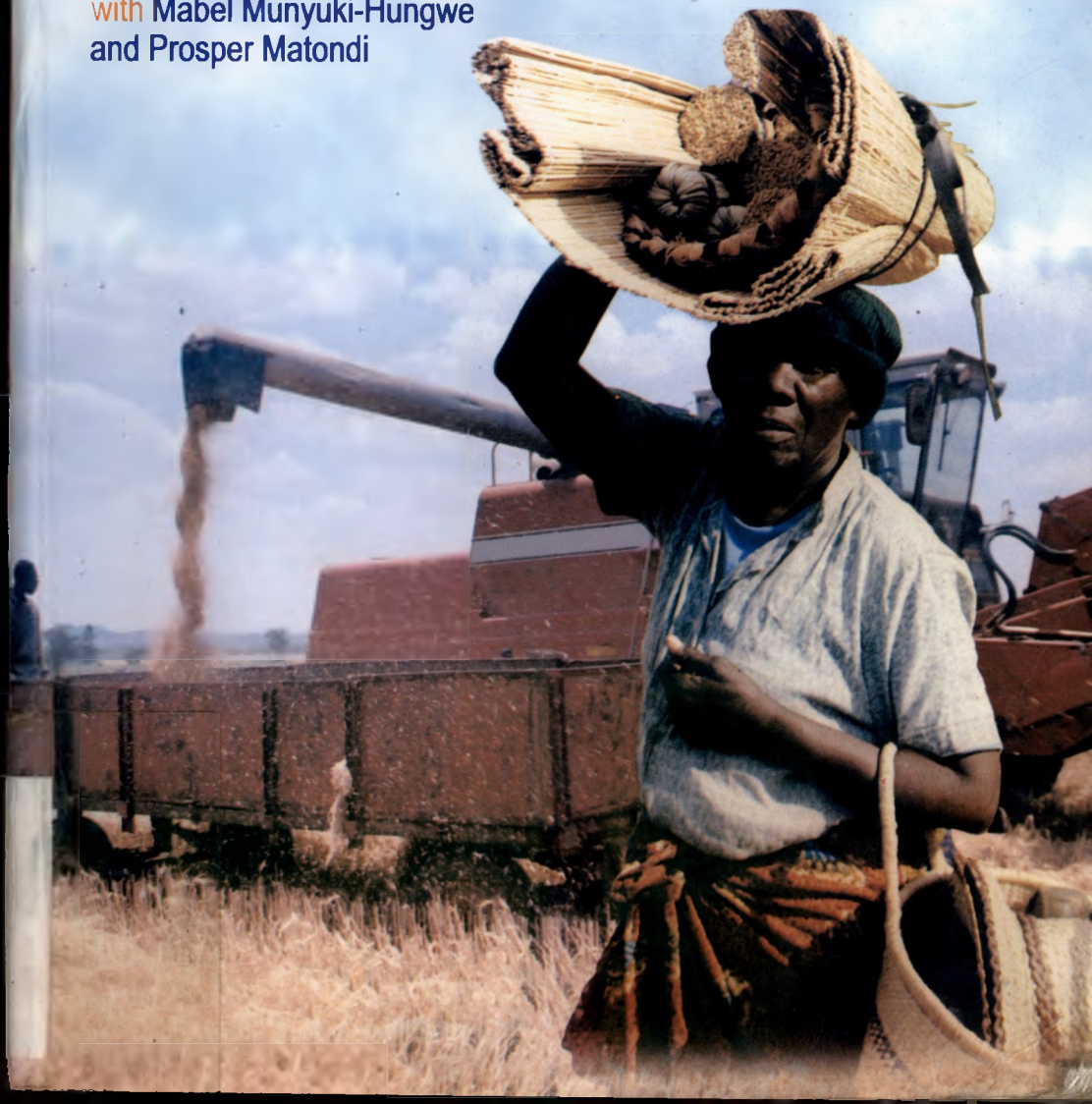
ZIMBABWE'S AGRICULTURAL REVOLUTION REVISITED

Edited By:
Mandivamba Rukuni,
Patrick Tawonezvi,
Carl Eicher
with Mabel Munyuki-Hungwe
and Prosper Matondi



ISBN 0-86924-141-9

Published by University of Zimbabwe Publications, P. O. Box MP 167,
Mt. Pleasant, Harare, Zimbabwe
First printed: 2006
Publishing consultant: Margo Bedingfield,
Cover and inside photographs supplied by Manfred Takaendesa, Centre for Rural Development

Printed by Sable Press Private Limited

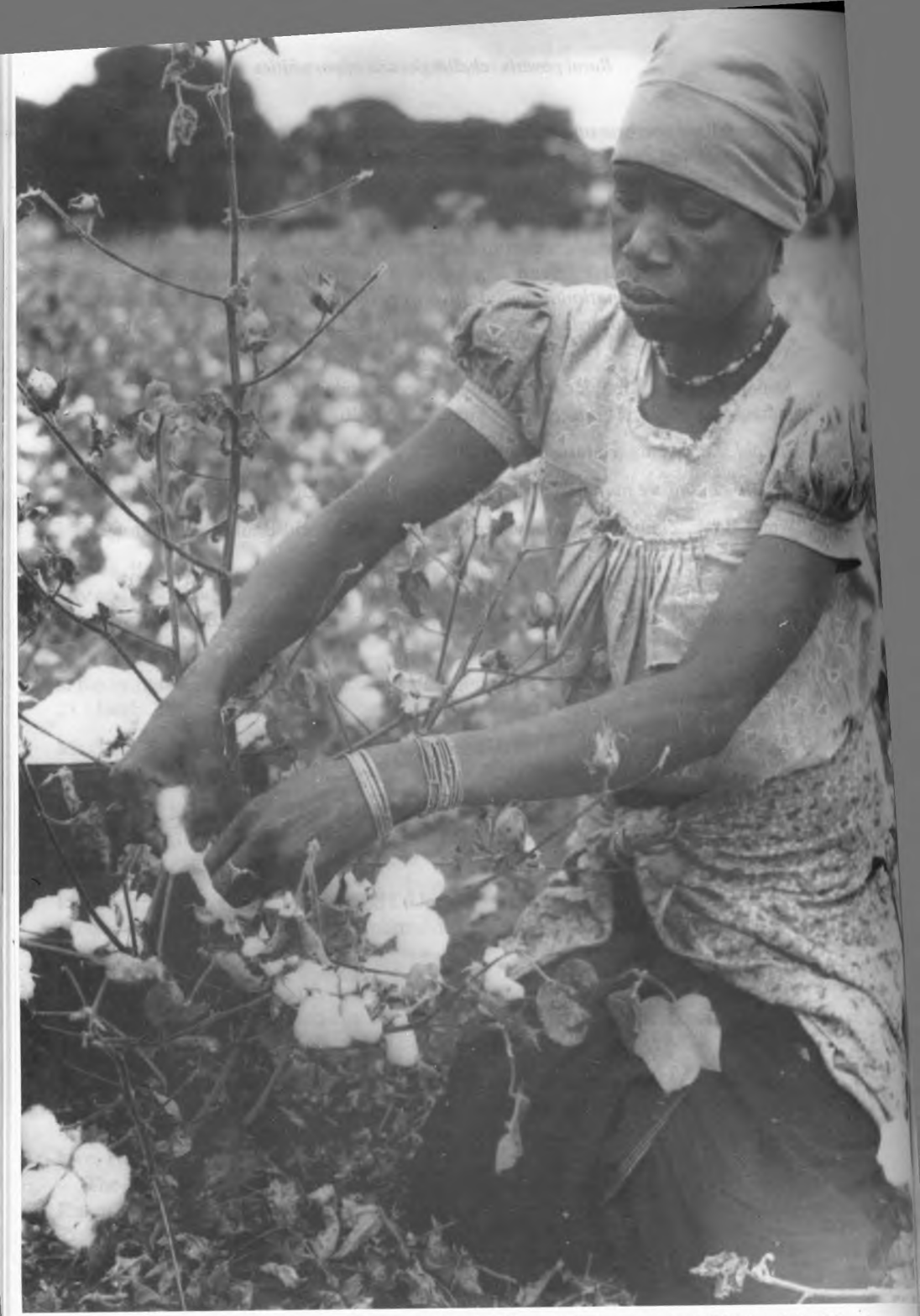
25 The food and nutrition situation in Zimbabwe 543
Julia Tagwireyi
Background 543
Causes of the deterioration in the nutrition situation 546
Policy and institutional environment for food and nutrition 548
Technical and financial resources base for nutrition activities 551
Lessons learnt 553
Conclusion 554

26 Rural poverty: challenges and opportunities 557
Jayne Stack and Chrispen Sukume
Overview of poverty in Zimbabwe 558
What sort of households are poor in rural areas? 561
Sources of income for poor rural households 563
Agricultural policies and poverty alleviation in Zimbabwe 565
Implications for poverty reduction and pro-poor growth 568
Postscript: post-2000 events and poverty alleviation 570

27 Commercialization of smallholder agriculture 577
Enos M. Shumba and Ephrem E. Whingwiri
Increased smallholder commercialization 578
Factors that contributed to increased smallholder crop output 580
Smallholder farmer production of cotton, groundnut and tobacco 583
Emerging commodities 586
Marketing and pricing policies 587
Conclusion 589

28 Agricultural diversification 593
Samuel C. Muchena
Challenges in developing new crops and livestock 595
Potential for diversification based on Zimbabwe's climatic regimes 597
Potential new crops 598
Diversification potential and prospects 607
Conclusion 609

29 Biotechnology and the future of agriculture in Zimbabwe: strategic issues 613
Idah Sithole-Niang
Global and African overview 613
Application of biotechnology in Zimbabwe 618
Vaccines 621
Policy issues 621
Future of biotechnology in Zimbabwe 624
Strategic issues for Zimbabwe 625
Conclusion 626



Smallholder cotton has always been of high quality as it is hand-picked (National Archives)

27

Commercialization of smallholder agriculture

Enos M. Shumba and Ephrem E. Whingwiri

Smallholder commercialization has been a long drawn out process in both the colonial and post-colonial period. Colonial rule in 1890 saw the emergence of the large-scale commercial farming sector, consisting of white settlers alongside a subsistence smallholder farming sector composed of blacks. The white large-scale commercial farming sector received unqualified government political and policy support to raise agricultural production and productivity, largely at the expense of the smallholder farming sector. This scenario persisted until the attainment of independence in 1980. The agricultural thrust of the majority rule government was to increase productivity in the smallholder sector while maintaining production on large-scale commercial farms. In this regard, the government focused on empowering smallholder farmers through research and extension, establishing marketing depots in communal areas, and providing favourable pricing policies to increase agricultural production. This policy thrust contributed to the agricultural revolution of the 1980s and 1990s. Smallholder farmers have transformed themselves from subsistence to commercial producers of a number of key agricultural enterprises over the last 20 years.[216]

Before 2000, smallholder farmers included communal, resettlement and small-scale commercial farmers. However, the addition of A1 farmers has broadened the base of smallholders who now command the majority of the land used for agricultural purposes. The question is whether such growth in the number of smallholders and the area they use will translate into increased agricultural productivity. This chapter discusses the evolution of the smallholder sector and examines the underlying environment that has enticed farmers to commercialize their farming operations.

The chapter is biased towards cotton and tobacco as these are the country's largest agricultural foreign currency earners. The production of these cash crops has provided opportunities for smallholder farmers to make significant inroads into commercialization. Cotton is a drought-tolerant crop that can be grown by

[216] Commercialization in its broadest sense is the transition from mostly subsistence agriculture (based on production for own consumption) to production for the market (domestic and export). Many smallholders practise both subsistence and market production. There are a few cases where smallholders concentrate on a narrow range of crops just for the market.

smallholder farmers, the bulk of whom are located in the low rainfall areas of the country. However, in the last decade, groundnut production for consumption and marketing in the smallholder sector has also increased. Since groundnut is a legume, it is important for a balanced smallholder cropping system. The chapter will also discuss the commercialization of milk production and small grain cereal multiplication by smallholder farmers. The two commodities are emerging as important cash sources in the smallholder farming sector. Both commodities require considerable technical knowledge, financial backup and assured markets for their successful production.

Increased smallholder commercialization

Before the arrival of the white settlers in 1890, Zimbabwe's smallholder agriculture was based on a wide range of food crops for balanced household nutrition and risk aversion. Some of the crops grown were finger millet, pearl millet, sorghum, maize, groundnut, rice, sweet potato, cowpea, pumpkin and melon (Palmer, 1977). Apart from the introduction of a few cash crops, similar crop mixes continue to dominate smallholder farming systems (Rukuni, 1994). Table 27.1 shows typical cropping patterns in the smallholder farming sector by natural region.[217] According to this table, every farmer grows (or attempts to grow) maize, irrespective of natural region. The crop accounts for over 50 per cent of all cropped land. It is regarded as both a subsistence crop and, where surpluses occur, as a cash crop. Groundnut is the second most prevalent crop. On average, groundnut is grown by 72 per cent of the farm households although it occupies only 8 per cent of the cropped area. In drought-prone areas such as Nyajena (natural region IV), more drought-tolerant food crops such as sorghum and pearl millet assume greater importance in the cropping system. On the other hand, purely cash crops such as cotton and sunflower cut across the natural regions while burley tobacco is largely confined to the better rainfall areas and heavier and more fertile soils.

Table 27.2 gives the agricultural production trends for five selected crops in the small-scale and large-scale farming sectors through extrapolating five-year periods from 1980. Of these crops, maize, groundnut and sorghum were grown for both subsistence and cash while cotton and burley tobacco were grown purely for cash. The percentage contribution of smallholder farmers to total maize production showed an increase from 42 per cent in 1980 to 1985 to 60 per cent in 1995 to 2000. Similarly groundnuts also increased from 86 per

[217] Natural regions are the five geographical areas of Zimbabwe with divisions based mainly on the average annual rainfall. Rainfall in the natural regions is as follows: natural region I has over 1000 mm/yr; natural region II has 800–1000 mm/yr; natural region III has 650–800 mm/yr; natural region IV has 450–650 mm/yr; natural region V has less than 450 mm/yr. (Vincent and Thomas, 1961) (See natural region map)

Table 27.1 Cropping patterns of smallholder farmers by area

Crop	Chiweshe NR II (2.48 ha)*		Kandeya NR II-III (4.14 ha)		Nyajena NR IV (3.43) ha	
	% of area planted	% of growers	% of area planted	% of growers	% of area planted	% of growers
Maize	63	100	56	100	50	100
Groundnut	11	85	2	39	11	92
Sorghum	–	–	–	–	7	53
Pearl-millet	–	–	–	–	7	43
Finger-millet	5	28	1	14	16	85
Cotton	3	4	38	95	1	2
Sunflower	11	30	–	–	2	22
Burley tobacco	2	9	1	4	–	–
Soyabean	3	24	1	4	–	–

*Average arable area per household

Source: Ministry of Lands and Rural Resettlement (1990)

Table 27.2 Crop production trends by sector

Crop	1980-85			1990-95			1996-2000		
	Average production (000t)	% contribution LSC	SH	Average production (000t)	% contribution LSC	SH	Average production (000t)	% contribution LSC	SH
Maize	1854	58	42	1532	42	58	1978	40	60
Groundnut	71	14	86	73	20	82	121	6	94
Sorghum	85	27	73	72	28	72	100	16	84
Cotton	184	73	27	171	44	56	284	30	70
Burley tobacco	4	80	20	11	64	36	7	43	57

Key: LSC = Large-scale commercial farmers, and SH = smallholder farmers
Source: Central Statistics Office figures: 1980–2000

cent from 1980 to 1985 to 94 per cent from 1995 to 2000. Significant gains were also made by smallholders in cotton and burley tobacco production.

Factors that contributed to increased smallholder crop output

Increased participation by smallholder farmers

There has been a drastic increase in smallholder output of cotton, burley tobacco and groundnut over the last two decades. This has largely come from increases in the cropped areas and improved crop yields in some cases. With respect to cotton, the area planted almost quadrupled while crop yields remained almost static at around 0.7 tonnes per hectare. The rapid growth in the area planted to cotton was largely due to the recruitment of new growers, especially in resettlement areas. The number of smallholder cotton growers increased from less than 90,000 in 1980 to 215,000 in 1987 (Takavarasha, 1994). In the case of burley tobacco, there was a 500 per cent increase in the area planted to the crop between 1980 to 1985 and 1996 to 2000. This was largely due to the entry of new tobacco farmers. However, trends in tobacco yields have been inconsistent. For example, yields increased by 30 per cent between 1990 and 1996 but fell to 80 per cent between 1996 and 2000 compared with yields for the period between 1980 and 1985. There was no major change in the area planted to groundnut between 1980–85 and 1996–2000. However, there were notable increases in the yields between the two time periods. Compared with the 1980–85 yields, groundnut production increased by 19 per cent and 78 per cent in 1990–95 and 1996–2000, respectively.

The increased output of the three crops are accounted for by the drastic increase in cropped areas due to the entry of new growers in the case of cotton and burley tobacco. However, there were relatively small changes in the area planted to groundnut but there were significant increases in yields. Yields of cotton and tobacco remained relatively static during the period.

Research and development efforts

Concerted research efforts coupled with effective extension were the cornerstones of an agricultural revolution that occurred in the large-scale commercial farming sector from the 1950s (Tattersfield, 1982). The resultant technologies largely promoted capital-intensive production that required large investments in machinery and capital. Some of the crop varieties of cotton, tobacco and groundnut benefited some smallholder farmers before and after independence but, with an extension worker to farmer ratio of 1:800 in 1980, it was difficult to provide extension services to the 600,000 smallholder farm households. Furthermore, the linkage between technology generation and dissemination was rather weak (Pazvakavambwa, 1994).

Following the attainment of independence, the former Department of Re-

Table 27.3 Factors that contributed to increased outputs of key commercial crops

Factors	Cotton	Tobacco	Groundnut
Research and development	– High yielding cultivars with good lint qualities – Early planting and application of boron containing basal fertilizer and some nitrogen top dressing. – Optimum plant densities and use of moisture conservation techniques (ridges and tied ridges) – Simpler pest scouting techniques and integrated pest control (pesticides and cultural methods)	– Short season and high yielding cultivars. – Rotation with a manured maize crop and application of gypsum topdressing. – Close plant spacing to reduce incidence of rosette virus. – Control of leaf diseases through chemical sprays. – Early planting and timely harvesting and other subsequent crop handling and processing activities.	– Use of improved seed – Crop rotations to reduce the population of rootknot nematodes – Seedbed fumigation to control rootknot nematodes – Crop fertilization.
Extension and training	– Training provided through the Cotton Research Institute – Private sector driven extension based on contract farming	– Tobacco Research Board training of smallholder farmers – Farmers' Development Trust training in tobacco production at Dozemary, Trelawney, and so on	
Public–private sector partnerships	– Emergence of new players – FSI-Agricom, FSI-Cotton, – Cotco, Cargill have played key roles through contracting farmers (by providing inputs and farmers marketing through them)	– FSI-Tobacco emerged as a key partner of government in contracting farmers to produce tobacco	– Contract production through Olivine Private Limited for the production of groundnut. The state provided extension to farmers
Credit facilities	– Contract system of production enabled availability of inputs	– Tobacco financing schemes introduced	
Marketing and pricing	– Marketing deregulation in the 1990s	– Tobacco auctioning systems – New tobacco merchants resulted in increased competition	– New marketing arrangements through Reapers
Availability of quality land	– Increased area of cotton production by smallholders as they gain access to quality land in former large-scale farming lands	– Increasing participation of smallholders through the A2 scheme in the production of tobacco in former large-scale farming lands	

Source: Price Waterhouse (1994); Cole and Cole (1994); Mariga (1994) and Metelerkamp (1988)

search and Specialist Services placed more emphasis on on-farm technology generation and verification as a way of addressing the specific needs of smallholder farmers. It broadened its approaches to include group extension to reach more smallholder farmers. Furthermore, there was an upsurge in the private sector extension service (for example, through agro-chemical and fertilizer companies) to smallholder farmers. The private extension services adopted a package approach (for example, the Cotton Company of Zimbabwe in the case of cotton). The linkage between research and extension was further strengthened through the conduct of on-farm research trials and demonstrations and the establishment of the committee for on-farm research and extension in 1986. The major players in the committee were technical personnel from the Department of Research and Specialist Services and the Department of Agricultural, Technical and Extension Services (both government departments) as well as smallholder farmers. As a way of further strengthening technology generation and dissemination, the two departments were merged into one department called the Department of Agricultural Research and Extension in 2002. The government's post-independence on-farm research thrust contributed to improved linkages between researchers and extensionists. The transformation into the Department of Agricultural Research and Extension was designed to increase the contact between researchers and farmers.

Financing of smallholder production

The success of smallholder production and output was partially based on expanded government financial support. The Agricultural Development Assistance Fund emerged as one of the key financial institutions in availing agricultural credit to smallholder farmers for working capital, inputs and for medium-term loans for farm machinery and equipment. Even though the government devolved itself from direct financing in the late 1990s, a number of private sector players took on a critical role. For instance, the Cotton Company finance scheme contributed to a record 353,000 tonnes of cotton in the 1999/2000 season. At least 76,000 growers were financed (*New Farmer*, 2003). With the inception of the cotton input credit scheme in 1993, the company had allocated a total of Z$8.6 billion in nominal terms, or Z$30 billion by 2002/03. In a decade, 608,000 members benefited from the scheme. Setting up input supply systems for the benefit of smallholder farmers was critical in commercialization.

In the 1990s, within the spirit of the economic structural adjustment programme, there were attempts by commercial banks to support commercialization in the smallholder sector. Commercial banks such as Zimbank and Barclays established specialized small business units which extended credit to some smallholder farmers. The Jewel Bank also supported livestock commercialization through an Initiative for Development and Equity in African Agriculture (IDEAA) programme (Khombe, Munyuki-Hungwe and Tirivanhu, chapter 32).

The initiatives were on a small scale, supporting the production of a few selected commercial crops such as tobacco, paprika, cotton and livestock. However, faced with loan repayment defaults and high monitoring costs, the commercial banks scaled back or abandoned lending to smallholders. For example, Barclays Bank closed most of its small business units because of the high rate of loan default. Other commercial banks did not emulate this intervention as expected hence the scheme collapsed.

In general most smallholder farmers derive agricultural capital from personal savings from either formal and informal employment remittances or sales of agricultural produce. However, the income earned from these two sources is generally too low to permit substantial savings. In many cases the size of the local market tends to be small and have low purchasing power. Wages from formal employment are too low to enable regular savings. In general commercial banks shy away from providing capital to smallholder farmers because, firstly, many of the commercial banks are located far away from smallholder farmers and, secondly, there were generally more failures than successes for banks in giving loans to smallholders. Failure to obtain funding is due to the limited number of funding agents that operate outside urban areas which limits people's access to banking facilities. Funding conditions and requirements of the financial institutions are not favourable to small-scale rural entrepreneurs, for example, the banks require collateral. There is also a lack of information on alternative sources of funds for agriculture, the fear of failure as well as the inability to repay the loans.

Smallholder farmer production of cotton, groundnut and tobacco

Cotton

Although smallholder cotton yields have remained relatively static during the last 20 years, there have been significant increases in the number of farmers growing the crop. These farmers benefited from the available pool of production technologies, extension and training initiatives. There has been considerable adoption of some cotton technologies, especially high yielding cultivars, moisture conservation techniques, pest scouting techniques and integrated pest management developed under the auspices of the Cotton Research Institute of the Department of Research and Specialist Services before and after 1980. On the extension front, the growers were assisted by the Department of Agricultural, Technical and Extension Services personnel operating at the local level and representatives of fertilizer and agro-chemical companies who promoted their products in the process. With respect to training, the Commercial Cotton Growers' Association established the Cotton Training Centre that worked closely in partnership with the Department of Agricultural, Technical and Extension Services and the Cotton Research Institute of the Department of Research and

Specialist Services. The centre offered short courses in cotton scouting, picking, pest management and general cotton production for professionals, extension workers and farmers.

Despite the foregoing initiatives that contributed to the increased output of cotton in the smallholder sector, the crop's average yields of 0.7 tonnes per hectare are still relatively low compared with about 1.8 tonnes per hectare realized by large-scale commercial farmers. The key reasons smallholder farmers achieved lower yields was because of the use of lower levels of fertilizer. In addition, timely implementation of key practices is not observed, such as early planting, due to lack of irrigation infrastructure as well as timely weeding, pest control and harvesting compared to in the large-scale commercial sector. Additional factors that constrained production were the use of low-yielding varieties, water problems or droughts, lack of tillage facilities, poor infrastructure, lack of inputs or access to credit, poor health and education facilities, and inadequate research and extension services. The changes in the macro-economic environment in the 1990s constrained the ability of smallholder farmers to commercialize. Smallholder farmers lacked adequate resources, such as cash and human, animal or mechanical power, which resulted in poor crop husbandry (Price Waterhouse, 1994).

Groundnut

There have been considerable increases in smallholder groundnut yields during the last three decades although the area planted to the crop has remained relatively static. The crop benefited from the use of improved production technologies generated by the Department of Research and Specialist Services and targeted extension activities carried out by the Department of Agricultural, Technical and Extension Services and other players. Groundnut technologies that were adopted by smallholder farmers included high-yielding, short-season cultivars, close plant spacing, crop rotation with manured maize and gypsum application. The government extension services have been complemented by agro-chemical entities and private marketing companies such as Reapers. The latter was established following the liberalization of groundnut marketing by government. It buys and processes groundnut from both smallholder and large-scale commercial farmers.

Despite the increase in groundnut productivity as a result of the use of improved technologies, groundnut yields are still low at 0.6 tonnes per hectare compared with over one tonne per hectare achieved in the former large-scale commercial sector. The yield levels in the large-scale commercial sector were due to physical land conditions and availability of support from both government and the private sector. Most of the crop was grown in the higher rainfall areas while most smallholder farmers were located in poor rainfall areas. This is in addition to the availability of irrigation facilities and the growing of late

maturing cultivars which have a higher yield potential. Good soil fertility and crop management programmes implemented on large-scale commercial farms enabled the groundnut crop to benefit from the resultant residual fertility. On the other hand, soils in the smallholder sector are generally depleted of nutrients and are characterized by low pH. Furthermore, large-scale commercial farmers used appreciably higher fertilizer levels on the crop than smallholder farmers. Appropriate crop husbandry based on timely implementation of key practices such as early planting and timely weed control on large-scale commercial farms increased the yield levels. Due to the lack of or inadequate animal, human and mechanical power, these operations were generally carried out late in the smallholder sector.

Burley tobacco

There has been a significant increase in the area planted and the number of smallholder farmers growing burley tobacco in the last two decades. However, crop yields remained static during this period. Farmers adopted a number of production technologies developed by the Tobacco Research Board[218] before and after independence. Such technologies include: improved tobacco seed, seedbed fumigation and crop fertilization.

Extension advice on tobacco production was primarily provided by the Department of Agricultural, Technical and Extension Services while training of smallholder farmers was carried out at the Trelawney Training Centre which is funded by government and managed by the Zimbabwe Tobacco Association. The training covered all aspects of small-scale tobacco production, rotation and farm finance. After completing training at the centre, farmers were assisted financially and technologically in growing the crop on their farms. At about one tonne per hectare, smallholder tobacco yields were still much lower than the 1.8 tonnes per hectare achieved by large-scale commercial farmers.

The production performance of the large-scale commercial farming sector was attributed to the use of more fertilizer than in the smallholder sector. There was timely implementation of key husbandry practices such as early planting and weeding, topping and harvesting. Burley tobacco is an intensive crop to produce, inadequate labour and draught power shortages delay the implementation of these activities in the smallholder sector. The emergence of contracting arrangements by private companies has mobilized smallholder producers because of the market guarantees.

[218] The Tobacco Research Board received most of its funding from the tobacco industry.

Emerging commodities

There has been considerable commercialization of milk production and small grain cereal seed multiplication in the smallholder sector over the last few years. Hitherto, smallholder farmers realized less than three litres per head per day of milk from their indigenous cattle, which depended on veld grazing and occasional supplements of crop residues. With respect to small grain cereals, smallholder farmers largely planted poor quality seed retained from previous harvests. This was because commercial seed companies found it unattractive to market this seed due to low effective demand. This section highlights progress made in the commercialization of the two commodities within the smallholder farming sector.

Smallholder milk production

In line with government's poverty alleviation strategy, the Agricultural and Rural Development Authority, a parastatal organization, promoted smallholder milk production through its Dairy Development Programme. The programme aimed at a dairy facility close to the target community and the facility or centre was then responsible for buying and processing milk produced by the community. The programme gave loans to community members for the purchase of feed, vaccines and other drugs for the dairy herd. Heifer International (a non-governmental organization) provided cows to the target community through the 'pass on the heifer scheme'. In order to reduce the cost of cattle feed, planting of fodder legumes such as *Leucaena, Crlyricidia* and *Sesbania sesban* was promoted by a number of government and non-governmental organizations operating in the target areas. The fodder was fed strategically to the dairy cattle throughout the milking period.

These partnerships and the use of crossbred dairy cattle raised the milk yield from less than three litres to an average of eight litres per cow per day. The introduction of the fodder component reduced the cost of feed and improved the profitability of smallholder dairying. Because of its relative success, the milk production partnership model has been extended to the new farmers allocated land under the government's land reform programme. Smallholder milk production by 2002 constituted about 3 per cent of national milk production (Mandiwanza, 2002). The number of large-scale dairy producers dropped to 300 from 560, following the acquisition of some farms by government. While the number of smallholder dairy producers increased to over 3000.

Dairy production is an expensive and specialized area. Many of the new landowners are not fully equipped nor do they have the technical know-how to venture into dairy production. Poor husbandry due to the inability of small-scale dairy producers to procure stockfeeds has constrained their operations. Dairiboard Zimbabwe Limited has so far been the only key private sector insti-

tution that has ventured into supporting small-scale dairy producers with both finance and technical know-how in the A1 schemes.

Smallholder small grain cereal seed multiplication

A number of non-governmental organizations such as the Community Technology Development Trust promoted the multiplication of small grain cereal seed in a number of districts. The focus of the projects was to improve access to good quality seed of sorghum and pearl millet through farm level seed multiplication with the involvement of government departments and the private sector. Farmers were taught how to produce good quality seed. Once trained, the farmers were linked to Seed Co (a commercial seed company) which then contracted them to produce the required seed. The seed production process was supervised by relevant government departments to ensure that seed production standards were adhered to. Seed Co then purchased the resultant seed for packaging and marketing.

In Tsholotsho district alone, the number of smallholder farmers trained in on-farm quality seed multiplication increased from 149 in 1998/99 to 568 in 1999/2000. About 300 of the trained farmers were contracted by Seed Co to multiply seed of selected varieties of sorghum and pearl millet. Most of the farmers were able to meet their seed yield and quality targets (Shumba *et al.*, 2002). For example, of the 30 tonnes of sorghum seed produced, 22 tonnes met the pre-purchase germination standards required by the certifying authority. The seed was purchased by Seed Co at a price of Z$6,500 per tonne compared with $ 1,833 per tonne for a normal commercial sorghum crop sold through the Grain Marketing Board.

This demonstrates that with appropriate training and adequate financial incentives, smallholder farmers are prepared to adopt new technologies such as seed multiplication. Apart from the increased returns that accrued to farmers who multiplied the seed, the project improved the availability of seed of the crop cultivars to participating farmers and their neighbours. However, the sustainability of the farm level seed multiplication initiative will largely depend on value addition to small grain cereal in order to increase their use and demand beyond the local level.

Marketing and pricing policies

Before and after independence in 1980, the pricing of major agricultural products, including cotton and groundnut, was subject to a high degree of official regulation and administration through agricultural marketing parastatals and boards. This was aimed at achieving national self-sufficiency in food and generating foreign currency through agricultural exports. However, there was no direct intervention in tobacco prices which were determined at the auction floors.

The marketing boards established for the three case study crops were:

- The *Grain Marketing Board* which paid uniform prices set by government for all controlled products (including groundnut) delivered to its depots or collection points. Before 1980, the Grain Marketing Board had only three depots that were in communal areas but this had grown to 45 by 1993;
- The *Cotton Marketing Board* that provided a guaranteed market for seed cotton at a prescribed price. The Cotton Marketing Board operated 18 intake depots, half of which were built adjacent to communal areas after 1980;
- The *Tobacco Industry Marketing Board* (formerly the Tobacco Marketing Board) that provided an institutional framework for market forces to operate at the tobacco auction floors as enshrined by the Tobacco Marketing Act of 1936. The country has three auction floors located in Harare.

In line with the economic structural adjustment programme of 1991, Zimbabwe started to decontrol agricultural prices and marketing systems to align them with market forces and move away from uniform commodity prices. In addition, the economic reforms entailed the relaxation of market regulations to create a multi-channel marketing system in which private traders could freely compete with statutory boards. In principle this meant higher returns for smallholder farmers who now faced competitive buyers. The reforms were introduced in phases over a three-year period (1991/92 to 1993/94) depending on the commodity (Takavarasha, 1994).

The Cotton Marketing Board transformed itself into a private limited company called the Cotton Company of Zimbabwe (Cottco). The company competed with other private players (such as Cargill, Cotpro, FSI-Cotton) in the marketing of cotton and the provision of backup support to cotton growers. It provided a cotton input package to producers on credit terms. Cottco established new ginneries in Gokwe, Sanyati and Muzarabani. This not only increased rural employment opportunities but also business development through the establishment of linked industries (transport, repairs, welding) and commerce (banks, postal services). Cottco increased its countrywide network to over 30 collection points and transit depots which made the transportation of seed cotton from farm to ginnery much easier. In addition it provided a combination of seasonal financial support, technical advice and assistance, and convenient location. After 2000, Cottco also established new collection centres in the A1 and A2 resettlement schemes to facilitate the marketing of crops by newly resettled smallholders. This arrangement between Cottco and farmers provided a mutually rewarding partnership.

The Tobacco Industry Marketing Board continued to provide a legal framework for the marketing of tobacco at the sales floor. However, the Tobacco Marketing Act of 1936 allowed government to intervene when a collapse in the

industry was imminent. For example, in 2002 the government had to give an 80 per cent support price to tobacco farmers. The latter had threatened to withhold their crop following the low prices offered at the start of the 2002 tobacco marketing season. Because the tobacco farmers were well organized (both smallholder and large-scale commercial) they were able to put pressure on the government to act on their behalf. Tobacco is sold through the tobacco auction floors.[219] The prices were competitive and although a tax was levied for sales, the major stumbling block for the industry was the rate of exchange from the US$ auction price to the Z$ that the farmers were eventually paid. The industry was granted special status and a 'favourable' exchange rate was allowed but this fell short of the demands of producers who were forced to buy inputs whose costs were pegged at parallel market rates.

Reapers, a private company, entered into the marketing of groundnut in direct competition with the Grain Marketing Board. The company provided technical support and a credit facility for crop inputs to smallholder groundnut producers. An increase in small-scale peanut butter producers also ensured that smallholder farmers secured a market for their groundnut. Most of these are small projects or cooperatives that were introduced largely by non-governmental organizations.

In summary, the government's marketing and pricing policies encouraged the commercialization of smallholder production of cotton, groundnut and burley tobacco by guaranteeing markets and improving farmers' access to market outlets by opening up more depots within and adjacent to the communal areas and in some resettlement areas. Government should facilitate negotiations between farmers and marketing agencies so that smallholder farmers obtain a fair price for their commodities.

Conclusion

Zimbabwe's smallholder farmers have excelled in the production and marketing of cotton, burley tobacco and groundnut. The first two crops are pure cash crops while the latter is grown for both food and cash. The increased production of these crops largely came from expansion in the cropped areas due to the entry of new growers in the case of cotton and burley tobacco and from some notable increases in crop yields in the case of groundnut. This is partly because successful smallholder farmers acted as magnets for the other farmers as their success was visibly manifested by the expansion of their asset base.

Factors that contributed to the commercialization of the three crops by smallholder farmers included: a conducive agricultural policy environment; functional transformed institutions; a strong technology generation and dis-

[219] There are two major auction floors in Zimbabwe where most of the tobacco leaf is sold.

semination system; an enabling marketing and pricing system; and the availability of credit for the purchase of production inputs. A considerable body of knowledge was created over a long period of concerted on-station and on-farm research by government institutions with complementary support from the private sector. Some of these technologies were subsequently adapted and adopted by smallholder farmers based on strong extension support from both the public and private sectors. Non-governmental organizations also supported the adoption of some of the agricultural innovations. Input production packages offered on credit terms by companies such as the Cotton Company of Zimbabwe and Reapers for cotton and groundnut, were also key drivers. Furthermore, farmers received specialized crop production training from a number of training centres and marketing organizations.

To support the use of the improved technologies and the acquired farming skills, government made credit facilities available to smallholder farmers through the Agricultural Finance Corporation. Other public and private sector initiatives aimed at increasing credit availability to farmers were also put in place. Furthermore, farmers were assured of guaranteed and competitive marketing arrangements following agricultural market liberalization. The entry of more players on the marketing scene had the net effect of pushing producer prices upwards, thus making the production of the target crops more attractive. However, government continued to ensure that farmers remained viable through appropriate pricing intervention when market failures occurred. This contributed to smallholder agriculture commercialization.

It is noteworthy, however, that yield levels achieved by smallholder farmers in the three crops were still much lower than those realized by large-scale commercial farmers. To address this, there is need to strengthen technology generation and dissemination in favour of the smallholder farming sector. However, given the huge costs involved (for institutional strengthening, capacity building and operations) and the long-term nature of such efforts, the need for smart partnerships between the public and private sectors is essential (Shumba, 1991). Furthermore, there is need to strengthen various commodity associations including those under the Zimbabwe Farmers' Union (representing the smallholder farmers) for them to be effective in lobbying government and the private sector for a conducive business environment. Smallholder farmers largely benefited from the lobbying done by commodity associations under the previously strong and better organized Commercial Farmers' Union (representing large-scale commercial farmers). Some of these include the Cotton Growers' Association, the Zimbabwe Tobacco Association and the Oilseed Producers' Association (for groundnut).

References

Cole, L. D. and J. S. Cole, 'Tobacco research and development', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

Community Technology Development Trust, *On-farm conservation survey of crop landraces in Tsholotsho district, Zimbabwe*, Harare, 1998.

Mandiwanza, A. S., *Dairiboard Zimbabwe Limited annual report*, Harare, 2002.

Mariga, I. K., 'Cotton research and development', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

New Farmer, 'Land reform started in 1992', Vol. 3, No. 1, March, 2003.

Palmer, R. and N. Parsons (eds), *The roots of rural poverty in central and southern Africa*, Heinemann, London, 1977.

Pazvakavambwa, S., 'Agricultural extension', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

Price Waterhouse, 'Linkages between tenure and farming efficiency, investment and environmental degradation', report prepared for the Land Tenure Commission, Government of Zimbabwe, Harare, 1994.

Rukuni, M., 'The evolution of agricultural policy: 1980–1990', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

Shumba, E. M., 'Zimbabwe's experience in agricultural research priority setting for communal area households', pages 206–294 in M. Rukuni and J. B. Wyckoff (eds), *Proceedings of the sixth annual conference of 'Food security research in southern Africa', November 12-14, 1990*, University of Zimbabwe, Harare, 1991.
– (ed), 'On-farm crop biodiversity conservation and management in Zimbabwe', in *Biodiversity conservation and management in Zimbabwe*, Part 1, Government of Zimbabwe. Harare, 2003.

Takavarasha, T., 'Agricultural price policy', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

Tattersfield, J. R., 'The role of research in increasing food crop potential in Zimbabwe', in *Zimbabwe Science News*, 16 (1) 6–10, 1982.

Tawonezvi, P., 'Agricultural research policy', in M. Rukuni and C. K. Eicher (eds), *Zimbabwe's agricultural revolution,* University of Zimbabwe Publications, Harare, 1994.

Vincent, V. and R. G. Thomas, *An agricultural survey of Southern Rhodesia: Part 1, Agro-ecological survey*, Government printers, Harare, 1961.

Zimbabwe Government, *Economic structural adjustment programme 1991–1995*, Government printers, Harare, 1991.

ZIMBABWE'S AGRICULTURAL REVOLUTION REVISITED

Since the publication of the first edition of the *Zimbabwe Agricultural Revolution* ten years ago, the country's agricultural sector has undergone fundamental changes. This book raises issues on the direction and pace of Zimbabwe's agricultural revolution.

Zimbabwe's agrarian history is unusual in African development experience in that the country used its own resources to craft an agricultural science base that fuelled the first and second agricultural revolutions. However, the policy environment and prime movers have been seriously eroded and that raises a question on whether the country is capable of generating a third revolution. The unfavourable macroeconomic environment, deterioration of the core rural institutions in the 1990s, a contested land reform programme, economic and political 'isolation' and recurrent droughts have all worked against agricultural recovery.

This book attempts to raise issues of importance for agricultural development. A common theme throughout the book is the need tackle challenges and prompt serious discussions that could lead to the recovery of the country's agricultural sector.

The book is targeted at students, academics, practitioners, policy makers, citizens interested in the agricultural development of Zimbabwe.

UNIVERSITY OF ZIMBABWE Publications

ISBN 0-86924-141-9

9 790869 241416