchuda transit depot regularly delivers to Sanyati for ginning; however Nemangwe sometimes does and Manoti could as Sanyati is the nearest gin. The cotton seed from all three transit depots passes nearby Sanyati in its passage by lorry to Kadoma and Chegutu for ginning.

In general the trend of deliveries to the four depots in Sanyati/Gokwe is similar both to increase in production of the general area, and of the nation (Table 5).

TABLE 5 (1)

SEED COTTON RECEIVED BY SANYATI/GOKWE DEPOTS

Harvest Year	DEPOT Sanyati '000 mt		Nemangwe '000 mt	Manoti '000 mt	Tchoda '000 mt	Total '000 mt
1985	25	-7 (2)	11	9	12	50
84	16	-5	7	7	6	31
83	10		4	4	4	22
82	11		4	2	1	18
81	20		8			28
80	12					12
79	10					10
78	11					11
77	4					4
76	1					1

(1) See Appendix 14 for details of seed cotton intake, pack provision, and planting seed sold at these depots.

(2) Accounts for transfers from Tchoda and Nemangwe to Sanyati:

	Sanyati received from Tchoda kg	Nemangwe kg
1985	5 744 722	1 202 729
84	4 511 749	963 916

If the intention is to gin Sanyati/Gokwe seed cotton at Sanyati, production already exists to justify a 50 000 mt ginning capacity not even taking into account the considerable volume which already bypasses the area's four depots, or of possible growth in production.

INCREASE IN COTTON PRODUCERS

About 1 000 large-scale commercial farmers are registered cotton producers. Recently between 520 and 720 have been active producing somewhat more than half the national crop. Excepting the large ARDA estates that account for one tenth of total output, the remainder is grown by many small-scale farmers in communal areas, resettlement schemes and small-scale commercial farms.

Both nationally, and in the Sanyati/Gokwe area, the number of registered small producers has been growing at a considerable rate, at least since 1979/80 (Appendix 15 and Table 6). Nevertheless this increase is slower than the increase in production from the same sector. This suggests that established small growers are contributing more to the national increase than new growers. This deduction fits with our field data which indicate that new producers begin with cotton in a modest way, building up hectarage with experience.

TABLE 6 (1)

REGISTERED COMMUNAL AREA AND SMALL-SCALE COMMERCIAL COTTON PRODUCERS

at December	Chitenderano, Sanyati and Gokwe ('000)	Nation ('000)
1985	56	159
84	47	130
83	42	107
82	37	88
81	31	76
80	25	59

(1) Source: Cotton Marketing Board Producers' Registry.

Although we believe a strong relationship of number of registered producers to production does exist, the use of registered producers as an index is flawed. First, only about half of registered growers are active in a given year (Appendix 17). Further,

members of cooperatives sell through their coop rather than individually. Otherwise, the number of registered producers does not correspond perfectly to the number of household holdings that grow cotton. Households do contain more than one registered producer and producers do register more than once using different names. Nevertheless it is clear that an increasing number of small farmers, especially communal area farmers are growing cotton and that the proportion of active to not active among them has been increasing.

(1) A comparison of number of registered producers in the study area with estimated total numbers of households reveals registrations exceeding households in 1985:

	1985	1984	1983	1982	1981	1980
Households '000(estimate)	49.5	48.1	46.8	45.6	44.3	43.1
Registered Producers '000	55.7	47.4	41.9	36.7	31.1	24.8

INCREASE IN VALUE OF COTTON PRODUCTION

Payment to producers for seed cotton delivered to the Cotton Marketing Board has been rising for some time, but especially in the study area (Table 7).

TABLE 7 (1)

VALUE OF SEED COTTON TO FARMERS 1978/79 - 1984/85
Z$ MILLION CHITENDERANO, GOKWE, SANYATI

Year	Nation	Study Area (estimated)
1984/85	137.5	43.2
83/84	83.1	24.8
82/83	76.9	11.8
81/82	75.9	11.8
80/81	67.1	16.8
79/80	53.9	6.9
78/79	52.7	5.3

(1) Sources: Cotton Marketing Board. Annual Report 1984/85 for national figures; study area figures estimated from Sanyati Depot grade and weight statistics plus historic producer prices. See Appendix 20 for details.

These increases reflect upward movement in production and price.

What is the meaning of this to the small farmer? Assuming that in 1985, the average farmer in the study area delivered about 1 500 kgs of seed cotton to GMB, he received about Z$765 for his crop. (2) After cash costs, some Z$420 was his return for management, labour, ox traction and ox transport. (3)

(2) See Appendix 21 for estimation procedures.
(3) See Appendix 22 for estimation of gross contribution. We had expected to find considerable data on actual on-farm communal area costs and returns. We did not.

INCREASE IN AREA PLANTED TO COTTON

National estimates suggest a considerable trend of increase in area planted to cotton (Appendix 13). All of this increase is believed to be coming from communal areas. The lack of increase in commercial areas is hard data. The great increase recorded for communal areas is soft. It appears to be based on twice yearly crop estimation exercises by AGRITEX staff. These surveys are meant to provide a rough estimate of trend and to allow an assessment of prospects or problems in a given year. The data do not seem to be based on a carefully designed survey and do not include crop harvesting or clever quantitative techniques for estimating yield. As a result the figures are not sufficiently accurate for many purposes including prediction of marketed production.

Data available in the Sanyati AGRITEX Regional Office from these surveys on cotton (area, production, yield) appears in Appendix 16. Broadly speaking they are evidence for a rise in area planted to cotton, and production.

Increase in cotton production and number of registered growers in the Sanyati/Gokwe area are indicative evidence of increase in area planted to the crop. Sale of planting seed from CMB depots in the area (see Table 8) is sharper evidence but not definitive, as many farmers get CMB seed from elsewhere.

TABLE 8 (1)

PLANTING SEED SOLD BY CMB DEPOTS IN SANYATI/GOKWE AREA

YEAR	DEPOTS				TOTAL LOCAL SALES	INFERRED HECTARAGE
	Sanyati	Nemangwe	Manoti	Tchoda		/20=
1985	712	313	259	289	1572	79
84	857	322	279	235	1693	85
83	662	282	182	175	1300	65
82	615	260	126	125	1126	56
81	570	172	Nil	Nil	742	
80	494	Nil			494	
79	205				205	
78	224				224	
77	311				311	
76	Nil				Nil	

(1) Source: see Appendix 14.

An upward trend in planting seed sales occurs in the nation as a whole, but it is not as pronounced (Table 9).

TABLE 9 (1)

TOTAL NATIONAL PLANTING SEED SALES BY CMB

Financial Year	Sales ('000 mt)
1984/85	7
83/84	6
82/83	4
81/82	3
80/81	4
79/80	3
78/79	3
77/78	4
76/77	3
75/76	2
74/75	3

(1) Source: Cotton Marketing Board. Annual Report 1984/85.

Is the apparent increase in cotton hectarage coming from new ground or displacing other crops? On the former alternative, we have no evidence. On the latter we have found suggestive data.

In crop year 1983/84, the Household Survey Unit of the Central Statistical Office in cooperation with AGRITEX commenced to gather data on area and production of crops in communal areas through a sophisticated sample survey. The initial survey had teething problems but the 1984/85 survey was broader, and for the first time included crop cutting, but only for maize. (1) The survey gives good estimates to provincial level but cannot reliably be disagregated to smaller areas. The results of the survey appear in Appendix 18. A summary appears in Table 10.

TABLE 10

TOTAL SOWN AREA AND PRODUCTION ESTIMATE FOR MAIN CROPS GROWN IN COMMUNAL LANDS 1984/85 ('000) (1)

NATION	TOTAL	MAIZE	COTTON	MILLET	SORGHUM	FINGER MILLET	GROUNDNUT
Area (ha)	1650	887	140	252	177	70	84
% Total Sown	100%	54%	9%	15%	11%	4%	5%
Production (mt)		1706	110	214	173	107	80
Midlands Province							
Area (ha)	340	192	63	13	20	22	18
% Total Sown	100%	56%	19%	4%	6%	6%	5%
Production (mt)		342	55	10	18	24	15
Mashonaland West Province							
Area (ha)	145	84	38	1	13	1	4
% Total Sown	100%	58%	26%	<1%	9%	1%	3%
Production (mt)		219	20	1	22	1	4

(1) Source: Central Statistics Office: Area and Production Estimates for Crops in The Communal Lands 1984/85. Report No. AL2.

In the nation or in Midlands Province (includes Gokwe and Chitenderano) and Mashonaland West Province (includes Sanyati), six crops (maize, millet, sorghum, cotton, groundnut and finger millet) account for 95% or more of sown area in the communal lands. Maize the staple food, which also has a good market, is the predominant crop and covers more than half the sown area. Cotton is the second largest crop in the two provinces and appears to be sown at the expense of lesser grains (millet, sorghum, finger millet).

The general pattern revealed in our discussions with farmers was that each plans as first priority to secure his subsistence base, on farm, with maize and only second to grow cotton for cash. The farmers did not want to depend on cash from cotton to buy maize meal. This pattern is explicit in data from 10 farms in the immediate vicinity of Sanyati which are included in the national survey for 1985/86 (Appendix 19).

INCREASE IN YIELD

Cotton yield (weight/area) data for the large-scale sector are excellent. For communal areas of the nation they are poor. Many persons, not least the small farmers, have a good idea of yields, but to the best of our knowledge, impressions have yet to be tied down by adequate quantitative survey work that actually measures yield. We believe such work should have a high priority.

DISCUSSIONS WITH FARMERS

We did not attempt to random sample or follow up numerical estimates with measurements. Hence, for many purposes our results, while indicative, are certainly not definitive. We do believe we did adequately sound farmer opinion on the effects of the depot and the ginnery. (1)

All the farmers we talked to individually grow cotton but one. He is 67 years old and stopped growing it when the Grain Marketing Board put in a depot in Sanyati. He maintains he is old and growing maize for money is easier than growing cotton.

All the farmers, but four on Gowe irrigation scheme, grow cotton on dry land only.

Most of the 55 farmers in the survey that grew cotton had been doing so for some time. The average was 8.6 years with a range of 2-21 years. The most frequent was 6 years.

The farmers tended to report a slow increase in area planted to cotton, with a slight downturn 1985/86.

(1) See Appendix 4 for location and type of the 58 farmers we interviewed individually.

TABLE 11

AVERAGE AREA PLANTED TO COTTON (ACRES)

	Sanyati (17)	Gokwe (33)	Gowe (4)	Copper Queen (1)
1985/86	5.7	9.6	9.9	50
84/85	7.1	8.1	9.1	60
83/84	4.8	6.1	8.0	60
82/83	4.4	3.4	5.5	60
81/82	4.8	3.5	5.0	60
80/81	4.8	3.3	2.8	55
79/80	4.5	5.0	2.8	55

Asking farmers to recall production and area is an invitation to error. Our yield results (Table 12) seem high and in one case we are sure the farmer was telling a tall story. When queried about a claimed production of some 7 000Kg/ha, he invited a friend to testify. The friend declared it was all true and that it had been necessary to pick the

highest bolls standing on a stool. The results suggest a dryland yield on the order of 1.4 metric tonnes/ha and 2.7 metric tonnes/ha for irrigation.

TABLE 12

AVERAGE YIELD MT/HA

	Gowe	Gokwe	Sanyati	Copper Queen
1985/86	2.7	1.5	1.1	1.5
84/85	3.0	1.6	1.3	1.9
83/84	3.0	1.5	1.4	0.3
82/83	3.8	1.2	0.9	0.8
81/82	2.8	1.1	1.2	1.1
80/81	2.0	2.0	1.3	1.6
79/80	1.7	1.9	1.2	1.6

Forty-five of the farmers ploughed with oxen and of these all but two owned the beasts. Only two farmers own tractors but 15 others hired tractors for some primary cultivation. At the other end of the spectrum three farmers used hoes. One of these also hired oxen.

Of the 56 farmers, 48 thought their ploughing to be timely and 8 did not. One of these lacked oxen and only managed to hire too late. The others attributed the problem to late rains or oxen weakened in the long dry season.

Of the 56 farmers, 35 used fertilizer on their cotton plots but 21 did not. The 4 Gowe farmers using irrigation, have a full fertilizer input. The dryland farmers that do use fertilizer report using on average three-quarters of the amount recommended.

26 farmers of the 35 using fertilizer bought it direct from commercial houses (ZFC, Agricura, Windmill), 6 through cooperatives, 3 from local rural stores.

All 55 of the farmers that grew cotton use pesticides and were quite clear of the absolute necessity to do so. Only 4 farmers use herbicides. The sources of herbicides and pesticides tend to be the same as for fertilizer.

Cotton requires more than household labour as is apparent in Table 13 below. Picking is the main cause for hiring help but some of this help is not paid. Some farmers join work groups that circulate within a village.

TABLE 13

SOURCE OF LABOUR

	Household only	Household and hired
Thinning	46	9
Weeding	30	25
Spraying	50	5
Picking	11	44

27 of the farmers said they financed their cotton entirely from their own resources. However 25 obtained some credit from AFC and 9 stated that AFC was covering all their cash costs for cotton. Two borrowed from a cooperative and one from a rural store.

Of our 56 single interviews, an amazing 28 had received some sort of agricultural training:

Master Farmers - 16
Cotton Training Centre - 11
Diploma in Agriculture - 1
(Mlezu)

Training is popular and there is a tendency for a person who has been trained in one place to seek training in another. In addition to the above, we recorded individual cases of training in farm management (7 days), animal health (4 days) and machinery maintenance (2 days).

We were curious as to whether persons with some formal training did try and pass on this training to neighbours. In the case of the Cotton Training Centre, it specifically attempts to get leaders through AGRITEX. In every case of people who had received training we received a positive response, some acting as advisors but many going into fields to teach. This was especially true of the CTC students. In addition every one of the trained states that training had improved their yields.

We were taken to 14 specific farmers' houses by AGRITEX Officers, so our sample is biased upward especially so far as extension visits are concerned. Nevertheless it is remarkable and heartening how many of the farmers are being visited by a wide variety of field trainers (Table 14).

TABLE 14

EXTENSION VISITS TO SURVEY FARMERS (NO. = 56) 1985/86

Visited by	Where: In a group	At own home	In own field
AGRITEX	50	38	39
AFC	38	2	8
CMB	24	3	3
Input Supplier	44	6	8
CTC Graduate	18	8	10
Other farmers	4	4	4

Half of the farmers used only their own transport to get their seed cotton to a depot and having a depot within scotch cart distance was very much appreciated. Half hired at least some transport, usually lorries or tractor trailers. Nine used both. In regard to transport our survey was biased by centering on Sanyati and farmers at the CMB depots.

Most seed cotton arrives at the depots on hired transport, which is a source of considerable worry to the farmers.

Of the 56 farmers interviewed using the standard questionnaire, 18 raised transportation of their cotton as their problem of greatest concern. A detailed treatment appears elsewhere.

Seventeen aired complaints relating to inputs. Eight said input costs, especially chemicals, were rising at an alarming rate and would soon be out of reach of the small farmer. One farmer in Sanyati remarked, "We make good money out of cotton, but the chemical companies take it all away!" Another 8 complained that their input come in late or are not available at all when required, making it necessary to go to Kadoma or Kwekwe for supplies. One man observed that inputs being expensive, he spreads a small quantity over a large area. When asked why he does not borrow to meet his needs he replied that if he borrowed and the season was poor, AFC would retain all his proceeds as loan repayment.

Ten farmers observed that ploughing with oxen is a problem. Several suggested that AFC loan requirements for the purchase of tractors be relaxed. Several noted that Government tractors are too few in relation to demand. One farmer who hired oxen reported that oxen are only available for hire too late.

A large number of farmers complained about bottlenecks at receiving depots. In the high season depots operate a booking system. The farmer or his transporter must book a date to deliver raw cotton. Most disliked this. Many also complained of spending long hours in a queue and in extreme cases spending a night at a depot. One farmer said, "I arrived here at 11:00 am but the depot is soon closing. I shall have to sleep here as it is too far for me to return home. Meanwhile I hire pickers so that work continues during my absence. But then they do not pick as carefully as I do, resulting in low grade cotton."

Due to shortages, empty packs are currently rationed. Eight farmers said that they spend too much time and money travelling to collect their packs. Farmers are exacerbating this problem by retaining empty packs at home for various purposes. Some deny this, but it was obvious in our village visits.

Eight farmers wanted an opportunity to train in pest control. They are experiencing great difficulties with red spider mite in particular. Training in animal health care so that oxen are healthy and strong was a farmer request. One farmer suggested that simple reading material with illustrations on cotton production would be very helpful.

Other problems aired were the weather, delays in payment and the fact that pickers are now more difficult to come by as so many persons have taken to growing cotton.

When CMB opened Sanyati Depot in 1976, it assumed responsibility for all seed cotton accepted into the depot, and for its transport to the ginnery in Kadoma. The transport charge by CMB in 1976 was $1.28/bale, which contrasted sharply with the +/- $3.00/bale that farmers had been paying for the same trip at higher risk: losses through theft, accident or removal of producer number labels through careless handling did occur. CMB since dropped the transport charge and the Sanyati Depot and those in the area built after independence assume all risk and cost for transporting the seed cotton to a ginnery. This transport has been extremely popular with farmers and 46 of those individually interviewed saw some aspect of this as the greatest benefit of having a depot. The arguments put were that a depot either allows them to use scotch carts at no cash cost, or markedly lowers the transport costs of hiring transport and hence increases profitability. Four other benefits were put forward by these farmers:

Queries get sorted out quicker, for example overweights can be rectified on the spot (n=4);
Transit losses from accident and theft are lower (n=3) and so is weight loss (1);
Empty packs are nearer at hand (n=2) and so is planting seed (n=1);
The depot creates jobs (n=2).

We believe a general feeling exists among the farmers that having a depot encourages them to produce cotton.

A major benefit of Sanyati ginnery as seen by the farmers of the survey was that it provides employment. Twenty-seven volunteered this opinion, some vividly.

> "The ginnery is a very great thing because it brings jobs to the people instead of people to the jobs."

The next most prevalent sensed benefit was easier availability of packs than had been the case when Sanyati was only a transit depot, which was coupled with a belief that a bigger ginnery would eliminate the present shortage of packs (no=10).

Fourteen farmers in Gokwe thought a new gin should come to them. One specifically argued: the Sanyati people have had their cotton production acknowledged by building a gin in their area; we want to be recognized in the same manner.

Another at Tchoda said:

> "Why do you develop already developed places? Moreover why do you use cotton produced by us to develop an area 100 Km away from us?"

On the other hand, the further we moved away from Sanyati, some farmers knew no benefits. When asked what the gin had done for them, eight farmers answered "Nothing" and another eight replied "What is a gin?"

Four farmers said a bigger ginnery might eliminate booking, which is heartily disliked; four more thought a bigger gin would speed up intake and reduce queuing time.

Four saw the ginnery as a significant development contribution for the area. One saw it as a satisfying recognition of the farmers by Government. Two went so far as to say that it inspired them to grow more cotton by its presence.

Several lines of misconception by farmers did appear in our conversations:

> that the planting seed they get is produced at the gin;
> that a bigger gin will eliminate booking, lower queuing times and generally speed up the process of getting a check;
> that the shortage of packs will be solved by a bigger ginnery.

Our interviews with farmers indicate greatest concern with transport from farm gate to depot. We were not able to analyse this in the detail it deserves.

Page 25 Discussions with Farmers

At Nemangwe and Tchoda depots we found farmers from 20 - 30 Km distant delivering seed cotton with scotch carts. We noted that charges for transport by lorry or tractor/trailer tend to be applied by area but that individual negotiation occurs, particularly if the transporter has to go on a difficult road or track. We recorded charges up to Z$25/pack in the study area, in this case from Njelele to Kadoma, otherwise Z$20/pack was the highest.

The number of depots in the study area has increased by three since independence, but obviously, many small farmers live a long way from a depot and transport costs erode their margins and are a disincentive to cotton production.

On the other side, the two transporters we talked to said that during peak season they cannot cope with demand and this is exacerbated by the fact that each delivery must arrive on a booked date or suffer delay, and in any event they must face gruelling bottle-necks. The transporters report breaking down on bad roads and tracks and hesitate to use many tracks in the area. They complain of poor spares availability and fuel running out from time to time at more remote rural filling stations.

More depots would certainly help the farmer by transfering transport costs to CMB, which would result in downside pressure on producer price. Nevertheless, done judiciously we believe a net benefit would occur because:

> CMB would negotiate cheaper transport than the unorganised small farmers;
> the result would induce greater production.

More effort on organising farmers to bulk up at points safely available to motor transport would have high pay-offs.

A continuing process of improvement to feeder roads will help as will economic growth that eases the present foreign exchange constraints.

Finally, we did note that some gravel roads are having their road bed completely destroyed by heavy vehicle use during rains. This is especially evident in areas with a high clay content. A system of user discipline would probably be a net benefit.

PRICE AND PRICING

The Zimbabwe Government controls the domestic price of many agricultural products. A system run by statutory bodies operates for many of the country's important crops, which are known as 'controlled products'. Those currently controlled include maize, groundnuts, soyabeans, wheat, sorghum, bullrush and finger millet, beans, coffee, cotton, beef and milk. Four marketing boards are charged with the task of handling those commodities subject to control, viz:

The Grain Marketing Board (GMB)
The Cotton Marketing Board (CMB)
The Cold Storage Commission (CSC)
The Dairy Marketing Board (DMB)

The Agricultural Marketing Authority (AMA), is responsible for coordinating the operations of the four boards. The General Manager of each board is responsible to the Authority.

Price recommendations are prepared by the AMA following detailed consideration of production cost, consumer cost, world market price, the cost of importing the product, the amount of strategic stocks of the product held. On the basis of pricing papers by the AMA and producer organizations the Minister of Lands, Agriculture and Rural Resettlement recommends on appropriate prices to the Cabinet, who make the final decision.

A schedule showing the movement in producer prices over the past seven years for cotton, groundnuts, maize and sorghum appears in Appendix 23.

Of the 58 farmers interviewed only three were unhappy with the cotton producer price. At a glance this is surprising because, as is evident in Appendix 26, the price of cotton, in constant terms, has fallen 7.4% since 1980. However, the constant prices are derived from application of the Consumer Price Index for Lower Income Urban Families, which is possibly unsuitable for farmers.

Of the three farmers that raised price as a problem, two complained that the prices were low in relation to the input costs, especially chemicals. This prompted us to compare the rise in input costs against increase in the producer price (Table 15).

TABLE 15 (1)

COST OF PRODUCTION VS PRODUCER PRICES

COTTON

$/HECTARE $/METRIC TONNE

Year	$/ha Production Cost	Growth	$/ha Producer Price	Growth
82/83	196	100	515	100
83/84	244	124	570	111
84/85	260	133	670	130
85/86	260	133	750	146
86/87	316	161	-	-

Source: Agricultural Finance Corporation (production costs). The figures are based on the Corporation's recommended crop pack per hectare, made up of direct cash inputs only, ie, fertilizers, insecticides, seed, transport and contingencies (ref zones III/IV code C3 (Knapsack)).

Cotton production costs, which are higher than those of competing crops have been rising somewhat faster than producer price until this season. This contrast is probebly accentuated in a farmers mind by the fact that he takes the cost up front and bears both production and price risk.

CREDIT

The principle agricultural credit institution in Zimbabwe is the Agricultural Finance Corporation, a parastatal making short to long-term loans for all agricultural purposes including farm purchase.

AFC capital structure at 31 March 1985 was:

	Z$million (1)	
long-term loans	102.9	
short-term loans	169.0	
	271.9	
other assets	13.2	
	285.1	
financed by		
long-term debt	123.8	
short-term debt	121.0	
	244.8	(of which 226.7 from Government)
reserves	40.3	
	285.1	

The AFC operates both as a commercial agriculture bank and as a vehicle for government agricultural credit schemes. Two of the most important for the small farm sector are:

The small farm credit scheme to assist communal and small scale commercial farmers;

The resettlement credit scheme to assist resettlement farms.

(1) Source: Agricultural Finance Corporation, Annual Report 1985.

In view of the risks and high operating costs of administering many small loans in rural areas, Government underwrites any loss on these schemes, whose position for financial year 1984/85 was:

	expenditure	income	deficit (to Government)
Small farm credit scheme	7.4	5.0	2.4
Resettlement credit scheme	2.5	1.3	1.2

Since its founding in 1971, the AFC has primarily been providing credit to commercial area farms. However, since 1980 it has extended offices into communal areas, including Sanyati and Gokwe, and expanded its loans to small farmers, expecially communal farmers (Table 16) This expansion has certainly contributed to increased production of cotton by communal farmers, but is associated with a considerable arrears.

TABLE 16 (1)

AGRICULTURAL FINANCE CORPORATION LOANS BY FARM TYPE

	LARGE-SCALE COMMERCIAL		SMALL-SCALE COMMERCIAL		COMMUNAL		RESETTLEMENT	
	No. '000	Value Z$M	No.	Value	No.	Value	No.	Value
1984/85	1.5	110.3	12.7	3.7	165.9	32.0	122.6	12.2
1983/84	1.4	110.2	13.1	8.1	150.0	24.4	118.3	8.5
1982/83	1.7	87.2	13.0	4.5	138.9	13.2	4.2	1.5
1981/82	2.1	88.8	13.6	4.6	130.0	10.1	0.9	0.5
1980/81	2.5	86.9	13.3	3.7	118.0	4.2	-	-
1979/80	2.2	75.6	(4.3)	(1.6)	)	4.2	-	-

(1) Source: Agricultural Finance Corporation, Annual Report 1985 and Office of the Senior Economist.

The principal source of credit for farmers in the study area is AFC. AFC began loaning into communal areas in 1979/80 and the Sanyati Office opened in March 1981 with two inspectors; the Gokwe Office opened in June 1982 with three. Both are responsible to a Provincial Office in Gweru, which has computerized records of their operations. Unfortunately we did not have the time to visit Gweru.

When AFC credit is approved, stop orders on CMB or GMB payments are processed through Harare. Buying orders processed locally allow farmers to buy in the area, or from Harare, and in any case from suppliers of their own choice. The Agricura and Farmers Cooperative depot managers in Sanyati said they do more business with buying orders than cash.

Most of the credit extended is seasonal for cotton (Table 17). Some medium term credit is out for ploughs, planters, shellers, draft oxen and even a few tractors.

TABLE 17 (1)

AGRICULTURAL FINANCE CORPORATION SEASONAL CREDIT TO COMMUNAL AND RESETTLEMENT FARMERS IN SANYATI AND GOKWE

			FOR COTTON		FOR MAIZE		FOR WHEAT	
1984/85	No loans	Value(Z$)	Value	To Cover(ha)	Value	To Cover (ha)	Value	To Cover (ha)
Communal	5,763	4,407,749	4,366,508 (99%)	14,176	41,241	233		
Resettlement	1,105	620,760	573,810 (92%)	1,857	46,950	265		
Total	6,868	5,028,509	4,940,318	16,033 ha	88,191	498		
1985/86								
Communal	6,178	4,736,846	4,680,677 (99%)	15,197	44,280	250	11,889	159
Resettlement	1,226	688,688	634,880 (92%)	2,060	53,808	304		
Total	7,404	5,425,534	5,315,557	17,257 ha	98,088	554	11,889	159

(1) Source: Sanyati AFC Branch Office records. As the small-scale commercial farmers and medium term records are in Kadoma or Gweru we do not have them. Records in the Sanyati Branch commence 1984/85 when the office was upgraded.

AFC seasonal credit loans are given in terms of standard half or whole hectare packages.

TABLE 18

AFC CROP CREDIT PACKAGES FOR COTTON

Cotton 1985/86

COTTON 0,5 HA KNAPSACK SPRAYED

ZONES III/IV
CODE C3 (KNAPSACK)

2 x 50 KG COMP L	=	$37,00
1 x 50 KG A/N	=	$19,00
1 x .5 HA SPRAY PACK	=	$54,00
1 x 10 KG SEED	=	$ 3,00
TRANSPORT	=	$10,00
CONTINGENCY 5%	=	$ 7,00
		$130,00

COTTON 0,5 HA ULV (SPRAYED

ZONES III/IV
CODE C3 (ULV PACK)

2 x 50 KG COMP L	=	$37,00
1 x 50 KG A/N	=	$19,00
1 x .5 HA SPRAY PACK	=	$72,00
(including 1 doz batteries)		
1 x 10 KG SEED	=	$ 3,00
TRANSPORT	=	$10,00
CONTINGENCY 5%	=	$ 7,00
		$148,00

Cotton 1986/87

COTTON 0,5 HA KNAPSACK SPRAYED

ZONES III AND IV

CODE C3 (KNAPSACK)

2 x 50 KG COMP L	=	$45,00
1 x 50 KG A/N	=	$22,00
1 x .5 HA SPRAY PACK	=	$83,00
1 x 10 KG SEED	=	$ 2,00
TRANSPORT	=	$12,00
		$164,00

ZONES III AND IV

CODE C3A (KNAPSACK)

2 x 50 KG COMP L	=	$45,00
1 x 50 KG A/N	=	$22,00
1 x .5 HA SPRAY PACK	=	$83,00
TRANSPORT	=	$12,00
		$162,00

Break-even point (inc prescribed costs) 312 Kg/0,5ha (1,7 bales)

COTTON 0,5 HA ULV (SPRAYED

ZONES III/IV

CODE C3/ULV PACK

2 x 50 KG COMP L	=	$45,00
1 x 50 KG A/N	=	$22,00
1 x .5 HA SPRAY PACK	=	$90,00
(including 1 doz batteries)		
1 x 10 KG SEED	=	$ 2,00
TRANSPORT	=	$12,00
		$171,00

ZONES III/IV

CODE C3 (ULV PACK)

2 x 50 KG COMP L	=	$45,00
1 x 50 KG A/N	=	$22,00
1 x .5 HA SPRAY PACK	=	$90,00
(including 1 doz batteries)		
TRANSPORT	=	$12,00
		$169,00

Break-even point (inc prescribed costs) 326 Kg/0,5ha (1,8 bales)

The AFC Office in Sanyati has an active technical extension staff helped by credit assistants and inspectors assistants who live in the farmlands. These provide extension and supervision for farmers at group meetings and even in farmers' fields. Cooperation with AGRITEX staff is good. AFC technical staff organize groups for ease of loan administration and input supply but all loans are to individuals. Each farmer must have a plan and be a registered grower. Preloan group meetings begin in March and loan applications are processed from April through July.

We did not ask for details of the arrears position but this was said not to be good, primarily as a result of drought compounded by side-marketing cotton to avoid stop orders especially when arrears are up and yields down.

In the process of our study we noted many signs of side marketing. It is an open secret in Sanyati. The first reason is simply to get ready cash at a time of low income in this highly seasonal rural economy. Many individuals sell small amounts for this reason. A more pernicious form of side marketing is the pledging of part or all of the crop in return for credit at retail stores. (1) We do not know how prevalent this practice is.

We did note during the study that households contain more than one person registered as a cotton producer. The independence of wives and children makes this sensible. However, it can be used to bypass a stop order. Further, one person will have more than one registration card under different names.

Zimbank

In the more rural areas we visited, farmers are concerned about the safety of cash. They appreciate that Zimbank will encash CMB checks drawn on Barclays Bank. In 1984/85 Z$2 473 043 of these were taken in by Zimbank's Sanyati Branch.

The Zimbank Branch in Sanyati opened in September 1983. The bank is computerized and on-line to Harare. Current and savings accounts are building up rapidly; debtors are not.

TABLE 19

ZIMBANK SANYATI BRANCH ACCOUNTS

Year end (30 Sept)

	No.	Value(Z$) '000	Average monthly value '000
1. Savings			
1983/84	1071	394	109
84/85	1870	843	371
2. Current			
1983/84	63	454	303
82/83	83	563	379
3. Debtors			
1983/84		14	12
84/85		17	20

In effect deposits of this rural area are going elsewhere for investment. This stark fact arises from the difficulties which a conservative commercial bank must face in loaning into an environment such as Sanyati. First, the area is agricultural and agricultural credit is tied up by AFC, which charges lower interest. Second, the town's small businesses are mostly leasing buildings from ARDA and, as such, are unable to provide the required collateral security. Third, the town's two large enterprises (ARDA and the Ginnery) bank centrally. Fourth the area is not freehold.

(1) Referring to the practice of side market buying one person said "Ah! Outside of the law, that is where the riches lie".

SUPPLIERS OF AGRICULTURAL INPUTS

The increase in cotton production in the Gokwe-Sanyati area has attracted private sector suppliers of inputs to invest in the area. Four companies set up depots at Sanyati in 1981/82. However one of them withdrew in December 1984.

One of the companies explained that 75 - 85% of all chemicals sold at their depot are for cotton production. The depots were well received by cotton growers as they have the effect of transferring transport cost and risk from the grower to the chemical company. The incentive for the suppliers however, is small because the price control mechanism currently in force is such that the supplier is unable to recoup the transport costs incurred from the main centres to the depot. Nevertheless, the two depot managers interviewed expressed satisfaction with business in the area. Sales have been increasing every year.

To give an idea of the value of business in the area, in 1985/86 the AFC loaned $5 316 000 to communal and resettlement cotton farmers in the area (Table 17). 86% of this amount is for the purchase of fertilizers and chemicals. Considering the fact that a good number of farmers finance their own purchases (44% according to our survey, Table 13), total sales during the 1985/86 season were in the region of seven million Zimbabwe dollars.

In addition to supplying fertilizers and chemicals, one of the outlets, namely the Farmers Co-op, also sells implements such as ox-drawn ploughs, cultivators, harrows and planters and are stockists of other household consumables.

In the Manoti area we came across an emergent supplier of inputs. Because the centre is far from the established inut depots, a small rural store owner brings in inputs and sells to local farmers, sometimes on extended credit. We were not able to establish how the shop owner finances the credit given.

The survey revealed that chemical companies represented in the area are active in rendering extension services to the local farmers particularly with regard to the application of inputs they supply (Table 14). The company representatives work hand in hand with AGRITEX officials and are invited to address farmers at local farmers' meetings. They occasionally also call on farmers at their smallholdings to give technical advice that the individual may require.

RESEARCH

The principal agency for conduct and coordination of cotton research is the Ministry of Lands, Agriculture and Rural Resettlement, Department of Research and Specialist Services, Cotton Research Institute in Kadoma. The Institute opened in 1925 as a breeding station seeking resistance to Jacid (Empoaca facialis). Resistant varieties were developed. Today the Research Institute has sections of breeding, entomology, agronomy and pathology.

Until independence the Institute's research was basically aimed to solve commercial farm problems; although many of the problems were shared by any cotton farmer in the nation; and, a small amount of research was being done in communal farms. However, from 1981/82 a considerable research programme began in communal areas. By 1983/84 initial supervision/farmer participation problems had been solved, and since then a large proportion of the Institute's research has been conducted in and targeted to communal areas. Sixty-four trials are being done in 1985/86 on communal lands. Most are agronomy trials which focus on fertilizer use, spacing and moisture conservation, the last showing greatest promise. Some breeding trials are also being done. It is notable that the Institute's cultivar Albar 501, which is drought resistant, and which was released in 1981/82 has been of great benefit in the communal areas as well as in the middleveld as a whole.

In addition to trials work the Institute does entomological surveys in communal areas. Systematic studies by the Institute have shown that the many non-literate communal area farmers should have specially prepared instruction and materials for their scouting to be effective, and their insecticide use to be both effective and safe.

In the communal farming lands, trial areas have been selected on the basis of CMB seed sales and AGRITEX assessment. In the study area for this report, Gokwe, Sebungwe and Sanyati contain four trials centres. In each AGRITEX has selected 10 cooperating farmers with fields lying within a 10 Km radius. Each centre has a Research Hand with equipment to run trials. A Research Officer lays out the trials and visits once a month. The Research Hand plants, thins and runs each trial. Individual farmers deal with weeding and spraying. The cotton, or its weight equivalent accrues to the farmer.

Extension

Extension has played a key role in the expansion of cotton production in the study area. As reported to us, cotton growing began with trials on farmer fields began in Gokwe in 1963 and Sanyati in 1964. The extension service provided seeds, fertilizer, pesticides, sprayers and essential advice. In Sanyati this work was organized by an officer based at Gowe and reporting to Kadoma.

In our discussions with farmers they readily acknowledged the importance of extension staff in assisting them with highly useful cotton production and scouting advice. The Sanyati AGRITEX office only opened in 1979 and became a full Regional Office in 1982. Between 1982 and 1986 staff numbers have increased as follows.

TABLE 20 (1)

SANYATI AGRITEX OFFICE, 1982 AND 1986 STAFF

	1982	1986
Regional Agricultural Officer	1	1
Agricultural Extension Officer	2	4
Supervisor	4	5
Senior Extension Supervisor	0	1
Extension Worker	25	35
Clerical Assistant	1	1
Field Orderly	1	4

Source: Regional Agricultural Officer, Sanyati.

Coverage is now 1:500 farmers in Sanyati Communal Area and 1:700 in the office's area of responsibility.

The area covered has also increased. Until 1982, the staff concentrated on Sanyati Communal Area and the small-scale commercial areas of Copper Queen and Chenjiri. Since then the coverage has expanded to Sebungwe and Gandavaro communal areas and Copper Queen North Resettlement. The AGRITEX service concentrates on working with groups of farmers.

All extension staff go to the Cotton Training Centre for a two week course on cotton production and scouting. Thereafter some do one week refresher courses. These extension staff, in turn run short cotton courses locally for farmers at schools during holiday periods in December and January.

(1) Source: Regional Agricultural Officer, Sanyati.

TRAINING

The main agency for training farmers in cotton production is the Cotton Training Centre in Kadoma. This centre is adjacent to the Cotton Research Institute.

Historically the Cotton Training Centre arose from an initiative of the Commercial Cotton Growers Association, which in 1972 organized cotton scouting courses at the Cotton Research Institute. In 1974 the Association bought a farm beside the Institute and there in two phases (1981 and 1984) established the Centre.

At present this institution has residential facilities for 300 students at a time and provides:

i a six month, comprehensive cotton production course;

ii a three week production course, designed for small farmers;

iii a two week production course for extension workers;

iv 10 and 5 day refresher courses on cotton scouting;

v 3 day picking course;

vi 2 day pest management supervisory courses;

vii various special courses not strictly related to cotton.

Funding for the Centre and student tuition come from various sources including the Commercial Cotton Growers Association, large-scale commercial cotton growers, agro-chemical companies, international donors and profit from the 400 ha of arable farm that comprise the Centre's farm.

The Cotton Training Centre is run by a management committee responsible to the Council of the Commercial Cotton Growers Association.

From 1972 through 1979 students of the Centre were drawn entirely from commercial farms. However, since 1980 there has been rapid expansion in participation of communal area and small-scale farmers, and the inclusion of extension staff (see Table 21).

It is notable that, in seeking communal area farmers for training, AGRITEX staff try to select persons who are both literate and leaders with the intention of the trainees becoming trainers in their home communities.

The Centre follows up its training by check scouts going out at a ratio of 1:100 trainees to visit farms and attend meetings and field days.

TABLE 21

COTTON TRAINING CENTRE, COURSE PARTICIPANTS

Year	No. Trainees	Communal and Small-Farmers	Extension Workers
1972	141	-	-
73	486	-	-
74	1 052	-	-
75	783	-	-
76	929	-	-
77	956	-	-
78	1 054	-	-
79	998	-	-
1980	1 056	31	-
81	966	334	-
82	1 057	386	159
83	1 269	489	137
84	1 992	827	156
85	2 196	936	117

(1) The Cotton Training Centre kindly provided us with a list of all 328 trainees sponsered by USAID for cotton production courses in 1984 and 1985. The list provides name, address and mark obtained. It is part of the consultancy archive left with USAID.

Our talks with farmers indicated that the Cotton Training Centre is now at the apex of a highly effective cotton training mechanism:

i it trains farmers who in turn train other farmers;
ii its check scouts train farmers in the fields;
iii it trains extension agents who in turn train farmers both in the field and with course work.

SUMMARY

The amount of cotton being grown in the Sanyati/Gokwe Area is sufficient to supply a ginnery of double the capacity presently installed at Sanyati Depot. Doubling the ginnery would have a strong, positive economic effect on the town and provide a potential for additional agroindustry. It would be pleasing to the farmers as both a practical example of decentralization and a rewarding recognition of their importance as cotton growers.

Increasing the number of transit depots would immediately lower farmer transport costs and risks, and would definitely be an incentive for greater production.

Investment to increasing cotton production in the study area, or in other appropriate small farmer area of Zimbabwe, requires much the same broad strategy needed to improve small farm output generally: supportive policy, fair producer price, access to markets, easy availability of inputs, and appropriate research tied to active extension. In fact support to a broad spectrum of production increase within the small farm sector is the best way to insulate it from the risks of growing cotton.

APPENDIX 1

STATEMENT OF WORK

A. Objective

To determine the impact of the Sanyati cotton gin upon smallholder cotton production in the Gokwe area.

B. Background

USAID provided the Cotton Marketing Board (CMB) with US$1.8 million to purchase a cotton gin and USAID further provided Z$2.8 million for the local costs of its construction. The cotton gin was located at Sanyati the centre of increasing cotton production by smallholder cotton producers. The cotton gin was formally opened on 15 June 1984.

Cotton production by smallholder producers has increased significantly during the past few years. For example, in 1981 there was 44 000 smallholder growers registered with the CMB; by 1985 the number of registered growers had increased to 158 000. The total production from the smallholder growers has risen from 32 000 tons in 1979 to 96 000 tons in 1984. During the most recent season, 1985, the smallholder producer accounted for about 45 percent of the nation's production.

The Sanyati cotton gin is expected to process 25 000 tons of cotton during a season. It is estimated that the value of this production will be Z$10,0 million. In 1984 the number of growers that were producing cotton in the Sanyati and Gokwe areas was as follows:

Communal Farming Areas	Actual Registration	Est Avg Area/Grower ha	Est Area ha	Prod: (t)
Sanyati	6 922	2	13 840	13 840
Sebungwe	7 174	2	14 350	14 350
Gokwe	22 400	2	45 000	45 000
Gandavaroyi	773	2	1 550	1 550
TOTAL	37 269		74 740	74 740
Small Scale Commercial				
Copper Queen	367	4	1 470	1 470
Chenjiri	233	4	930	930
	600		2 400	2 400
Resettlement area	300	2,5	750	750
TOTAL	900		3 150	3 150

The seed cotton production by these growers in 1985 was about 80 000 tonnes of which 25 000 tonnes was ginned at Sanyati and the balance hauled by road transporters between 100 and 185 Kms from the various points to the two ginneries at Kadoma and Chegutu.

The Cotton Marketing Board is interested in doubling the output of the cotton gin at Sanyati so that it can process 50 000 tons annually. USAID and the CMB believe that the cotton gin has had a positive impact upon cotton production in the Gokwe area. However it is felt that the impact of the cotton gin should be more fully described. Therefore a field study should be conducted in order to enable USAID and the CMB to evaluate the impact of its program and to determine if other agricultural activities should be initiated.

C. Scope of Work

The Contractor should review cotton reports available through the CMB, the Commercial Cotton Growers Association, and the National Farmers' Union of Zimbabwe in Harare.

The contractor should review the use of agricultural inputs to support cotton production. Initial contact should be made with firms in Harare that are supplying production inputs to cotton producers, ie, fertilizers, herbicides and pesticides, as well as the Agricultural Finance Corporation.

The contractor should review the cotton production course at the Kadoma Cotton Training center (CTC) and should determine, to the extent possible, the names and numbers of persons from Gokwe that have been trained at the CTC. The number of holders of Master Farmer Certificates in the Gokwe area should be reviewed through AGRITEX.

The contractor will spend up to four weeks conducting field work based in Sanyati and undertaken throughout Gokwe. Interviews should be conducted among the farmers of the areas with emphasis upon the communal farmer. Efforts should be made to locate farmers who attended production courses at the Cotton Training Centre and the Ciba-Geigy sponsored Kohwa Pakuru production course. Discussions should be held with Sanyati Cotton Gin personnel; Agricultural, Technical and Extension Services, (AGRITEX) extension agents, Agricultural Finance Corporation (AFC) officers; and suppliers of agricultural inputs for cotton production.

Based on the above, the contract will provide information about the impact of the cotton gin upon acreage planted to cotton, cotton production and farmer incomes from cotton sales. The contractor will discuss the possible impact of the doubling of the capacity of the existing cotton gin. The other factors that effect cotton production, such as availability of credit, cotton production inputs, extension information, technical knowledge, labour and transport, will be discussed and with emphasis given to any one of these factors that are or may be a constraint to future production. The contractor will make recommendations for future activities that would support smallholder cotton production activities.

D. Required Reports

Contractor will have a draft report complete at least five days prior to planned departure. Draft report will be reviewed by USAID and Cotton Marketing Board before contractor leaves the country.

A final report, 15 copies will be mailed to USAID within 15 days of contractor's departure from Zimbabwe.

APPENDIX 2

INDIVIDUAL INTERVIEWS BY ORGANIZATION AND LOCATION

Organization	Chitenderano RC	Harare	Sanyati DC	Gokwe DC	Kadoma	Total
Cotton Marketing Board		4	5	9		18
Ministry of Agriculture		3	3	2	2	10
Central Statistical Office		8				8
Agricultural Finance Corp		3	2			5
Agric and Rural Dev Authority		2	2			4
Ministry of Local Government		2			1	3
Input Supply Houses		1	2			3
Cotton Training Centre					2	2
Zimbabwe Nat Farmers Union		2				2
Transporters	1		1			2
Commercial Cotton Growers Association		1				1
USAID		1				1
Zimbabwe Banking Corporation			1			1
Cooperatives					1	1
Sanyati District Council			1			1
Cotton Research Institute (also Ministry of Agric)					1	1
Zimbabwe Information Service			1			1
Sanyati Bakery			1			1
	1	27	19	11	7	65
Farmers	1	-	24	33	-	58
	2	27	43	44	7	123

APPENDIX 3

FARMER INTERVIEWS BY LOCATION AND TYPE OF FARMER

	LOCATION				
	Sanyati District Council		Gokwe District Council	Chitenderano Rural Council	Total
Type	Communal	Resettlement	Communal only	Small-Scale Commercial only	
Site of Interview					
At a CMB depot	2	-	24	-	26
On own farm	10	4	5	1	20
In own farm area (1)	8	-	4	-	12
TOTAL	20	4	33	1	58

APPENDIX 4

FARMER GUIDED INTERVIEWS (1)

1. Date: 2. Location:

3. Name:

4. Area:

5. Type:

6. Household:

   =>15

   =<14

   total

7. Grows cotton No Yes Dryl Irr

8. Every year for last _____ years

9. History

Crop Yr	Area (a)	Bales	Comments
1985/86			
84/85			
83/84			
82/83			
81/82			
80/81			
79/80			
78/79			
77/78			
76/77			
75/76			
74/75			
73/74			
72/73			
71/72			
70/71			
69/70			
68/69			
67/68			
66/67			

(1) The interview data sheets have been turned over to USAID as part of the consultancy archive.

10. Inputs (1995/86)

Traction	self	other	both
tractor			
oxen			
hoe			
Timely	No	Yes	
Fertilizer	No	Yes	Bags
sources			
timely	No	Yes	
Pesticides	No	Yes	
sources			
Herbicides	No	Yes	
sources			
Labour	househ	hired	both
thinning			
weeding			
chemicals			
picking			

Finance

self only

AFC only

both

other

CMB last delivery

CMB check arrived

AFC credit approved

11. Training No Yes

Years Lengths

CTC

Other

Master Farmer No Yes

Since taught others No Yes

comment

Since greater yields No Yes

comment

12. Extension (1985/86)

Visited in	Group	Househ	Field
by AGRITEX			
AFC			
CMB			
Supplier			
CTC Grad			
Other			

13. Transport of cotton (1985/86)

self only

hired only

both

comment

14. Problems/Improvements

15. What has/will

Depot done for self/community

Ginnery done for self/community

2 x Ginnery do for self/community

APPENDIX 5

RISK

Risks to cotton occur in the market and in the field.

Zimbabwe cotton has a deserved reputation for high quality as a result of thorough and reliable classification, grading, hand-picking and variety characteristics. It is in demand.

Nevertheless, external risks arise from many sources, including:

1. OECD growth;
2. competition from synthethics and from formidable producing competitors;
3. exchange rate instability;
4. security of transport channels.

Internal risks arise from two sources:

1. internal policies, and
2. field risks.

The two sources are intimately intertwined as a result of the nature of cotton as a crop.

Excepting tobacco, cotton is the most management and input demanding field crop grown in Zimbabwe. Although, in comparison to maize it is drought resistant, it is sensitive to nutrient level, and extraordinarily attractive to disease entities and pests, whose dynamic adaptation capabilities inevitably involve the farmer in pest control at increasing levels of complexity and cost to the individual producer and to the environment. Cotton is subject to fire in the field, and prior to delivery to the gin.

Cotton requires particularly careful management to overcome these risks, cover the costs of the considerable inputs and give a good return to its large labour requirement.

Specifically, in addition to fertilizer and certified seed, the farmer must put in special labour on thinning in the first month and weeding in the first two months. Thereafter insect control, involving constant monitoring, expert extension advice and timely application of pesticides are absolutely essential to a decent return. Harvesting is onerous and getting the crop to the gin requires an adequate supply of packing materials and transport. Fire control in the field and destruction of all plants after harvest require a high level of social cooperation, discipline and control.

Inputs, advice and transport must be reliably available on time for the farmer to minimize these many production risks.

Finally, it does happen in this world that small farmers in response to cash potential overextend themselves on cotton at the expense of subsistence cropping. This is a viable ploy only if the cotton crop gets through and gets a good price plus subsistence foods are available for purchase.

Consistent internal policies that:

- shield the small farmer, in particular, from external risk;
- provide a good price;
- expand availability of inputs in communal areas;
- support research and extension on cotton but also on food crops and alternative cash crops;

are all necessary for risk reduction and expansion of cotton production.

APPENDIX 6

THE ECONOMY AND AGRICULTURE SECTOR

General Background: The Economy, Agriculture Sector, Rural Development Policy, Land, Farm Types, Population.

Excepting South Africa, Zimbabwe has the largest and most sophisticated economy in sub-Saharan Africa. (1) Manufacturing constitutes the largest sector (>25%) followed by public administration, including health and education, all of which have been growing rapidly since independence as a direct result of Government expenditure (Table 25). Agriculture at 15% (1985) has been rising from low drought induced levels to a proportion it sustained at the begining of the decade.

For various reasons spelled out in the national plan, the mining sector can be expected to grow slowly (external market constraints and the high cost of new developments); so the major burden of improvement will fall on manufacturing and agriculture, which probably must prevail in a condition of slow growing international demand. (2)

To feed a population increasing at >2%/year, to supply agroindustry, and to contribute to exports, the agriculture sector should grow on the order of 4%/year. This can only be done through investment in communal area farmers who represent a store of unused capacity.

(1) USAID Zimbabwe Economy and the Agriculture Sector, 1985.
(2) Republic of Zimbabwe First Five Year National Development Plan 1986-1990. Volume 1, Harare 1986. pp23-31

TABLE 22

GROSS DOMESTIC PRODUCT AT FACTOR COST 1974-1985 (Z$ MILLION AT CURRENT PRICES)

SECTOR (1)

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Agriculture and forestry	315	323	350	334	292	325	458	649	662	592	783	966
Mining and quarrying	136	131	152	149	156	226	285	250	217	284	330	380
Manufacturing	421	447	480	460	514	623	802	1016	1121	1385	1565	1797
Electricity and water	42	50	57	56	62	71	70	78	73	134	161	187
Construction	82	94	88	84	68	92	87	133	185	194	217	239
Finance and insurance	73	86	92	102	105	123	159	185	228	274		337
Real estate	46	44	47	47	45	44	43	55	55	59		66
Distribution, hotels and restaurants	258	258	262	242	265	313	425	566	718	737	747	840
Transport and communications	138	145	159	166	178	188	211	303	362	364	379	417
Public administration	109	130	163	204	238	269	290	307	357	375	391	411
Education	55	65	73	76	86	98	169	217	309	343		418
Health	33	38	43	49	54	63	73	84	106	109		130
Domestic services	40	45	49	52	52	53	65	72	85	88		91
Other services	85	98	105	113	120	136	173	213	277	316		377
Less imputed bank services charges	-42	-52	-56	-65	-69	-82	-108	-131	-146	-173	-199	-227
Gross Domestic Product (Factor Cost)	1791	1902	2064	2069	2166	2539	3226	4049	4609	5081	5699	6429

TABLE 23

GROSS DOMESTIC PRODUCT AT FACTOR COST 1974-1985 (Z$ MILLION AT CONSTANT (1980) PRICES)

SECTOR (1)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Agriculture and forestry	489	460	512	403	444	444	458	496	501	469	529	593
Mining and quarrying	295	299	326	309	292	292	285	271	284	283	295	295
Manufacturing	736	729	687	653	629	697	802	881	877	852	811	847
Electricity and water	91	94	85	58	70	64	70	70	63	68	70	74
Construction	166	156	123	109	91	89	87	99	97	89	91	91
Finance and insurance	140	190	192	192	171	147	159	206	239	211	194	202
Real estate	93	81	72	66	54	48	43	51	42	42	43	43
Distribution, hotels and restaurants	386	378	353	337	329	339	451	528	451	392	372	389
Transport and communications	209	196	189	165	167	174	211	242	238	223	213	223
Public administration	177	198	219	245	277	277	290	337	332	336	363	363
Education	127	134	134	137	127	127	169	236	284	310	334	334
Health	61	63	63	68	68	68	71	88	89	92	92	92
Domestic services	74	74	74	72	69	65	65	63	61	60	59	59
Other services	168	168	165	163	163	165	173	186	204	215	217	217
Less imputed bank service charges	-77	-90	-90	-95	-95	-98	-108	-109	-168	-120	-124	-129
Gross Domestic Product (Factor Cost)	3135	3130	3104	2882	2856	2898	3226	3645	3646	3522	3559	3693

(1) Central Statistical Office: Statistical Yearbook of Zimbabwe 1985, Harare, 1985, page 83.
Central Statistical Office: National Income and Expenditure Report, Harare, 1985, pages 6-7.
Republic of Zimbabwe: First Five-Year National Development Plan, 1986-1990, Harare, 1986, pages 48-49.

BALANCE OF PAYMENTS, EXPORTS AND FOREIGN EXCHANGE

Zimbabwe has an open economy in which exports and imports typically play a large role. Total mechandise exports constitute over one quarter of GDP. Tobacco is consistently the dominant export. Cotton lint is now the fourth largest and agricultural products regularly contribute more than 40% of exports.

TABLE 24

MAIN MERCHANDISE EXPORTS (Z$'000) (1)

	1978	1979	1980	1981	1982	1983	1984	
Tobacco	102494	85491	122848	224354	194668	232632	287319	23%
unmanufactured	96629	80229	118131	218280	192315	229690	284043	
manufactured	5865	5262	4714	6074	2353	2942	3276	
Gold	46100	66600	115200	76300	140500	104300	159600	13%
Ferro-alloys	31600	46345	88071	79517	77163	116186	154941	12%
Cotton Lint	40063	46362	57192	60299	51759	73574	115262	9%
Asbestos	57344	70527	80083	75947	60859	68590	74036	6%
Nickel	36525	37851	52754	11974	45453	67771	63031	5%
Sugar	10891	20569	47358	54801	52316	52124	56022	4%
raw	7369	15802	40992	45908	44418	39605	40593	
refined	3522	4767	6366	8893	7898	12519	15429	
Maize	25433	17021	7398	34738	39881	40551	?	
Meat	37274	37787	18626	8560	7117	17872	37879	3%
chilled/frozen	34555	32572	13708	4526	4496	10942	26760	
procured	2719	5215	4918	4034	2621	6930	11119	
Steel Ingots & Billets	22767	25968	34224	24185	28228	40666	31027	2%
Copper	26455	31270	24617	18317	21702	33676	31062	2%
Coffee	11612	10762	6871	9915	14742	19156	29843	2%
Tea	7975	6895	6168	5870	6056	10126	25462	2%
Total Merchandise Exports	558661	645365	787526	88067	807144	1025708	1271070	

(1) Central Statistical Office: Statistical Year Book 1985, Harare 1985, pp 164 - 166.

Typical imports are fuel, intermediate and capital goods which together constitute 85% of all imports. Consumer goods make up the remaining 15%

One result of this large external trade is that Zimbabwe is vulnerable to forces outside its control such as lower OECD country demand coupled with higher costs of intermediate and capital goods and fuel.

In order to sustain a workable balance of payments in the face of such forces Government keeps the Zimbabwe dollar low and otherwise promotes exports; tightly controls foreign exchange, external borrowing and imports.

Promoting merchandise exports is the most productive means to improve the balance of exchange position and in this case manufactured goods, gold, beef and cotton have reasonably good prospects in terms of future demand.

RURAL DEVELOPMENT POLICY

A rapid transformation of the rural areas has been going on since independence. This is a result of deliberate government policy aimed to redress asset imbalances that existed prior to 1980.

The Prime Minister, Mr Robert Mugabe, in his opening address to the Zimbabwe Conference on Reconstruction and Development (ZIMCORD), provided a very apt summary of the major objectives of his plan:

"The task before my Government in the post-war era of independence and peace ... involves rehabilitating our economy, particularly in the rural areas, resettling thousands of our people, as well as making sure that vital social services are restored or introduced for their benefit."

This plan is manifest in an increase in Government expenditure in those votes that reflect expansion of services in the rural areas. Since 1980, expenditure under these votes has increased 276% although total Government expenditure increased by only 158% over the same period. (Table 25)

Of particular interest is the Agriculture vote which has increased 319% since 1980. This sector is the key to the rural economy of Zimbabwe because:

(a) over 70% of the population lives in rural areas and their main source of livelihood is farming;

(b) the growth of the economy is heavily influenced by performance of the agricultural sector;

(c) although the number of people in formal employment in the agricultural sector has decreased in the past decade, it remains the largest contributor to formal sector jobs.

In the 1985-86 budget, the Minister of Finance, Economic Planning and Development allocated an amount of Z$140m to cover trading losses of agricultural marketing authorities and an additional Z$13m for the Agricultural Finance Corporation losses resulting from loans to farmers.

An Urban Development Corporation Bill has recently passed through Parliament. The purpose of the Act is to establish a statutory body whose primary aim is provision of assistance to councils and the private sector for the development of rural service centres and growth points as well as small urban centres. The Corporation will assist local authorities to mobilise finance for the general development and industrialisation of these rural centres.

The Government's aim is to increase gainful employment in rural areas so that citizens do not immigrate to urban centres in search of jobs.

TABLE 25

CENTRAL GOVERNMENT EXPENDITURE BY VOTES, Z$ THOUSAND

	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85
AGRICULTURE:								
General	47116	47968	37298	34021	47757	83061	142492	166188
Research and Settlement Services	4646	5323	5929	7968	9011	7950	9165	10738
AGRITEX	2941	3346	3734	4083	9964	14819	16912	20646
Veterinary Services	4317	5649	6082	8780	17176	18891	21261	24489
TOTAL AGRICULTURE	59020	61286	53043	54852	83908	124781	189830	222061
HEALTH	38561	45621	52844	76728	104583	120041	136645	155564
EDUCATION	71275	89967	118631	207642	291587	372743	429010	477752
LANDS, RESETTLEMENT + RURAL DEVELOPMENT	3147	9242	13510	20779	39919	57146	44593	38519
TOTAL	172003	206116	238028	360001	519997	674711	800078	893896
GROWTH	72	87	100	151	218	283	336	376
NATIONAL EXPENDITURE	744969	859906	1026369	1202242	1571224	2012051	1432769	2643467
GROWTH	73	84	100	117	153	196	237	258

Source: Central Statistical Officer, Statistical Yearbook 1985, page 98 and Quarterly Digest of Statistics, September 1985, page 62.

THE LAND ASSET

Agro-Ecological Regions

Zimbabwe has been classified into five natural regions. The principal criterion for classification is the amount and usefulness of the rainfall for cropping. Regional characteristics are as follows:

Region 1: Specialized and diversified farming region

Rainfall is more than 1 000mm/year below 1 700m altitude and 900mm higher. Temperatures are comparatively low and rainfall effective. In frost-free areas tea, coffee and macadamia are grown. In all areas afforestation, fruit tree horticulture and intensive livestock rearing are done. Some supplementary irrigation is used.

Region 2: Intensive farming region

Rainfall is 750 - 1 000mm/year and seasonal. The region is suitable for intensive crop and livestock production. Part of the region is subject to shortened rains or intra-season dry spells.

Region 3: Semi-intensive farming region

Seasonal rainfall of 650 - 800mm/year, much of it in heavy storms. Temperatures are comparatively high and intra-season dry spells frequent. The area is marginal for maize, cotton or tobacco. The farm enterprise should include livestock and moisture conservation farming of drought resistant crops.

Region 4: Semi-extensive farming region

Rainfall is 450 - 600mm/year, with periodic drought and severe dry spells during the rains. Predominant use is livestock production.

Region 5: Extensive farming region

Rainfall is too low and erratic for drought resistant crops, in the absence of irrigation. Predominant uses are ranching and wildlife management.

The distribution of these regions is given in Map 3. The area of each is as follows:

	sq km	% of total area of Zimbabwe
Region 1	7,000	1.8
2	58,600	15.0
3	72,900	18.7
4	147,800	37.8
5	104,400	26.7
	390,700	100.0

FARM TYPES

Farms in Zimbabwe are of two basic types: large-scale commercial and communal. Smaller derivative types are small-scale commercial and resettlement.

Large-Scale Commercial Farms

About 4 500 large-scale farms are located in discrete large-scale commercial farm areas which cover 40% of the country. Average farm size is more than 2 000 ha. Services and infrastructure in these areas are good. Farm technology is advanced and yields high. These farms produce some 60% of total agricultural output and 90% of marketed production. They account for more than 25% of total wage employment. The main crops are maize, virginia tobacco, cotton, soyabeans and wheat. Large ranches in the extensive farming region grow beef cattle. Large-scale dairy farms are concentrated around the larger towns. The large-scale commercial farms are mostly owned by persons of European origin. Tenure is freehold based on Roman Dutch law.

Communal Area Farms

About 700 000 small household farms are located in some 170 designated communal land areas. Such areas, known in colonial days as the tribal trust lands, occupy about 42% of the country and contain more than half the total population of the nation. The main occupation of these areas is mixed subsistence farming of maize, millets and sorghum, with cotton as a cash crop. Cattle are kept for draught power, meat and milk; as a store of wealth; for traditional exchange, and for sale. Ox ploughing is the usual form of primary cultivation. Smallstock diversify the enterprise and are handy packets for sale or consumption. Tenure is customary, involving rights of use and communal grazing.

Development of services and infrastructure in the communal areas is largely a post-independence phenomena. It is still in process.

Small-Scale Commercial Farms

About 8 600 small-scale commercial farms occupy 4% of all the land. These farms, averaging 124 ha, are clustered in areas known in colonial times as the African purchase lands because they were subject to purchase by black farmers. Main crops are largely those produced in the communal areas but with a considerable proportion for the market.

Resettlement Areas

Resettlement areas, and farms, result from post-independence government efforts to resettle farmers from overused communal areas into commercial areas bought for the purpose. In some resettlement areas government provides considerable infrastructure. Farm areas are 10 ha or less plus open grazing. Some resettlement farms are cooperatives.

DISTRIBUTION OF FARM TYPE BY REGION

A most basic flaw in Zimbabwe is that farm types are historically and presently tied to specific areas that are not proportionately distributed among the agro-ecological regions. The harder regions, of less easy use, carry a disproportionately large and growing population and are degrading from use at the low present levels of investment.

Basic data appear in Table 26. Reading down: 74% of the communal area is in regions 4 and 5; conversely 51% of the large-scale commercial area is in regions 1-3. The weight of the small-scale commercial area is marginal to that of the large-scale. Reading across: 78% of regions 1 and 2 fall within commercial farming areas; only 21% of these is covered by communal lands.

TABLE 26

DISTRIBUTION OF LANDUSE BY REGION

Natural Region	Area (sq km)	Designated Land-Use: Communal Farming	Large-Scale Commercial Farming	Small-Scale Commercial Farming	Parks, Wildlife & Forest Reserves
I	7000 (2%)	1400 (20%) (1%)	4300 (61%) (3%)	100 (1%) (1%)	1200 (17%) (2%)
II	58600 (15%)	12700 (22%) (8%)	43300 (74%) (26%)	2500 (4%) (18%)	100 (1%) -
III	72900 (19%)	28200 (39%) (17%)	32400 (44%) (21%)	5400 (7%) (38%)	6900 (9%) (12%)
IV	147800 (38%)	73400 (50%) (45%)	40200 (27%) (26%)	5200 (4%) (37%)	28900 (20%) (51%)
V	104400 (27%)	47800 (46%) (29%)	36500 (35%) (23%)	1000 (1%) (7%)	19100 (18%) (34%)
TOTAL	390700	163500 (42%)	156800 (40%)	14200 (4%)	56200 (14%)

Source: Central Statistical Office. Statistical Yearbook 1985. Harare 1985.

The maldistribution of land assets is vexed by its association with ethnic origin. This is no longer a determining fact; however direction of investment is.

POPULATION

The population of Zimbabwe is estimated to be 8,4 million and rate of increase 2,8% per year. (1) There is some evidence that crude birth rate at 39,5/1 000 is beginning to decline. Crude death rate is 10,8/1 000.

The 1982 census indicates that 98% of the population is of African ethnic origin. Persons of European ethnic origin number only some 0,15 million. (2)

The population is young with median age of 16 years. 48% are 0-14 years; 49% 15-64 years; and 3% >= 65 years. Dependency ratio is 104.

Nationally the density in 1982 was 19/sq Km, with wide variation according to administrative type. Excepting municipalities the population is densest at 25/sq Km in District Councils (including both communal lands and small-scale commercial farm areas), where 57% of the people live.

TABLE 1

POPULATION BY ADMINISTRATIVE UNIT 1982 (1)

	Population (millions)	Area (percent)	Density (per sq Km)
Zimbabwe	7.55 (100%)	100%	19.3
District Councils (2)	4.28 (57%)	43%	25.2
Rural Councils (3)	1.57 (21%)	43%	9.4
Municipalities (4)	1.67 (22%)	<1%	870.9
Other Areas (5)	0.02 (<1%)	13%	0.5

(1) Central Statistical Office: Main Demographic Features of the Population of Zimbabwe. Harare, June 1985, p 47.
(2) Includes both communal lands and small-scale commercial growing areas.
(3) Includes large-scale commercial farming areas, their service towns and resettlement lands.
(4) Covers certain urban areas.
(5) Parks, wildlife and forest reserves.

Nearly three-quarters of the population live in a rural area; 26% live in settlements of 2 500 or more.

Literacy rate for persons >= 15 years is 62% (70% for males and 56% for females). (2)

Of the 7.55 million persons enumerated in the 1982 census, 2,48 million are classified as belonging to the labour force, with 1,04 million communal farmers being the largest occupation. Both these figures and proportions to total population would be higher, but for women classified as homemakers rather than farmers, and hence excluded from the labour force by definition.

Of those who were classified as communal farmers the majority, 0,585 million (56%), were women and 0,454 million (44%) men. Of the female labour force, 60% are communal farmers. Of the male labour force, only 30% are communal farmers.

About 61% of the total labour force is engaged in agriculture or forestry.

(1) Source: Central Statistical Office. Population Projects of Zimbabwe: 1982-2032. Harare 1986, medium variate projection from 1982 census data.
(2) Source: Central Statistics Office. Main Demographic Features of the Population of Zimbabwe. Harare 1985.
(3) Defined on the basis of having completed grade 3 or more.

Population of the Chitenderano, Gokwe, Sanyati study area for this project in the 1982 census was as follows in Table 28.

TABLE 28 (1)

1982 POPULATION CENSUS, NUMBER OF PERSONS AND HOUSEHOLDS IN CHITENDERANO RC, GOKWE DC, AND SANYATI DC

Area	Population	No. Households
Chitenderano RC	19177	3220
Cheziya Gokwe DC	228854	38479
- Gandawaroyi	3348	636
- Sebungwe	23854	4024
- Kana	23254	3984
- Gokwe	168513	28221
- Chemagora	1625	253
- Mafungubisi	7873	1334
- Chirisa Safari Area	386	25
Sanyati DC	22312	3857
TOTAL	270342	45556

(1) Source: Central Statistical Office print-outs.

On a national basis, and applicable to the communal areas the following expectations occur: (1)

A dependency ratio of 180% to obtain at least for the next six years;
The proportion of population in the working age group (15-64) to increase for the foreseeable future;
And the problem of jobs.

"In absolute terms this population is expected to increase from 3,7m in 1982 to 6,5m in 1997, 7,5m by 2002, about 10,0m by 2012 and by 2032 it is expected to range between 13,7m and 15,5m. This fourfold increase in a period of 50 years provides a great challenge to the national planners as it has serious implications for the supply and demand of the work force."

"These changes in the working age population have important socio-economic implications and in particular for investments in education, manpower development and for job creation. The population in the working age or the potential manpower is

expected to grow at a much faster rate than the total population. This can have a positive effect on economic development provided special efforts are made to create sufficient employment opportunities to cope with the increase in the labour force and at the same time reduce the levels of under employment and unemployment."

Specifically, since 1980 a net average of only 7 000 jobs a year have been created in the formal sector while in the order of 80 000 persons entered the labour force. (2)

(1) Source: Central Statistical Office. Population Projections of Zimbabwe: 1982 to 2032. Harare 1986. p20.

(2) Source: Minister of Finance Economic Planning and Development. Budget Statement 1985.

Cotton is well placed to contribute to a solution of this problem. It is a valuable crop with gross margins exceeded only by tobacco among the normal field crops. It does take lots of work to grow but its gross margin per labour hour is better than most competing crops although not as good in a fair year as maize.

TABLE 29 (1)

ESTIMATED GROSS MARGINS PER HECTARE AND PER LABOUR HOUR FOR COTTON, MAIZE, SORGHUM AND SUNFLOWER 1984/85 SANYATI (AGRO-ECOLOGICAL AREA III)

	Cotton	Maize	Sorghum	Sunflower
Yield Level (Kg/ha)	900	2 000	1 5000	600
Gross Output ($/ha)	486,00	357,04	207,00	165,69
Less Total Variable Cost	256,98	175,63	187,27	99,74
Gross Margin ($/ha)	229,02	181,41	19,73	66,12
Labour (hours/ha)	855	285	665	440
Gross Margin ($/labour hour)	0,27	0,64	0,03	0,15

(1) Source: Agritex Office Sanyati.

APPENDIX 7

COTTON MARKETING BOARD

Zimbabwe has a single channel marketing system for most agricultural produce. Marketing is controlled by the Agricultural Marketing Authority, under the Ministry of Agriculture. The Authority's board is appointed by the Minister and inturn advises him. The AMA has six constituent advisory commodity committees and an economic policy committee as well as four statutory marketing boards - the Grain Marketing Board, Cold Storage Commission, Dairy Marketing Board and the Cotton Marketing Board.

For the cotton sector the basic units are: the AMA Cotton Committee, the AMA Seed Multiplication Sub-Committee and the Cotton Marketing Board itself.

The AMA Cotton Committee directs the Cotton Marketing Board. On the Committee are representatives of the Commercial Cotton Growers Association (large-scale commercial farms), the National Farmers Association of Zimbabwe (communal farms), and the Zimbabwe National Farmers Union small scale commercial farmers, each of whom is a cotton grower.

The CMB was set up in terms of the Cotton Marketing Control Act of 1969 for the purpose of: (a) purchasing storing and ginning the entire national cotton crops; (b) selling the lint and cotton seed which result; and (c) ensuring the supply of high quality planting seed.

The CMB headquarters is in Harare and it operates from seventeen depots around the country (Map 1).

TABLE 30 (1)

COTTON MARKETING BOARD DEPOTS

	Type		Year of
	Ginning	Transit	Opening
Kadoma	x		1963
Tafuna	x		1966
Banket	x		1967
Mutare	x		1969
Glendale	x		1970
Chegutu	x		1974
Binduna	x (1986)	x	1974
Sanyati	x (1984)	x	1976
Guruwe		x	1981
Karoi		x	1981
Mt Darwin		x	1981
Nemangwe		x	1981
Nyamaropa		x	1981
Manoti		x	1982
Tchoda		x	1982
Birchenough Bridge		x	1983
Mahuwe		x	1985

(1) There is also a ginnery at Triangle. This is a private concern acting as an agent for the CMB.

All of the ginning depots except Sanyati are in commercial farming areas. Sanyati is in a communal farming area. Conversely, all of the transit depots except Karoi and Mount Darwin are in communal farming areas, and Mt Darwin is on the border of a communal area. Most of these transit depots, all built since Independence represent a deliberate effort by Government to extend CMB facilities into small farmer areas in order to lower small farmer transport costs and stimulate production.

After delivery of seed cotton to a CMB depot, it is immediately graded, and through an elaborate, partially computerized system the individual grower receives first a statement of weight, grade and value and then a computer printed check, that reflects his earnings from each delivery net of stop-order obligations, pack charges and a levy.

Cotton Marketing Board payment to producers have been as follows: (1)

	'84	'83	'82	'81	'80	'79	'78
Z$ million	137.6	83.1	76.9	75.9	67.1	53.9	52.7

Ginned output has been as in Table 31.

TABLE 31

COTTON MARKETING BOARD, GINNED OUTPUT

Harvest Year	Seed Cotton Ginned (mt)	Lint Out-turn (mt)	Ginned Seed (mt)
1985			
1984	250 172	91 508	155 540
1983	168 407	59 955	105 840
1982	154 561	55 923	96 773
1981	199 592	70 124	127 543
1980	184 796	64 083	118 183
1979	163 359	56 992	104 381
1978	172 620	60 402	109 292
1977	146 478	51 169	93 911
1976	133 975	46 574	85 690
1975	161 907	57 967	102 532
1974	164 099	57 473	104 433

(1) Sources are: (1) Agricultural Marketing Authority Cotton Situation and Outlook Report 1985-86, for years 1974-1983; (b) Cotton Marketing Board Annual Report 1984/85 for 1984.

The CMB operates a scheme for multiplication, certification and provision of high quality planting seed. In the 1984/85 crop season multiplication was largely limited to Albar G501 and K602. Delinting takes place in Glendale from where planting seed in bags of 10.25 and 50 Kgs are shipped to depots around the country for sale to farmers. The output of planting seed was 7.3m Kg as follows: (1)

Variety (Stage)			Kg
Albar	G501 (foundation)		209 925
"	K602 (")		36 350
"	HAA1 (")	(2)	10 825
"	G501 (certified)		6 279 425
"	K602 (certified)		718 525
Delmac	(foundation)		36 500
			7 291 550

(1) Source: Cotton Marketing Board: Annual Report 1984/85.
(2) A new high altitude Albar variety.

CMB product sales are as in Table 32. In addition to the export of lint, board output is the base for a variety of other processed and manufactured exports (Table 33).

COTTON MARKETING BOARD PRODUCT SALES PART A

Financial Year
(1 March - 28 Feb)

		Cotton Lint Total	Export	Local
1984/85	(2)			
Vol (mt)	(3)	79 225	56 778	22 447
Sales Z$'000	(4)	179 872	144 057	35 814
		227,04c/kg	253,72c/kg	159,54c/kg
1983/84		60 632	49 679	10 953
		108 233	93 867	14 366
		178,51c/kg	188,95c/kg	131,17c/kg
1982/83		64 482	52 431	12 051
		86 831		
		134,66c/kg		
1981/82		63 877	51 164	12 713
		88 297		
		138,23c/kg		
1980/81		70 895	54 635	16 260
		88 335		
		124,60c/kg		
1979/80		67 164	56 516	10 648
		74 962		
		111,61c/kg		
1978/79		54 976	41 119	13 857
		55 520		
		100,99c/kg		
1977/78		47 166	37 297	9 869
		48 274		
		102,35c/kg		
1976/77		54 803	39 960	14 843
		51 290		
		93,59c/kg		
1975/76		46 977	34 163	12 814
		32 973		
		70,19c/kg		
1974/75		52 762	43 140	9 622
		49 834		
		94,45c/kg		

(1) Cotton Marketing Board Annual Report 1984/85
(2) ibid. Table 6 plus Schedules of Expenditure and Sales Realisations.
(3) Ibid. Cotton lint sales and cotton seed sales derived from Table 7: Sales Realisations (cents per Kg gross).

COTTON MARKETING BOARD PRODUCT SALES PART B

Cotton Seed Ginned Seed Expressors	Feedmills	Subtotal	Delinted Seed Planting Seed	Total Seed
1984/85				
123 195	6 239	129 434	6 998	136 432
		24 814	990	25 804
		19,17c/kg	14,15c/kg	
1983/84				
101 404	269	100 890	5 842	107 515
		13 720	909	14 629
		13,60c/kg	13,73c/kg	
1982/83				
91 570	13 393	104 963	4 127	109 090
		10 496 (4)	580 (4)	
		10,00c/kg	14,06c/kg	
1981/82				
122 447	3 814	126 261	3 360	129 621
		12 567	442	
		9.96c/kg	13,15c/kg	
1980/81				
99 612	7 480	107 092	3 512	110 604
		10 356	483	
		9,67c/kg	13,75c/kg	
1979/80				
91 549	6 134	97 683	2 616	100 299
		7 385	349	
		7,56c/kg	13,33c/kg	
1978/79				
82 574	11 273	93 847	3 000	96 847
		5 884	434	
		6,27c/kg	14,47c/kg	
1977/78				
78 760	10 449	89 209	3 673	92 882
		5 049	396	
		5,66c/kg	10,77c/kg	
1976/77				
65 065	13 100	78 165	3 199	81 364
		4 330	442	
		5,54c/kg	13,82c/kg	
1975/76				
81 222	10 605	91 827	2 244	94 071
		5 096	262	
		5,55c/kg	11,66c/kg	
1974/75				
98 033	10 117	108 150	3 139	111 289
		6 197	357	
		5,73c/kg	11,37c/kg	

TABLE 33 (1)

SELECTED EXPORTS OF COTTON BASED PRODUCTS

	Cotton Seed Oil	Yarns and Threads	Fabrics	Bed Sheets	Clothing
1985					
mt					
Z$'000					
1984					
mt		6800	5392('000m2)		
Z$'000	52	14218	8613	5882	7922
1983					
mt		977	2839		
Z$'000	29	2839	5255	3941	2945
1982					
mt		1434	820		
Z$'000	677	2686	1563	1853	4177
1981					
mt		1959	1632		
Z$'000		3948	2812	2335	6988
1980					
mt		3008	3046		
Z$'000		5620	4862	2367	7127
1979					
mt		3101	2850		
Z$'000	519	5058	4139	1952	7253
1978					
mt		1857	3714('000m2)		
Z$'000	147	3080	4612	1345	6887

(1) Source: Central Statistical Office. Statistical Year Book 1985. Domestic Export of Principal commodities, 1978 - 1984.

The CMB is unusual among the four agricultural marketing boards in that it does not normally run a deficit on trading account (Table 34).

TABLE 34

COTTON MARKETING BOARD, TRADING ACCOUNT (Z$) (1)

	1985	1984
Stock at 29 Feb (2)	21 947 844	18 115 221
Purchases	137 629 952	83 079 247
Less Stock at 28 Feb	55 843 227	21 947 844
	103 734 569	79 246 624
Operating Costs	36 365 847	27 422 680
Ginnery	23 616 437	14 806 962
Crop Production	1 800 028	1 493 469
Marketing	234 443	220 579
Admin and Interest	10 714 939	10 901 670
Costs of Sales	140 100 416	106 669 304
Sales	189 970 663	109 650 513
Surplus on Foreign Exchange	6 957 559	1 335 458
	196 928 222	110 985 971
Surplus Transferred to General Reserve	56 827 806	4 316 667

(1) Cotton Marketing Board: Annual Report 1984/85.
(2) Stocks are valued at estimated net realizable value not the lower of costs or net realizable value.

APPENDIX 8

SANYATI GINNERY DEPOT

A Cotton Marketing Board depot opened in Sanyati in 1976 and became a full grading depot in 1978. The depot now covers 16.6 ha and has a ginnery opened 15 June 1984. The ginnery was built through funds from the United States Department of State Agency for International Development.

The ginnery consists of five, high capacity, brush type, 120 saw Continental gins, which, operating at average speed, can supply lint for 3-4 207kg bales/hour. The ginnery works three shifts during the season of high intake.

The depot procedure is as follows. A booking system by day determines acceptance of delivery from lorries or tractor trailers. Scotch carts come with first priority on Tuesdays and Thursdays. Queueing pertains. Sanyati ginnery depot is unique among the CMB gins in not operating on a quota system. This is because it serves a communal area in which farmers do not submit production reports.

The depot works six days a week in season (April/May - November). On accepting standard packs of seed cotton after moisture testing, the packs proceed directly to a standard grading room for grading on staple, maturity, trash, insect and soil damage, and colour. Weight is taken. This grading with weight determines the producers price, which is immediately processed and a cheque prepared in a month in Harare against each delivery, unless a stop order is outstanding. A just procedure is available to the farmer for review of grade.

The seed cotton packs are subsequently stacked or procede to the mixing floor where they are checked for false packing or weighty junk. The seed is then mixed and blown to the gin.

Lint bales are stacked for dispatch to railhead at Kadoma. Each lint bale is classified at the depot for staple against USDA standards and micronaire tested. Bale samples are sent to Harare for refined testing.

Cotton seed is put into 46kg sacks and stored for dispatch to expressors in Harare and Bulawayo.

The depot holds open days for farmers during which, in particular, the graders carefully explain the hows and whys of grading and how producers can profit by careful growing, picking and packing. These explanations are attended with great interest.

The Ginnery's operations are seasonal. Intake commences in April and tapers off to a low level in October. The main months are June through September. Ginning begins according to supply. This year it had not begun when we left the field on 18 May because of the effect on cotton of late rains.

TABLE 35 (1)

SANYATI CMB DEPOT, EMPLOYMENT AND WAGES BILL

	A	B	C
	As a transit depot (1983/84 figures)	As a ginning depot (1984/85)	If ginnery doubles size
1. Off-season (December - March) wages and salaries	Z$ 38,933	Z$111,771	N/A
2. Off-season average No. of employees	48	90	
3. Seasonal wages and salaries	114,865	591,965	N/A
4. Seasonal averages number employees	113	350	
	Z$153,798	Z$703,736	

(1) Source: Cotton Marketing Board, Operations.

APPENDIX 9

SANYATI TOWN

Sanyati is a District Council headquarters and gazetted development centre or 'growth point' expected to grow over the next twenty years on the basis of farming and agro-industry. (1)

The town was started in 1977 as a sensible adjunct to the Sanyati Irrigation scheme (Appendix 11). Until 1982 the area had been largely abandoned for three decades due to tsetse. Following tsetse eradication, population in the town commenced to grow and 3 364 persons were recorded in the 1982 census.

Sanyati lies 100Km northwest of Kadoma via tarmac. It has town water and a sewerage system, electricity off a 33KV line and telephone connections. More than 100 site and service housing stands are ready for use.

Sanyati contains an Agricultural Finance Corporation Branch and a Zimbank Branch, various government offices, several retail shops, a producers market, a truck depot, two fuel stations, a beerhall and a bar owned by the District Council, a bottle store, a bakery, a butchery; Chibuku, Agricura and Farmers Cooperative depots, a Cold Storage Commission auction. The ARDA Estate and the CMB ginnery depot are the major enterprises of the town. A seasonal Grain Marketing Board depot opened in 1984/85. Previously, farmers had to sell to Kadoma. A hospital is some 10Km off at a Baptist mission.

Sanyati lies within agro-ecological region 3. Its economic base is cotton. The Zimbank Branch reports cashing some Z$2,5 million of Cotton Marketing Board cheques in year 1984/85.

(1) Source: Regional Town and Country Planning (Prescription of Controlled Development Centres) Notice, 1982.

APPENDIX 10

AGRICULTURAL AND RURAL DEVELOPMENT AUTHORITY (ARDA)

ARDA is a parastatal farming operation attached to the Ministry of Lands, Agriculture and Rural Development. It was established in 1982 through amalgamation of the Sabi-Limpopo Authority, the Tribal Trust Land Development Corporation (TILCOR), and the Agricultural Development Authority. ARDA is responsible for 23 farms and is a major producer of food crops, beef and milk for national consumption, as well as cotton, tea, coffee, tobacco, vegetables and protea flowers for export.

ARDA fixed assets have a value of Z$33 million; its current operating budget is Z$24 million. ARDA is the nation's single largest rural employer with a permanent staff of some 5 500 and a seasonal staff of 16 400, hired mostly for cotton. (1)

In addition to its production and employment aims, ARDA:

(a) designs and establishes educational, medical and other essential facilities for communal areas around its estates (Sanyati town was originally laid out and developed by ARDA, or TILCOR as it was known at the time);

(b) assists smallholders adjacent to its estates with mechanical, technical, supply and marketing services.

The ARDA Sanyati Estate is located on the banks of the Munyati River, just west of Sanyati town. The estate is entirely irrigated from Munyati river flow controlled by a dam and a weir upstream. All fields are laid out on an old alluvial terrace with sandy soils extending down for 10 metres or more.

In the crop year 1985/86, crops grown are:

Crop	Summer (ha)	Winter (ha)
Cotton	600	-
Groundnuts	215	-
Sugar beans	10	-
Wheat	-	350
Green Maize	-	20

All produce, except green maize, is sold to the Cotton Marketing Board or the Grain Marketing Board.

Output of cotton and wheat, the estate's major crops, has been as follows:

Cotton and wheat ARDA Sanyati Estate: Producer, Area, Yield, Income, 1981/82-1984/85 (2)

Year	Production mt	Area ha	Yield Kg/ha	Income Z$/ha
1981/82				
Cotton	705	295	2 390	1 173
Wheat	-	-	-	-
1982/83				
Cotton	1 056	435	2 428	1 208
Wheat	-	-	-	-
1983/84				
Cotton	1 755	656,5	2 674	1 443
Wheat	951	335	2 840	710
1984/85				
Cotton	1 425	654	2 178	1 407
Wheat	374	134	2 794	796

The ARDA Sanyati Estate has some 243 permanent staff and also employs up to 1 500 seasonal workers from the local area. Cotton picking is the major reason for the seasonal employment.

The estate's salaries and wages bill 1984/85 was:

	Z$'000	(of which attributed to cotton)
(i) permanent staff	329	72 (22%)
(ii) seasonal staff	206	153 (74%)

Associated with the ARDA Sanyati Estate is the Gowe Irrigated Resettlement Scheme. This scheme, founded in 1967 on 50 ha of irrigation, with 36 farmers holding 0.7 - 1.4 ha each, now has 120 ha of irrigation with 38 farmers. Each works his own lands which range in size from 2.4 - 4.2 ha; all cooperate in handling the irrigation equipment. ARDA provides management planning and advice through an ARDA Settlement Officer who is an agriculturalist. It also provides at cost mechanical services, plus input and marketing facilities. The Agricultural Finance Corporation provides credit for all crops, excepting green maize.

In the year 1985/86 crops grown on the resettlement scheme are:

Crop	Summer ha	Winter ha
Cotton	120	-
Wheat	-	60
Green Maize	-	15

In addition the Gowe Scheme has 1,5 ha of irrigated gardens in which each of the 38 scheme households has its own plot producing vegetables, citrus, mangoes and guava. No livestock are allowed on the scheme.

Crop results are believed to be better on the scheme than the estate due to the more careful attention of the scheme landholders by comparison with the estate's hired workers. This is particularly noted in the case of cotton picking and resultant grade of the seed cotton.

(1) Source: ARDA News, February 1986.
(2) Source: ARDA Crop Estate Records.

APPENDIX 11 (1)

SEED COTTON DELIVERED TO CMB FROM CHITENDERANO RC, SANYATI DC AND CHEZIYA GOKWE DC

Administrative Area	Division	CMB Number	84/85	83/84	82/83	81/82	80/81	79/80	78/79	77/78	76/77	75/76	74/75	73/74	72/73	71/72	70/71	69/70	68/69	67/68
Chitenderano RC	Chenjiri SSC	14A	970	957	436	516	1349	916	1457	1088	1315	1786	1933	1582	431	2100	1431	884	1216	246
	Copper Queen SSC	15A	4753	2683	990	1048	1977	1573	1853	1555	1702	1774	1768	1412	592	2131	1595	1189	628	752
	SUB TOTAL		5724	3640	1426	1564	3326	2489	3310	2643	3017	3541	3701	2994	1023	4231	3026	2072	1844	998
Sanyati RC	Sanyati Communal DC	14C	9626	7140	3968	3710	5758	4207	4354	3691	3675	3131	3296	2229	641	2579	1625	1051	1624	2218
Cheziya Gokwe DC	Gandavaroyi Communal	15B	678	358	197	151	132	14	10	57	8	-	-	-	N/A	-				
	Sebungwe Communal	15C	9318	4967	3386	4471	5666	2831	1181	2345	1639	823	1096	420	N/A	42				
	Kana Communal	15D	2880	2157	1725	1077	1422	467	138	372	263	124	456	602	N/A	882				
	Gokwe Communal	15E	37938	26653	13349	12813	27403	9390	6443	15071	11839	9837	11163	10826	3160	10481	6079	3726	1263	917
	Chemagora Communal SSC	15G	49	35	14	24	26	28	19	7	1	-	1	4	N/A	8				
	SUB TOTAL		50865	34169	18671	18486	34650	12729	7791	17952	13750	10783	12716	11853	N/A	11413				
	TOTAL AREA		66215	44949	24063	23760	43734	19425	15456	24186	20442	17475	19713	17075	N/A	18222				
TOTAL NATIONAL COMMUNAL AND SMALL-SCALE DELIVERIES		CM4	141323	102151	56722	49210	77674	36904	33644	42930	36512	32634	43641	38711	N/A	40003				

(1) Sources: Cotton Marketing Board Producers Registry tabulated to February of year following (computer runs CM09 and CM07) years 1984/85 - 1971/72 and, letter reference 12 November 1979 from Cotton Production Officer CMB to General Manager TILCOR.

APPENDIX 12

COTTON: PRODUCTION, AREA, YIELD 1970-85 (1)

	NATIONAL TOTAL			COMMUNAL AREAS (2)			COMMERCIAL AREAS		
	Production (mt)	Area (ha)	Yield (Kg/ha)	Production	Area	Yield	Production	Area	Yield
1970	-	-	-	-	-	-	85803	66226	1296
1971	139388	85739	1625	15909 (11%)	18000	884	123429 (89%)	67739	1822
1972	165347	101173	1634	27000	30000	900	138347	71173	1944
1973	129456	110896	1168	13000 (10%)	26000	500	116456 (90%)	84896	1372
1974	190965	165858	1146	55000	62000	887	136065	103858	1300
1975	170111	146493	1161	40000 (24%)	54000	741	130111 (76%)	92493	1403
1976	142116	99003	1435	28000	35000	800	114116	64003	1783
1977	143948	116985	1230	22300 (15%)	35000	637	121648 (85%)	81985	1484
1978	166101	135144	1229	31000	41000	756	135101	94144	1435
1979	145218	96985	1497	15000	20000	750	130218 (4)	76952 (4)	1691 (4)
1980	157553	89921	1752	12000 (8%)	15000	800	145553 (92%)	74921	1943
1981	170594	125054	1364	45000 (26%)	59000	763	125594 (74%)	66054	1901
1982	134886	109014	1237	27000 (20%)	51000	529	104886 (80%)	58014	1860
1983	146521	132976	1102	32500 (22%)	65000	500	114021 (78%)	67976	1677
1984(3)	221746	180155	1231	70000 (32%)	100000	700	151746 (68%)	80155	1893
1985(3)	274186	209658	1308	110000 (40%)	130000	846	164186 (60%)	79638	2061

(1) Central Statistical Office: Statistical Yearbook of Zimbabwe 1985, Harare, 1985, page 144.
(2) Communal Area figures are estimates.
(3) 1984 and 1985 figures are estimates.
(4) Only covers large-scale commercial farms.

APPENDIX 13 (1)

SANYATI, NEMANGWE, MANOTI, TCHODA: SEED COTTON AND PACKS RECEIVED, EMPTY PACKS DISTRIBUTED AND PLANTING SEED SOLD

	Seed Cotton Received (Kg)	Packs Received	Empty Packs Delivered	Planting Seed Sold (Kg)
Sanyati				
1985	24 922 740	126 862	144 280	711 570
84	16 471 137	82 392	107 980	857 405
83	10 074 421	48 726	53 098	662 095
82	11 028 463	54 330	71 542	615 090
81	20 233 738	104 214	135 049	570 155
80	11 971 195	59 949	71 368	494 150
79	10 411 516	51 403	49 892	204 650
78	10 866 033	58 278	76 632	224 308
77	3 683 422	19 197	31 789	310 820
76	944 875	5 240	3 553	Nil
Nemangwe				
85	11 159 192	57 617	52 575	312 895
84	7 186 514	36 633	41 209	321 980
83	4 172 551	20 739	22 462	281 635
82	3 932 779	19 337	18 190	260 395
81	8 015 213	45 649	21 189	171 555
Manoti				
85	8 585 894	45 897	44 198	258 720
84	6 559 815	33 929	34 941	279 005
83	3 785 059	19 266	23 259	181 595
82	2 162 374	11 140	8 818	126 250
Tchoda				
85	11 912 238	59 672	48 432	288 635
84	6 405 237	31 803	33 963	234 940
83	3 594 892	17 568	18 770	134 615
82	633 649	3 236	498	124 600

(1) Source: Cotton Marketing Board Records.

APPENDIX 14 (1)

REGISTERED COTTON PRODUCERS IN CHITENDERANO RC, SANYATI DC AND GOKWE DC

Administrative Area	Division	CMB Number	at December 1985	1984	1983	1982	1981	1980
Chitenderano RC	Chenjiri SSC	14A	223	216	257	254	256	217
	Copper Queen SSC	15A	365 (3)	516 (3)	603 (2)	456 (2)	175 (2)	175 (2)
	SUB TOTAL		588 (3)	732 (3)	860 (2)	710 (2)	431 (2)	392 (2)
Sanyati DC	Sanyati DC Communal	14C	6922 (2)	5814 (2)	5186 (2)	4729 (2)	4041 (2)	3047 (2)
Cheziya Gokwe DC	Gandavaroyi Communal		773 (1)	524 (1)	457 (1)	340	260	173
	Sebungwe Communal		7174	6264	5866	5479	4980	3962
	Kana Communal		2954 (2)	2543 (2)	2192 (2)	1820	1516	977
	Gokwe Communal		37290 (24)	31545 (24)	27310 (22)	23599 (22)	19912 (20)	16229 (20)
	Chemagora SSC		11	11	23 (7)	16 (7)	15 (7)	7
	SUB TOTAL		48191 (27)	40887 (27)	35848 (30)	31254 (29)	26683 (27)	21348 (20)
	TOTAL AREA		55701 (32)	47433 (32)	41894 (34)	36893 (33)	31155 (31)	24787 (24)
TOTAL NATIONAL COMMUNAL AND SMALL-SCALE REGISTERED PRODUCERS			158587(452)	129575(410)	106890(368)	88396(302)	75518(262)	59459(252)

(1) Sources: Cotton Marketing Board producers Registry, hand tabulation 1980-83, computer printout 1984-85.

APPENDIX 15 (1)

SECOND CROP FORECASTS, SANYATI AGRITEX REGION, COTTON

	85/86	84/85	83/84	82/83	81/82	80/81	79/80
Gandavaroyi Communal Area							
Area (ha)	2425	2000	800	1064	1450	850	N/A
Yield(kg)	840	880	850	600	733	1100	"
Prod (mt)	2037	1760	680	638	1063	935	"
Sebungwe Communal Area							
Area (ha)	6140	9300	6150	11246	4300	3420	6980
Yield(kg)	900	900	850	600	680	1330	950
Prod (mt)	5526	8370	5228	6748	2924	4549	6631
Sanyati Communal Area							
Area (ha)	6861	9808	7430	5632	N/A	N/A	N/A
Yield(kg)	750	900	900	650	"	"	"
Prod (mt)	5146	8827	6687	3661	"	"	"
Copper Queen, Small-Scale Commercial Area							
Area (ha)	N/A	7500	1800	1420	N/A	N/A	N/A
Yield(kg)	"	850	1000	700	"	"	"
Prod (mt)	"	6375	1800	994	"	"	"
Chenjiri, Small-Scale Commercial Area							
Area (ha)	N/A	1386	N/A	1300	N/A	N/A	N/A
Yield(kg)	"	1000	"	650	"	"	"
Prod (mt)	"	1386	"	845	"	"	"

(1) Source: records in Sanyati Regional AGRITEX office of estimations done in the second crop forecast for each year.

APPENDIX 16 (1)

REGISTERED VERSUS ACTIVE PRODUCERS

TYPE	ACTIVE (delivered cotton to CMB)	NOT ACTIVE	TOTAL
1984/85			
1. Large-Scale Commercial	713 (71%)	294 (29%)	1007 (1%)
2. Communal	81369 (55%)	66640 (45%)	148009 (91%)
3. Small-Scale Commercial	7816 (58%)	5704 (42%)	13520 (8%)
4. TOTAL	89989 (55%)	72638 (45%)	162536(100%)
1983/84			
1. Large-Scale Commercial	675 (64%)	379 (36%)	1054 (1%)
2. Communal	62962 (50%)	63248 (50%)	126210 (91%)
3. Small-Scale Commercial	4809 (44%)	6189 (56%)	10998 (8%)
4. TOTAL	68446 (50%)	69816 (50%)	138262(100%)
1982/83			
1. Large-Scale Commercial	555 (58%)	400 (42%)	955 (1%)
2. Communal	44775 (45%)	54760 (55%)	99535 (94%)
3. Small-Scale Commercial	2238 (39%)	3517 (61%)	5755 (5%)
4. TOTAL	47568 (45%)	53677 (55%)	106245(100%)
1981/82			
1. Large-Scale Commercial	523 (57%)	389 (43%)	912 (1%)
2. Communal	38365 (46%)	45936 (54%)	84301 (95%)
3. Small-Scale Commercial	1483 (43%)	1938 (57%)	3421 (4%)
4. TOTAL	40371 (46%)	48263 (54%)	88634(100%)

(1) Source: Cotton Marketing Board Producers' Registry.

APPENDIX 17

TOTAL SOWN AREA AND PRODUCTION ESTIMATES FOR CROPS GROWN IN COMMUNAL LANDS: 1984/85 SEASON

OVINCE	SOWN AREA (HECTARES) PRODUCTION (TONS)	MAIZE	GROUNDNUT	COTTON	RAPOKO	SORGHUM	MILLET	NYIMO	SUNFLOWER	BEANS	RICE	POTATOES	TOBACCO	OTHERS	TOTAL
NICALAND	Sown Area	168600	20800	4000	7900	30900	85900	1900	1300	600	1300	1200	-	-	324400
	Production	306010	22800	3730	12780	27010	82810	3610	880	360	510	1800			
GHONALAND NTRAL	Sown Area	90000	3300	31700	2600	1100	1700	200	1000	200	200	600	500		123100
	Production	233200	3370	27610	5090	1040	1620	360	1360	230	260	630	680		
SHONALAND ST	Sown Area	96700	8100	1400	2500	1400	38100	300	3900	300	600	100			153700
	Production	173000	9670	1120	3430	2770	18290	150	4000	300	540	160			
SHONALAND ST	Sown Area	84100	3800	37900	1400	12500	300	-	3800	100	-	-	100	1100	145100
	Production	218700	3860	19860	830	21900	290	-	2540	110	-	-	70		
TABELELAND RTH	Sown Area	61500	500	600	-	23700	14000	-	1400	400	-	-	-		102100
	Production	62730	300	530	-	16590	7000	-	490	120	-	-	-		
TABELELAND UTH	Sown Area	38900	12900	-	300	35500	35200	-	300	2700	-	-	-		125800
	Production	58350	12900	-	240	35500	31680	-	60	1620					
DLANDS	Sown Area	191800	18000	63000	21800	20200	12700	3200	8300	300	200				339500
	Production	341670	15050	55450	24400	18300	10130	2890	6530	9000	110				
SVINGO	Sown Area	164900	16900	1700	33500	51300	63900	2800	400	400	500	100			336400
	Production	311960	11620	1810	60100	50070	62370	4220	460	350	250				
	Sown Area	886500	84300	143000	70000	176600	251800	8400	20400	5000	2800	2000	600	1400	1650100
	Production	17056280	79750	1101101	106870	173210	214190	11230	16320	12090	2670	2590	750	-	

Source: Central Statistical Office. Area and Production Estimates for Crops in Communal Lands 1984/85, Harare

APPENDIX 18 (1)

CENTRAL STATISTICAL OFFICE AND AGRITEX AGRICULTURAL SURVEY APRIL 1986, DATA ON 10 FARMS IN SANYATI COMMUNAL AREA

HOUSEHOLD SURVEY NUMBER	TOTAL AREA (ha)	MAIZE		COTTON		GROUNDNUTS		FALLOW	OTHER CROPS
		Area	Yield(bags)	Area	Yield(bags)	Area	Yield(bags)		
09	4,1	2	40	2	1400	0,1	12	-	-
retains			15				all		
19	5,7	4,9	29,6	-	-	0,2	12	0,6	-
retains			18				all		
29	3,7	2,2	50	1	472	0,4	10	-	0,1
retains			20				all		
39	5,1	3,4	64	1,4	700	0,2	10	-	0,1
retains			30				all		
49	4,8	4	17,5	0,8	400	-		-	-
retains			30						
59	7,45	4,8	49,6	2,4	1600	0,05	5	-	0,2
retains			20				all		
69	5,25	3,4	40	1,4	980	0,4	5	-	0,05
retains			20				all		
79	4,6	2,8	24,85	1,6	600	0,2	4	-	-
retains			25				all		
89	5,2	2,8	25	2	1400	0,3	8	-	0,1
retains			N/A				all		
99	10,6	3,4	30,8	6,8	2115	0,4	7	-	-
retains			N/A				all		

Source: Sanyati Regionnal AGRITEX Office.

APPENDIX 19

SANYATI DEPOT SEED COTTON INTAKE BY GRADE AND ESTIMATION OF PAYMENT TO FARMERS

		A	Ass	B	C	D	Total	
1985	a)	635,4(mt)	3202,1	17023,2	3784,6	284,3	24929,6	
	b)	2,6%	12,8	68,3	15,2	1,1		
	c)	1721,6	8475,5	45224,8	10064,7	728,4	66215(mt)	
	d)	67,0c/Kg	66,5	65,5	63,5	52,5		
	e)	1153472	5636208	29622244	6391085	382410	Z$43185419	1985
							==========	
1984	a)	341,3	2221,9	9687,0	4094,3	126,6	16471,1	
	b)	2,05%	13,5	58,8	24,9	0,75		
	c)	921,5	6068,1	26430	11192,3	337,1	44949	
	d)	57,0c/Kg	56,5	55,5	53,5	42,5		
	e)	525255	3428477	14668650	5987881	143268	Z$24753531	1984
							==========	
1983	a)	230,6	490,8	6084,6	2901,7	366,7	10074,4	
	b)	2,3%	4,9	60,4	28,8	3,6		
	c)	553,5	1179,2	14535,3	6930,7	866,3	24065	
	d)	51,5c/Kg	51,0	50,0	48,0	37,0		
	e)	285053	601392	7267650	3326736	320531	Z$11801362	1983
							==========	
1982	a)	305,4	335,3	9243,4	1098,6	45,8	11028,5	
	b)	2,8%	3,0	83,8	10,0	0,4		
	c)	665,3	712,8	19910,9	2376	95	23760	
	d)	51,5c/Kg	51,0	50,0	48,0	37,0		
	e)	342630	363528	9995456	1140180	35150	Z$11837238	1982
							==========	
1981	a)	518,1	2204,3	15781,1	1614,7	115,5	20233,7	
	b)	2,5%	10,9	78,0	8,0	0,6		
	c)	1093,4	4767	24112,5	3498,7	262,4	43734	
	d)	40,0c/Kg	39,5	38,5	36,5	25,0		
	e)	437360	1882965	13133313	1277026	65600	Z$16796264	1981
							==========	
1980	a)	745,6	1818,6	7548,9	1565,8	292,3	11971,2	
	b)	6,2%	15,2	63,1	13,1	2,4		
	c)	1204,4	2952,6	12257,2	2544,7	466,2	19425	
	d)	37,5c/Kg	37,0	36,0	34,0	23,0		
	e)	451650	1092462	4412592	865198	107226	Z$ 6929128	1980
							==========	
1979	a)	1437,7	1767,3	5884,5	1144,4	177,6	10411,5	
	b)	13,8%	17,0	56,5	11,0	1,7		
	c)	2132,9	2627,5	8732,6	1700,2	262,8	15456	
	d)	36,5c/Kg	26,04	34,67	31,5	23,16		
	e)	778509	946951	3027592	535563	60864	Z$ 5349479	1979
							==========	

APPENDIX 20

AVERAGE SEED COTTON DELIVERY AND PAYMENT

It would be possible with CMB records to determine exact statistical parameters of delivery and payment to individuals in any area of the country. The weight grade and payment for each and every delivery by each registered producer are on the computer. However, the computer does not normally do statistical measures; so to get some idea of individual output, we went to the printouts for total 1985 deliveries (printouts for February 1986). The printouts are in order of registration number - the older number first and the newer last. As it would have been too onerous to pull a random sample of any size by hand quickly, we chose to proceed 'systematically'. However it occurred that older numbers might correspond not only to old folks but to better established elders, so we decided to dip into the archive three times, at beginning middle and end, recording data on total delivery for the first hundred successive entries from Sanyati (14C) and Gokwe (15E) each time. The exercise took about two hours for one person and avoided asking the busy computer to turn time to our task. The results appear below and confirm the suspicion concerning the relationship of registration number and total size of delivery.

	Low Registration Numbers		Middle Registration Numbers		High Registration Numbers	
	Gokwe	Sanyati	Gokwe	Sanyati	Gokwe	Sanyati
average	1678	1894	1491	1447	1019	1273
500	35	33	30	35	34	29
1000	19	12	19	16	23	24
1500	10	11	19	15	20	19
2000	8	10	14	8	11	6
2500	6	9	4	6	6	4
3000	4	4	0	6	2	4
3500	2	4	4	6	2	7
4000	1	3	2	0	1	3
4500	2	7	1	2	0	2
5000	2	1	2	1	0	1
5500	4	1	0	1	0	0
6000	1	1	1	0	0	0
6500	3	1	0	0	0	0
7000	1	1	0	1	0	0
7500	0	0	1	1	0	0
8000	0	1	0	1	0	0
8500	0	0	0	0	0	0
9000	0	0	0	0	0	0
9500	0	0	1	0	0	0
10000	1	0	0	0	0	0
		1	1		0	0

It would have been possible to match registration number for the delivery printout to the finance printout and get exact pa ments, for speed, we simply used an average weight, grade, price procedure as in Appendix 20.

APPENDIX 21

ESTIMATE OF COMMUNAL FARMER GROSS MARGIN ON COTTON, REGION 3/4, 1984/85 (1)

1. yield level	900 kg/ha
2. blend price	$0.652/kg
3. gross output	$587/ha
4. minus levy	$579
5. cash inputs(seed, fertilizer, insecticide packs(net) contingency)	$262/ha
6. transport to market	$ 34/ha
7. interest on seasonal loan	$ 31/ha
8. total	$327/ha
9. gross contribution	$252/ha

(1) Assumes no charge for use of own oxen for cultivation and on farm transport, and no payment for labour, assumes that cash charges for inputs and transport to tarket are on credit at 14% for 9 months.

APPENDIX 22

ZIMBABWE PRODUCER PRICES OF PRINCIPAL AGRICULTURAL PRODUCTS

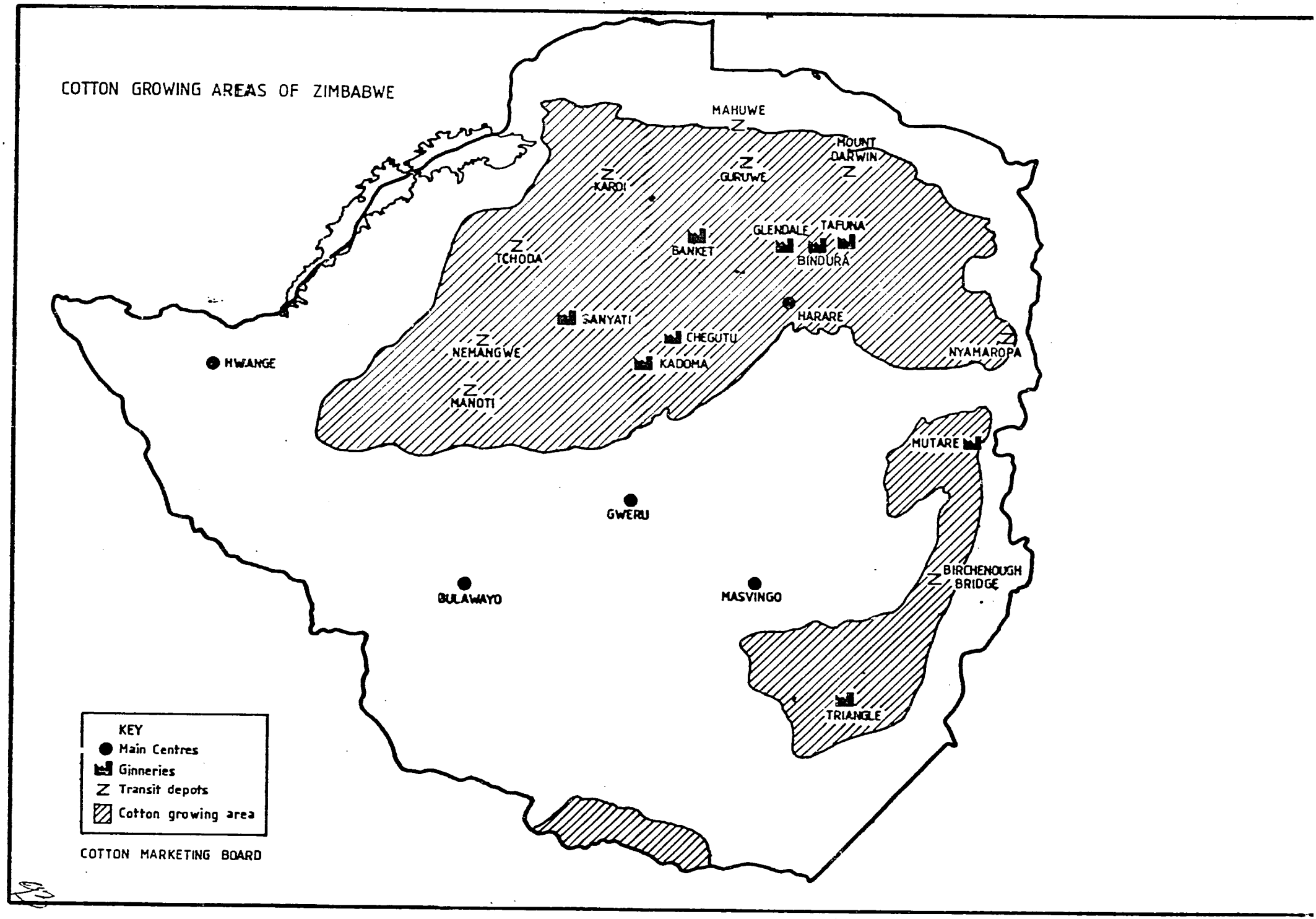
(Z$ PER METRIC TONNE)

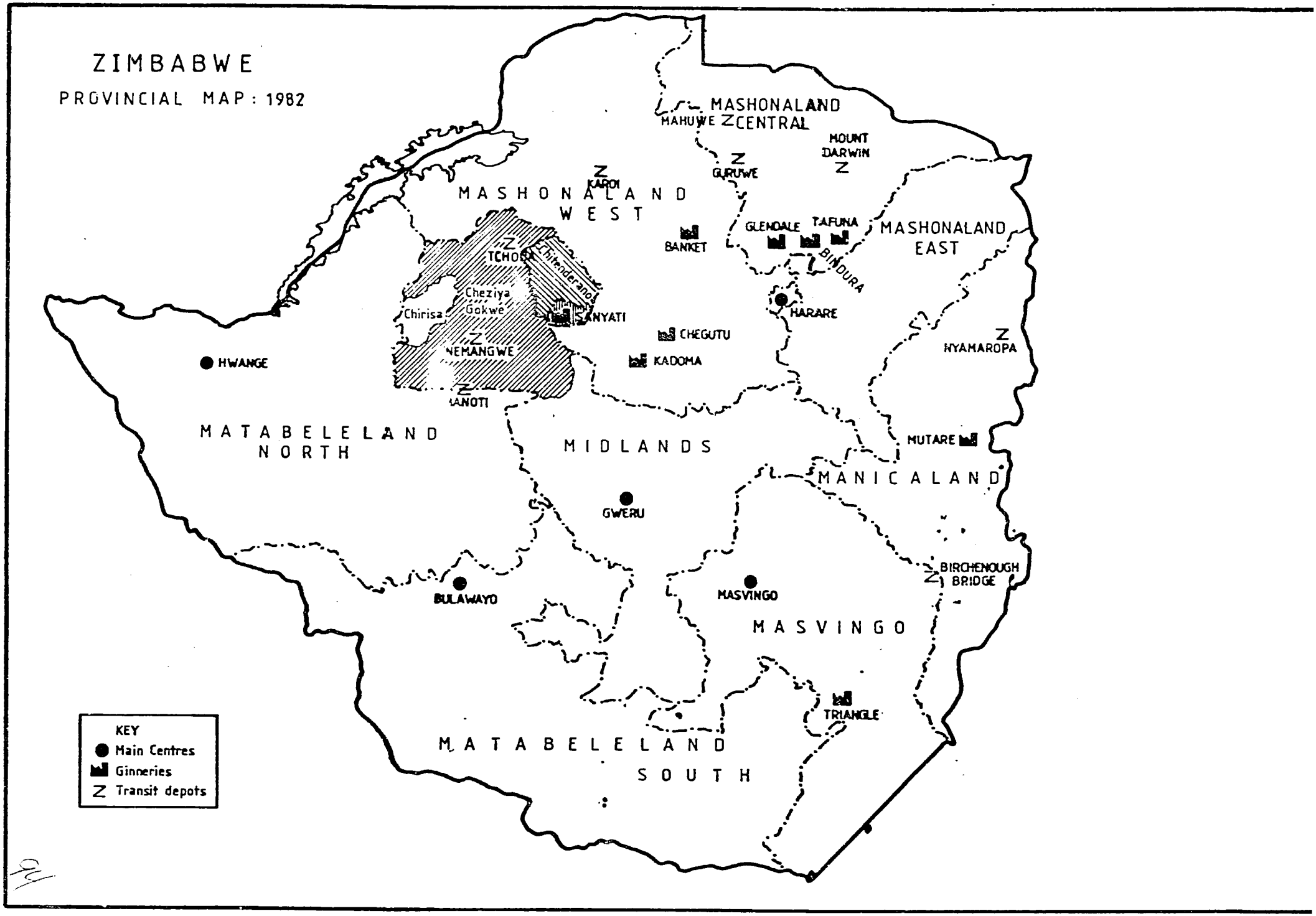
Intake Year (April/March)	1980/81 (1)	1981/82	1982/83 (2)	1983/84	1984/85	1985/86	1986/87
A. In Current Prices:							
Cotton (Grade A)	375	400	515	515	570	670	750
Maize (Grade A)	85	120	120	120	180	180	180
Groundnuts (Shelled)	390	420	450	450	500	750	750
Sorghum (Grade A)	105	115	115	120	140	180	180
B. In Constant 1980 Prices (3)							
Cotton (Grade A)	375	353,7	411,3	334,2	307,8	335,0	347,2
Maize (Grade A)	85	106,1	95,8	77,9	97,2	90,0	83,3
Groundnuts (Shelled)	390	371,4	359,4	292,0	270,0	375,0	347,2
Sorghum (Grade A)	105	101,7	91,9	77,9	75,6	90,0	83,3

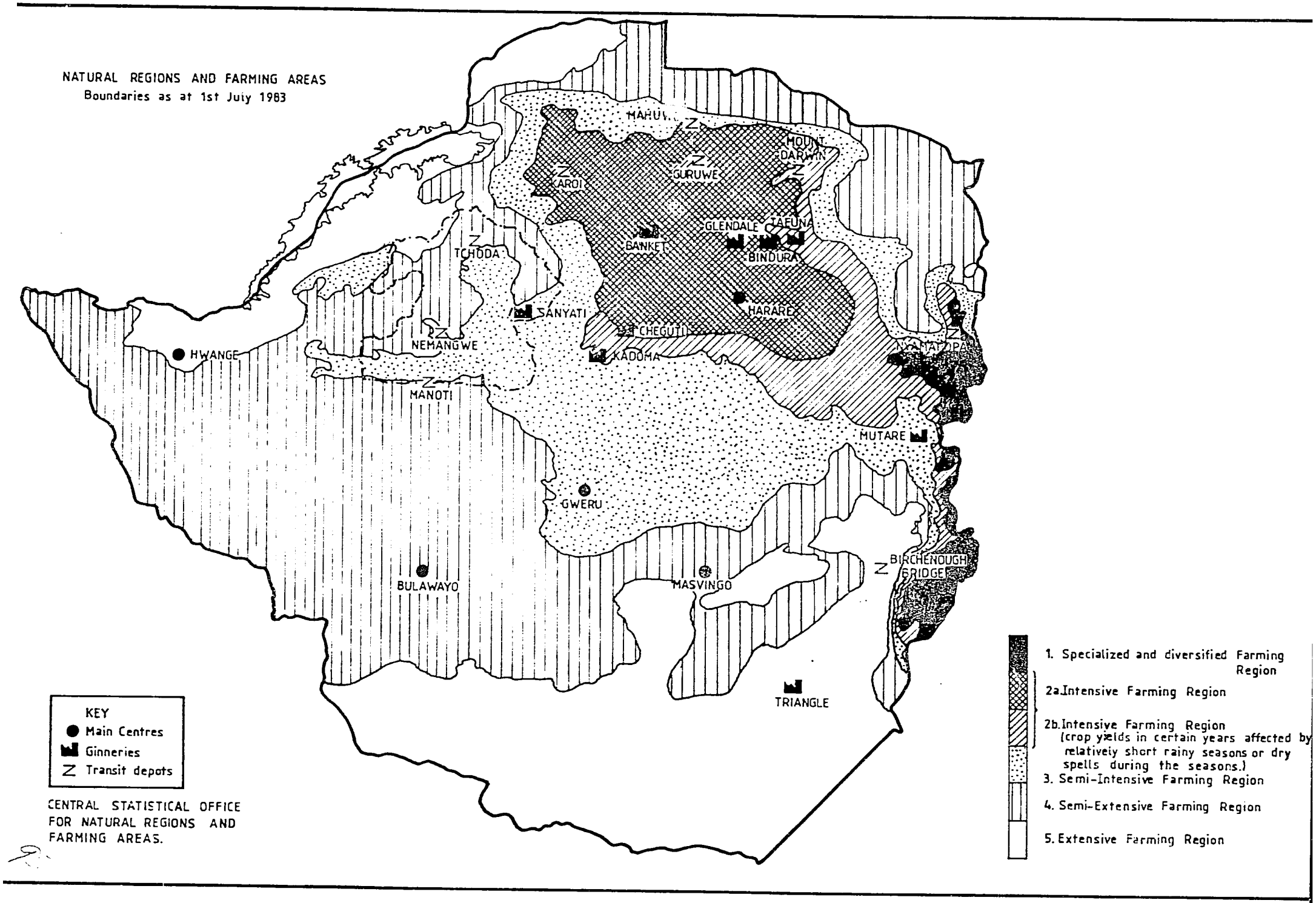
(1) Producer prices for intake years 1980/1 to 1981/82 were pre-planting for all crops, while those for intake years 1982/83 to 1986/87 were post-planting except for 1984/85 maize.

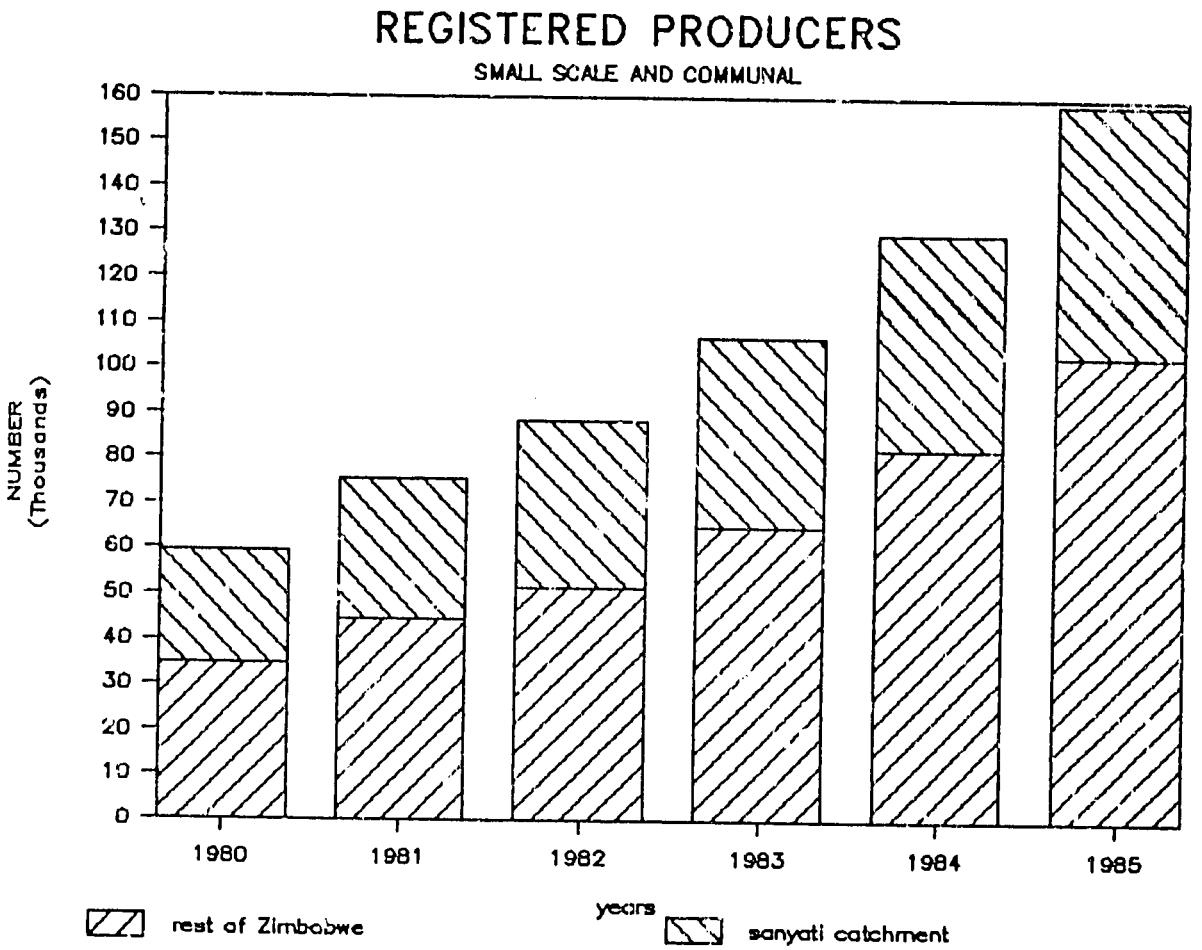
(2) In 1984/85 an early delivery bonus scheme was applied for maize (Z$20/MT for deliveries in April, Z$15/MT in May, and Z$10/MT in June).

(3) On the basis of Consumer Price Index for Lower Income Urban Families (All Items) 1980/81-100; 1981/82-113; 1982/83-125,2; 1983/84-154,1; 1984/85-185,2; 1985/86-200 (est); 1986/87-216. Central Statistical Office: Quarterly Digest of Statistics.


COTTON GROWING AREAS OF ZIMBABWE
MAHUWE
MOUNT DARWIN
GURUWE
KAROI
GLENDALE
TAFUNA
BINDURA
BANKET
TCHODA
HARARE
SANYATI
CHEGUTU
NEMANGWE
KADOMA
NYAMAROPA
HWANGE
MANOTI
MUTARE
GWERU
BIRCHENOUGH BRIDGE
BULAWAYO
MASVINGO
TRIANGLE
KEY
Main Centres
Ginneries
Transit depots
Cotton growing area
COTTON MARKETING BOARD

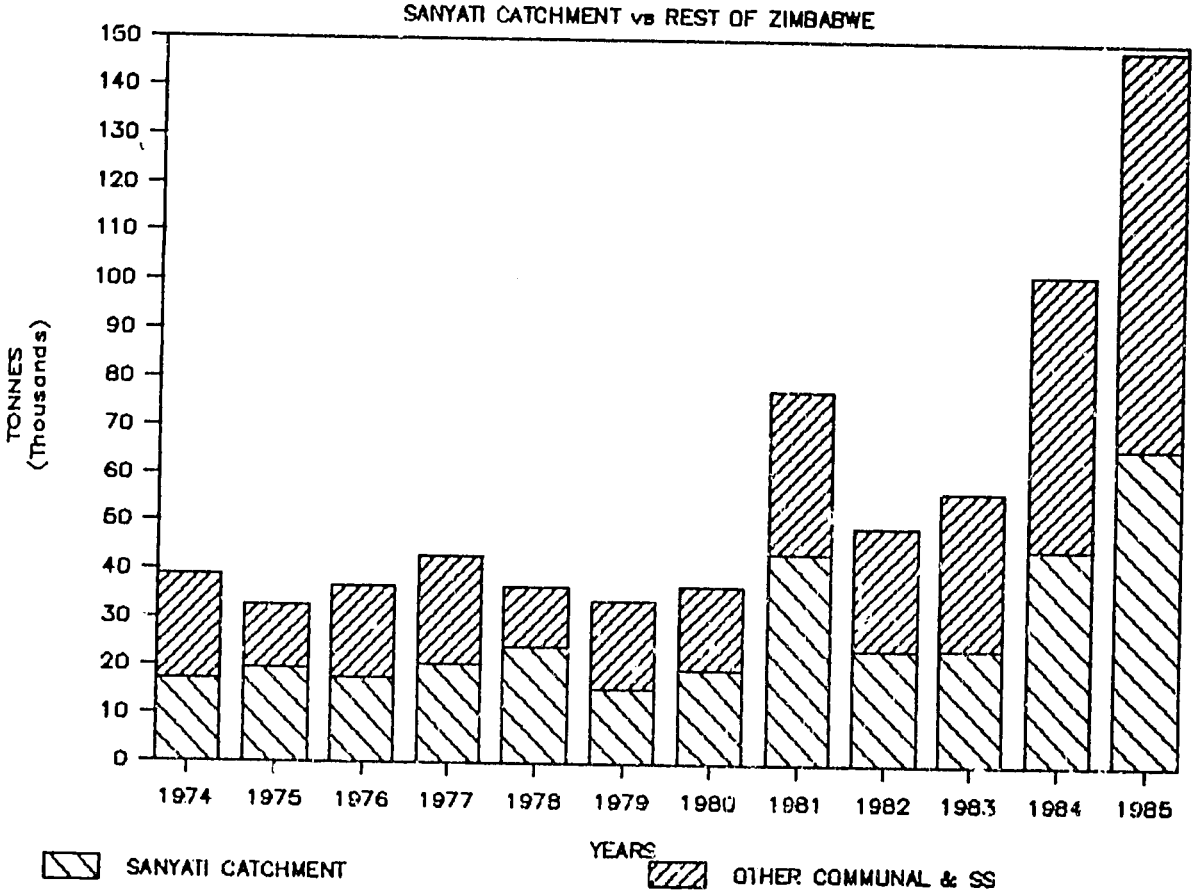

ZIMBABWE
PROVINCIAL MAP : 1982
MASHONALAND CENTRAL
MAHUWE
MOUNT DARWIN
GURUWE
KAROI
MASHONALAND WEST
GLENDALE
TAFUNA
BINDURA
MASHONALAND EAST
BANKET
TCHOLI
Chitenderano
Cheziya
Gokwe
Chirisa
SANYATI
HARARE
CHEGUTU
NYAMAROPA
NEMANGWE
KADOMA
HWANGE
LANOTI
MATABELELAND NORTH
MIDLANDS
MUTARE
MANICALAND
GWERU
BIRCHENOUGH BRIDGE
BULAWAYO
MASVINGO
MASVINGO
TRIANGLE
MATABELELAND SOUTH
KEY
Main Centres
Ginneries
Transit depots


NATURAL REGIONS AND FARMING AREAS
Boundaries as at 1st July 1983
MAHUN
MOUNT DARWIN
GURUWE
KAROI
GLENDALE
TAFUNA
BANKET
BINDURA
TCHODA
SANYATI
HARARE
CHEGUTU
NEMANGWE
HWANGE
KADOMA
MANOTI
MUTARE
GWERU
BIRCHENOUGH BRIDGE
BULAWAYO
MASVINGO
TRIANGLE
KEY
Main Centres
Ginneries
Transit depots
CENTRAL STATISTICAL OFFICE
FOR NATURAL REGIONS AND
FARMING AREAS.
1. Specialized and diversified Farming Region
2a. Intensive Farming Region
2b. Intensive Farming Region (crop yields in certain years affected by relatively short rainy seasons or dry spells during the seasons.)
3. Semi-Intensive Farming Region
4. Semi-Extensive Farming Region
5. Extensive Farming Region


REGISTERED PRODUCERS
SMALL SCALE AND COMMUNAL
NUMBER (Thousands)
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1980
1981
1982
1983
1984
1985
years
rest of Zimbabwe
sanyati catchment

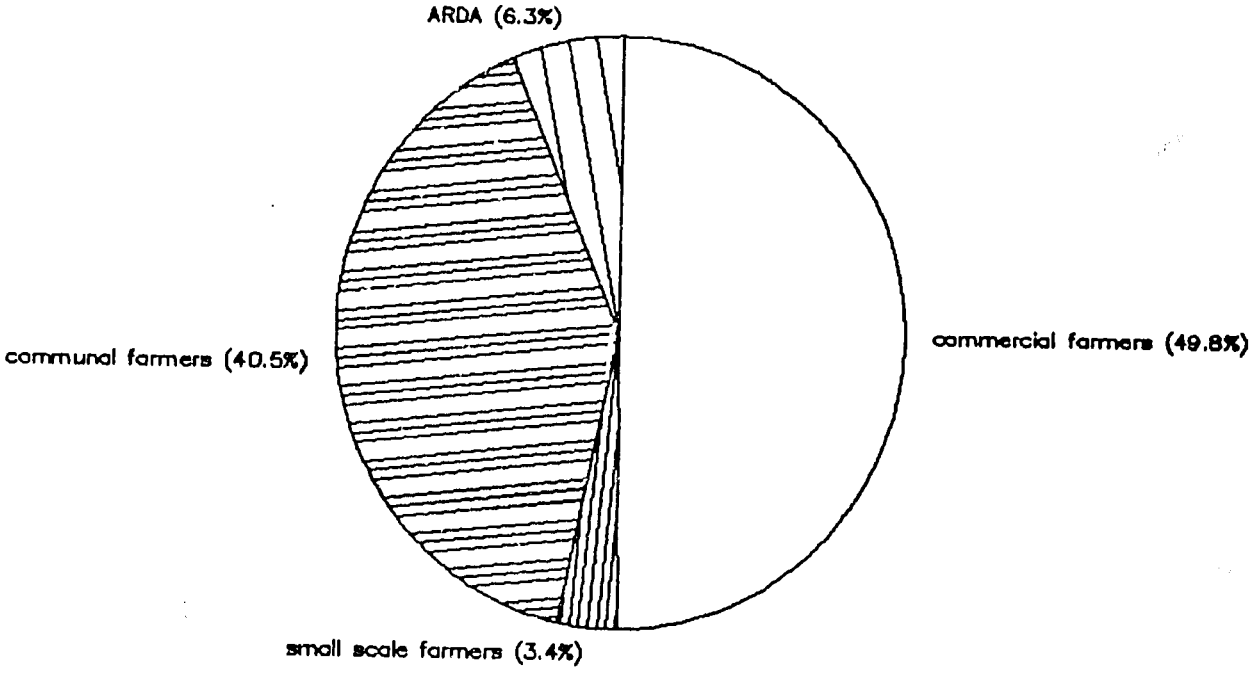
COMMUNAL AND SSF COTTON PRODUCTION

SANYATI CATCHMENT vs REST OF ZIMBABWE



ZIMBABWE COTTON PRODUCTION 1985

SECTOR ANALYSIS



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