

2

Agricultural Policy: Undoing the Legacy of the Past

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Introduction

There has been a long history of state intervention in South African agriculture, which reached a zenith around 1980 with a host of laws, ordinances, statutes and regulations. These affected, and in many cases still affect, all aspects of agriculture, including prices of, access to and use of natural resources, finance, capital, labour, local markets, foreign markets and foreign exchange. Importantly, these measures impacted unequally on different categories of farmers. As the last chapter showed, the early part of the twentieth century saw the initial steps aimed at the territorial segregation of white and black farmers.

The second phase of structural change started around the time of World War II (Wickens, 1989) and lasted until the early 1980s. In the former homelands, there was increased pressure on food production despite increased investment in large-scale development projects under expatriate management. This period also saw the commercialization of white farming through the adoption of modern mechanical and biological technology, resulting in consistent growth in output within a policy environment heavily favouring increased production by large-scale owner-operated farms. Much of this book analyses the success of the research system in generating new technologies that resulted in productivity growth, but we also find that there were huge costs to the biases caused by the distortionary policies.

Two trends were evident in the commercial sector during this period (van Zyl, *et al.*, 1987a). Between 1950 and about 1970 there was a large expansion in cultivated farm area, probably because tractors replaced draught oxen in ploughing operations. Larger areas could be managed and more labour was required for harvesting. This was exacerbated by the increase in yields throughout the 1960s and 1970s as a result of improved biological technology. The introduction of the combine harvester during the 1970s alleviated this problem but, together with credit, labour and tax policies favouring

Table 2.1 Growth in employment and capital formation, 1950–80

Period	Growth (%)	
	Total number of farm employees	Real gross capital formation
1950–1960	2.08	3.21
1960–1970	4.38	5.34
1970–1980	-2.67	5.09

Source: Adapted from van Zyl (1987c).

capital substitution and mechanization, led to considerable shedding of labour from agriculture thereafter (Fényes and van Rooyen, 1985). Table 2.1 shows these trends.

History has shown that neither racial discrimination nor price distortions in South African agriculture could be sustained, and the pressures on agriculture for reversal of these policies began to mount during the 1980s. This chapter details this period, which was characterized by a reversal of the policies of the previous two decades, starting with increased liberalization of the agricultural sector and then proceeding to the urgent task of removing the racial barriers between black and white agriculture. The focus in the chapter is on the period leading up to the democratic elections in 1994.

Production, consumption and prices

South Africa experienced a number of political changes and considerable political and economic instability during the 1980s. The constitution of 1983 gave birth to the tricameral parliamentary system and the concepts of 'own' and 'general' affairs. Violent uprisings, starting in 1984, led to a state of emergency and the intensification of economic sanctions in the mid-1980s.

As an important industry in the national economy, agriculture was also affected by numerous changes. The 1980s began with bumper harvests for maize and groundnuts in 1980/1, with an all-time record maize harvest of 14.6 million tonnes in that year. This was, however, followed by a period of drought between 1982 and 1984, resulting in widespread crop failures. Between 1984 and 1990, large surpluses of sorghum (1986), sunflower seed (1989), dry beans (1989), soybeans (1990) and sugar cane (1984) were produced. The field crop sector was again hit by drought in 1988 and 1991/92. Table 2.2 shows the production, consumption and the self-sufficiency index of the most important agricultural commodities produced in South Africa during the period 1985 to 1993. In spite of periodic droughts, South African

Table 2.2 Production and consumption of agricultural commodities, 1985-93

Commodity	Imports	Exports	Production (1000 ton)	Consumption		SSI ³
				Total ¹	Human ²	
Wheat	368	370	2242	2400	1865	93.4
Maize	515	2106	8019	7012	2839	114.4
Potatoes	4	11	1161	1142	942	101.7
Vegetables	5	27	1776	1755	1580	101.2
Sugar	41	892	1956	1107	1174	176.7
Beef	72	23	618	666	660	92.8
Mutton, goat and lamb	17	0	176	193	191	91.2
Pork	2	2	117	117	116	100.0
Chicken	7	2	656	661	654	99.2
Eggs	0	3	199	196	186	101.5
Deciduous and sub-tropical fruit	0	511	1484	974	876	152.3
Fresh milk	0	0	2435	2435	1118	100.0
Dairy products	35	58	2344	2321	2321	101.0
Sunflower seed oil	54	1	121	175	159	69.1
Citrus	0	435	802	369	366	217.3

¹ Available for use = Opening stock + Production - Closing stock + Imports - Exports

² Net human consumption = Available for use - Other uses - Losses, and further adjusted for extraction rate

³ SSI (self-sufficiency index) = Total production/Total consumption × 100

Source: Adapted from the Annual Food Balance Sheets of the Directorate of Agricultural Economic Trends, Department of Agriculture.

agriculture still succeeded in producing surpluses of all the important staples.

The table also indicates that in horticultural production, particularly fruit, South Africa was largely dependent on the export market. In contrast to crop and horticultural products, red meat had a self-sufficiency index of lower than 100. Shortages were supplemented by imports from mainly Namibia, Botswana and the EU. Red meat, coffee, rice, vegetables, animal fats and vegetable oils were the most important food products imported. The total gross value of agricultural production in South Africa was almost R15bn in 1987, whereas that of food imports amounted to about R1.2bn. Food exports in the corresponding period amounted to about R2.4bn (van Zyl and van Rooyen, 1991).

The area grown to crops fluctuated throughout the decade (see Table 2.3). The decline from 1986/87 in the area under maize is particularly noticeable, and formed part of a longer-term trend. Maize plantings decreased from an average of 4.6 million hectares per year in the periods 1970-75 and 1980-85 (after increasing from 3.2 million hectares in 1950-55) to an average of 4.1 million hectares in 1990-95. This was largely the result of the change in the price policy of the maize industry, which resulted in a near 50 per cent

Table 2.3 Area grown under selected field crops, 1985-94 (1000 ha)

Crop	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994*
Maize	4829	5063	4736	4394	4163	3816	4173	4377	4661	3526
Wheat	1983	1946	1749	2009	1843	1563	1436	750	1075	1048
Sorghum	388	401	326	228	196	166	191	239	227	180
Dry beans	81	87	77	80	87	100	70	57	69	59
Sugar cane	411	401	388	380	376	375	378	386	394	404
Tobacco	31	26	25	25	25	22	24	24	16	16
Potatoes	57	57	65	72	63	66	59	55	55	55

* Preliminary

Source: *Abstract of Agricultural Statistics* (RSA, 1995).

Table 2.4 Average yields, 1950/55 to 1990/95 (tons per hectare)

	1950/55	1960/65	1970/75	1980/85	1990/95*
Maize	0.88	1.22	1.82	1.78	1.94
Wheat	0.50	0.59	0.81	1.13	1.54
Sorghum	0.67	0.67	1.46	1.62	1.74

* Preliminary

Source: *Calculated from Abstract of Agricultural Statistics* (RSA, 1995).

drop in the real producer price of maize over the decade (Vink, 1993). Other influences included the land conversion scheme introduced to take land out of maize production, as well as unfavourable climatic conditions.

Although the area under cultivation for maize, wheat and sorghum declined during the period, production of these commodities grew steadily. Table 2.4 shows the trends in average yields for these commodities for the period 1950-55 to 1990-95. These increases in average yields may have been the result of a combination of yield-increasing technology, a shift in production away from the marginally productive areas and more intensive agronomic practices.

Real producer prices in many of the major commodities such as maize, wheat, red meat and oilseeds showed a marked decline from the beginning of the 1980s. Farmers also experienced a cost-price squeeze as the prices of farm requisites rose faster than producer prices in nominal terms, as indicated in Table 2.5.

Agricultural policy during the 1980s

Agricultural policy in South Africa during the 1980s was largely determined by the 1983 Constitution, and the continuation of a dualistic agricultural

Table 2.5 Annual increase in producer prices versus prices of inputs (1980–91)

Product	Producer price (% increase pa)	Prices of inputs (% increase pa)
Summer grains	9.7	12.4
Winter grains	9.0	9.8
Dairy products	11.2	11.3
Poultry	11.9	11.9
Red meat	11.1	12.2
Vegetables	10.1	10.1
Fruit	13.5	13.3
Average	10.6	12.0

Source: Abstract of Agricultural Statistics (RSA, 1994).

policy contained therein. Policy with regard to 'white' commercial agriculture was outlined in a White Paper on Agricultural Policy, tabled in 1984. The objective was to guide the development path of agriculture to ensure that factors of production would be used optimally with respect to economic, political and social development and stability, while also contributing to the promotion of an economically sound farming community. This was to be achieved through pursuing production, marketing and other goals.

Production goals included striving towards optimum use of natural agricultural resources; the preservation of agricultural land; the pursuit of a high number of well-trained and financially sound owner occupant farmers; and the optimum use of labour. The government's objective would be to ensure that potentially productive land was maintained as agricultural land and to retain any other land identified as agricultural land for agricultural purposes.

Marketing goals included the pursuit of orderly marketing, duly considering the principles of the free market system and the maintenance of specific quality and hygiene standards of South African agricultural products. Since the government was advocating a free market system, control under the Marketing Act needed to be applied with great circumspection to ensure that state involvement did not distort production, marketing and price structures. However, reform of the marketing system was limited in the period before the report of the Kassier Committee in 1992.

General goals included self-sufficiency in food, optimum participation in international trade of agricultural products, and maximization of agriculture's contribution to 'regional' development, incorporating the promotion of development in Southern Africa (the former homelands) and the rest of Africa.

Several Acts were passed aimed at the affirming these goals, most notably the Soil Conservation Act, which came into effect on 1 June 1984. The aim of this legislation was to ensure the optimum use of agricultural resources. The Act also introduced the Soil Conservation Scheme; the Flood Relief Scheme; the Bush Combat Scheme and the Weed Scheme.

In terms of the Agricultural Resources Act (Act 43 of 1983), some of the important regulations aimed at the conservation of natural resources, by maintaining the productive capacity of the soil, were:

- No cultivator was allowed to plough or cultivate virgin soil without written permission. Permission should be sought from the local extension office at least three months before the planned cultivation.
- Any soil user should not allow excessive soil losses through water erosion on cultivated soil; this should be prevented by suitable conservation works, a crop rotation system, strip cultivation or by leaving sufficient crop residues. Any soil user that allowed excessive wind erosion could be forced to protect it, by, for example, the erection of wind breaks.
- Irrigated soils should be protected from water logging and becoming salinated through the necessary drainage works.
- Wetland areas could not be cultivated or drained without written permission.
- Drainage water from a watercourse could not be re-routed to another course. A soil user should not erect any obstruction that will disrupt the natural pattern of the watercourse.
- No one could damage his/her natural grazing by over-stocking or mismanagement. A soil user exceeding his/her official grazing capacity would forfeit all claims for financial aid in the form of subsidies for soil conservation works and drought aid.

Food self-sufficiency

One of the main aims of agricultural policy was 'self-sufficiency in respect of food, fibre and beverages and the supply of raw materials to local industries at reasonable prices' (RSA, 1984). The White Paper (RSA, 1984: 8-9) motivated this policy aim as follows:

For any country, the provision of sufficient food for its people is a vital priority and for this reason it is regarded as one of the primary objectives of agricultural policy. Adequate provision in this basic need of man not only promotes, but is also an essential prerequisite for an acceptable economic, political and social order and for stability.

In order to achieve this aim, the South African agricultural bureaucracy was geared to support the white commercial farmer, especially in field crops and livestock. Farmers were protected from foreign competition, received

various forms of direct subsidies, often received producer prices at a premium relative to world prices, and had access to the latest and most productive mechanical and biological technology. Through these measures, South Africa maintained its position as a surplus agricultural producer and achieved the aim of self-sufficiency in most commodities. However, these measures were often in conflict with environmental aims as contained in the Agricultural Resources Act. The cultivation of maize, for example, became so profitable that large stretches of marginal land came under production (Brand *et al.*, 1992). This issue is further considered in Chapter 13.

The fact that per capita food production levels were maintained (and will in all probability still keep on increasing over the next two decades), however, says little about the nutritional status of the population. The Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990) attempted to identify the numbers of nutritionally deficient people in the country. It was estimated that, in 1989, there were around 16.3 million people in South Africa with an income lower than the minimum subsistence level (MSL). A more accurate description of the situation can be gleaned from anthropometric data (Table 2.6). Estimates according to these somewhat conservative norms show that there were at least 2.3 million people in South Africa who could be considered for nutritional assistance, as against the 16.3 million according to income criteria. About 2 million or 86.7 per cent of the 2.3 million people were Africans. Table 2.6 also shows that 829 000 (35.9 per cent) were children of six months to five years, 1.3 million (55.8 per cent) children of six to twelve years and 192 000 (8.3 per cent) pregnant and lactating women.

Agricultural subsidies

One of the major instruments to achieve the goals of the White Paper of 1984, apart from the Agricultural Marketing Act, was agricultural credit.

Table 2.6 Number of nutritionally needy in South Africa, 1989

	White	Coloured	Indian	African	Total
Children six to 60 months:					
Urban	15 874	52 214	15 323	236 419	319 830
Rural	1 617	33 108	2 366	472 517	509 608
Total	17 491	85 322	17 689	708 936	829 438
Children 6 to 12 years	20 318	123 467	24 530	1 123 095	1 291 410
Pregnant and lactating women	2 061	16 492	1 260	171 988	191 801
Total	39 870	225 281	43 479	2 004 019	2 312 649

Source: Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990).

Agricultural policy in this period was characterized by the large sums of government subsidies to farmers, usually in the form of drought aid and other disaster payments. These are detailed later in this chapter.

The government also paid industry subsidies to, among others, the wheat, maize and dairy industries. The subsidy to the wheat industry was paid to keep consumer prices of wheat and wheat products (flour, bread) as low as possible. The payment to the maize industry was in terms of the government's subsidization of the Maize Board's handling and storage costs, in order to keep selling prices of maize as low as possible. The extent of subsidies to the wheat and maize industry is shown in Table 2.7. Apart from the subsidization of handling costs in the maize industry, the government also took responsibility for the Maize Board's export losses.

Changes in agricultural policy

Within this policy framework, and at times seemingly despite stated policy, the sector faced increasing deregulation and market liberalization from the mid-1980s. Vink (1993) argues that the deregulation of the agricultural sector started outside agriculture in the late 1970s when the financial sector was extensively liberalized following the publication of the De Kock Commission report. The immediate effect on agriculture came from changes in the external value of the currency and in the interest cost of farm borrowing. Changes to the reserve requirements of the banking sector made it

Table 2.7 Government subsidies to the wheat and maize industries (1980–93)

Year	Maize (Rm)	Wheat (Rm)
1980	44.7	116.4
1981	59.5	162.1
1982	82.9	181.9
1983	69.9	193.4
1984	132.4	276.6
1985	215.0	194.3
1986	250.0	180.5
1987	151.0	147.4
1988	359.0	132.0
1989	79.9	105.9
1990	76.0	60.0
1991	100.0	–
1992	100.0	–
1993	–	–

Source: Abstract of Agricultural Statistics (RSA, 1994).

impossible for the Land Bank to continue subsidizing farmers' interest rates. The use of interest rate policy by the Reserve Bank led to a rise in interest rates to very high levels, which resulted in interest becoming the single largest cost of production in agriculture at that time. These changes led to the increasing exposure of farmers to market-related interest and exchange rates. The decline in the value of the Rand resulted in farm input prices, which have a relatively large import component, rising faster than farm output prices. The extent of this change in agriculture's terms of trade is investigated in Chapter 5 and the wider effect of macro-economic policy on agriculture is the subject of Chapter 15.

Other changes in the broader political economy that resulted in changes in agricultural policy included the lifting of controls over the movement of labour in South Africa in the mid-1980s, the considerable micro-economic deregulation leading to increased activity in the informal sector, especially in food supply services (Vink, 1993); and the momentous political changes that were set in motion on 2 February 1990.

Within this climate of macroeconomic and political change, a number of shifts in agricultural policy took place during the 1980s (Brand *et al.*, 1992; Vink, 1993):

- Budgetary allocations supporting white farmers declined by some 50 per cent between 1987 and 1993 (see also LAPC, 1993 and Vink and Kassier, 1991).
- The real producer prices of important commodities such as maize and wheat have declined by more than 25 per cent in real terms since 1984 and 1986 respectively.
- The tax treatment of agriculture changed, for example, by the extension in the period within which capital purchases could be written off from one to three years, thereby reducing the implicit subsidy, and the effective 'ring fencing' of agricultural incomes.
- There was a shift away from settlement schemes and large-scale projects as the major instruments of agricultural development in the former homelands areas, in favour of an approach based on the provision of farmer support services such as infrastructure, extension services and research, and access to credit and markets.
- The scrapping of the Land Acts and related legislation that enforced the racially based segregation of access to land. This was the most visible of the policy changes in agriculture following the important political events of February 1990.
- Certain elements of labour legislation were made applicable to farm labour and the farm sector has now become part of the mainstream of industrial relations in South Africa. The Basic Conditions of Employment Act was made applicable to farm workers in May 1993.
- There was a reduction in the institutional confusion by the amalgamation

of all the 'own' affairs and 'general' affairs departments of agriculture and through the dismantling of the Department of Development Aid.

- The removal of quantitative protection and the introduction of tariffs for farm commodities, mainly as a result of the pressures arising from the Uruguay Round of the GATT and the signing of the new GATT deal in April 1994.

In addition, there were a number of direct changes affected through implementation of the Marketing Act.

Reform of the agricultural marketing system

Agricultural marketing policy was largely determined by the Marketing Act (Act 59 of 1968, as amended). The Act consisted, among others, of a list of potential policy instruments that could be used to control the marketing of a commodity. It also enabled the Minister of Agriculture to proclaim a marketing scheme, and appoint a Control Board, to control the marketing of a particular commodity in a prescribed manner. A total of 23 Control Boards were established under the Act.

During the early 1980s there was a general reduction in the use of price controls and registration as instruments of marketing policy (for example in the maize and wheat industries). There were also shifts towards more market-based pricing systems, away from the cost-plus pricing procedures that had traditionally been used. In addition to the macro factors described above, there was also considerable pressure from within the system, with many farmers becoming increasingly unhappy with aspects of the controlled marketing of many agricultural products. There was also a realization of the poor performance of the agricultural sector in aggregate, as measured by the very slow rate of productivity growth (see Chapter 4 and Thirtle *et al.*, 1993c).

The trend of market liberalization was further enhanced by the pressures emerging from the GATT negotiations for the abolition of quantitative import controls and the introduction of tariffs on all agricultural commodities. The process of tariffication was intended to reduce the distortions created by quantitative controls, to create a more commercial environment in the planning of imports, to reduce the role of government in the allocation of licenses, and to increase the extent of competition. A general policy of tariffication has been in operation since 1985, but the application to agricultural commodities only commenced in 1992.

The report of the Committee of Inquiry into the Marketing Act (Kassier, 1992), appointed by the Minister of Agriculture in June 1992, was instrumental in supporting this process of deregulation. Between the release of the Kassier report in January 1993 and the promulgation of new legislation some ten of the existing Boards were abolished. The impact of these events

on the reform and deregulation of South Africa's agricultural marketing system is evident from Table 2.8.

Liberalization of price controls in the food sector

One of the important aspects of marketing deregulation was the liberalization of price control on a wide range of products. Examples are presented in Table 2.9. In their 1992 discussion document, the Board on Tariffs and Trade argued that the abolition of price controls was directly responsible for sharp price increases in consumer prices.

Change in tax policy

The farm sector has traditionally received differential tax treatment from the Receiver. Lamont (1990) estimated that income tax concessions to farmers amounted to 70 per cent of their theoretical tax bill in 1981-84. This seems to have changed in the years thereafter. Table 2.10 shows that by the late 1980s the agricultural sector contributed a fair share to national revenue. Although this contribution is lower than its contribution to GDP, which declined from about 7 per cent in 1980 to less than 5 per cent in the 1990s, farmers provide social services that are not usually expected of other business enterprises. What is important is that although agriculture's share of revenue remained fairly constant over the years under consideration, it increased from 1986. This coincides with the lessening of major tax concessions in the treatment of certain capital purchases.

The reduction in employment caused by tax policy is evident in the productivity data of Chapter 4 and is fully investigated in Chapter 14. The effects of tax policy on profits and the length of time needed to recover from the distortions caused are considered in Chapter 11. Such tax concessions tended to result in over-investment in good years but led to cash flow problems in bad years (LAPC, 1993).

Budgetary allocations to agriculture

During the 1980s, expenditure on agriculture, forestry and fishing increased in nominal terms from R833 million in 1982/3 to R2.24bn by 1990/1. However, real expenditure rose between 1982/3 and 1984/5, but fell back for the rest of the decade (LAPC, 1993). Data on budget expenditure provided by the Central Statistical Service indicate that white farmers' share of the agriculture budget was declining in the latter part of the 1980s. Between 1988/9 and 1990/1, white agriculture's share of the budget dropped from 72 per cent to 61 per cent. Conversely, over the same period, the former homelands received a greater proportion. Auditors' reports and expenditure estimates of the government indicate a similar trend. These figures show a steady fall in white agriculture's share of total expenditure from 79 per cent of the budget in 1985/6 to 52 per cent in 1990/1.

Table 2.8 A summary of marketing reforms before 1994

Product	First intervention	Recommendation by CIMA (1993)	Reforms (including those before 1993)
<i>Single channel fixed price schemes</i>			
Maize	1938	Change necessary	Shift to pool-type pricing (1987); prohibition on erection of grain silos repealed; grain sorghum established as surplus removal scheme (1986); scrapping of control on buckwheat considered; scrapping of price control on maize meal; change to buyer of last resort (April, 1995); one channel marketing system abolished.
Winter cereals	1938	Change necessary	Abolition of registration of millers and confectioners; elimination of bread subsidy (1990); price control on flour, meal and bread, and fixing of millers' margins scrapped (1991); simplification of grading system for wheat (1991).
<i>Single channel pool schemes</i>			
Oilseed	1952	Change necessary	Abolition of import control measures on oilcake and fishmeal; groundnuts under surplus removal scheme.
Leaf tobacco	1939	Statutory power unnecessary	Single channel marketing system under the Co-operatives Act discontinued. Export subsidies suspended.
Deciduous fruit	1939	Moratorium on statutory powers.	No change.
Citrus fruit	1939	Voluntary organization	Domestic market control abolished (1990).
Bananas	1957	-	Abolished in 1993.
Lucerne seed	1952	Statutory powers unnecessary	Switch to surplus removal scheme rejected (1990); Board permitted private imports and exports (1992).
Wool	1972	Statutory powers unnecessary	Single channel pool scheme discontinued. Wool Board voluntary organization providing market information etc.
Dried fruit	1938	Statutory powers unnecessary	No change.
Chicory	1939	No intervention.	Abolished in 1993.
Rooibos tea	1954	Statutory powers unnecessary	Abolished in 1993.
Mohair	1965	Voluntary organization.	Abolished on 31 January 1994.
Dairy	1956	-	Consumer price control on fresh milk abolished (1983); price control on butter and cheese abolished (1985); price stabilization activities ended following

Table 2.8 Continued

Product	First intervention	Recommendation by CIMA (1993)	Reforms (including those before 1993)
<i>Surplus removal schemes (or price support schemes)</i>			
Red meat	1945	Change necessary.	court ruling ending levy income (1992); Dairy Board and scheme abolished (31 Dec 1993). A voluntary organization established 1 Jan 1994.
Eggs	1953	Statutory powers unnecessary	Abolition of restrictions on movement from uncontrolled to controlled areas (1992); abolition of registration of producers, abattoir agents, butchers, dealers, processors and importers. Abolition of production and pricing control in 1993. Abolition of Egg Board in 1994.
Potatoes	1951	Statutory powers unnecessary	Abolished in 1993.
Dry beans	1955	Statutory powers unnecessary	Abolished in 1993.
Sorghum	1957	Statutory powers unnecessary	No change.
<i>Supervisory and price regulation schemes</i>			
Canning fruit	1963	Statutory powers unnecessary	No change.
Cotton	1974	-	No change.
<i>Control in terms of promotion</i>			
Karakul pelts	1968	-	Karakul scheme and board abolished circa 1985.
<i>Control in terms of other legislation</i>			
Sugar cane	1936 ¹		Reform of cane quota system (1990).
Wine	1918		Abolition of production quota system (1992).
Ostriches and ostrich products	1958 ² 1988 ³	Statutory single channel control to be repealed.	Abolition of single channel marketing system (1993).
Lucerne hay	1958	-	Abolition of single channel marketing (1993). The last government notice allowing a co-operative to implement single channel marketing withdrawn in 1993 (Oranje Co-operative).

Notes:

1. The Sugar Act of 1936 established control measures in the sugar industry. The Act makes provision for a Sugar Agreement, established in 1943, to oversee the industry.
2. Only ostrich products.
3. Ostriches and ostrich products.

Table 2.9 Abolition of price control in the food industry

Product	Level	Year abolished	1981 Subsidy (R million)
Bread	Retail and wholesale	1991	162.1
Maize marketing margin		1991	59.4
<i>Dairy</i>			3.7
Cheese	Retail	1985	
	Wholesale	1986	
Milk	Retail	1983	
	Wholesale	1983	
	Producer	1987	
Butter	Retail	1985	
	Wholesale	1988	
Fertilizer		1987/8	11.0
Stock feed and grazing			15.7
Transport rebates			4.0
Total			255.9

Source: Abstract of Agricultural Statistics (RSA, 1982).

Table 2.10 Percentage contribution of different sources to income tax (%)

Source of income tax	1982	1983	1984	1985	1986	1987	1988	1989
Banking and finance	2.11	1.96	2.93	3.06	1.41	2.99	2.36	0.70
Commerce, property dealing	18.83	13.58	10.18	11.42	4.74	5.83	12.11	9.97
Manufacturing (industry)	9.22	7.99	5.08	5.70	2.24	3.42	12.04	9.53
Employment	35.82	40.64	49.11	46.22	64.39	64.65	47.15	56.37
Agriculture, forestry, fishing	2.47	1.81	1.25	1.46	0.96	1.33	1.43	1.84
Construction	1.50	1.19	1.08	0.73	0.46	0.57	0.44	0.40
Mining and quarrying	19.29	21.57	19.81	20.79	18.28	10.85	14.85	10.83
Investments	3.52	3.94	3.62	4.62	4.05	4.62	2.54	4.47
Professional services	1.93	1.93	1.52	1.68	0.76	1.29	1.28	1.19
Other services	0.68	0.85	0.47	0.36	0.25	0.52	1.34	1.64
Real estate	2.78	2.95	3.50	2.52	1.93	2.66	1.80	2.25
Transport and storage	0.51	0.17	0.33	0.33	0.21	0.39	0.47	0.33
Insurance	1.33	1.42	1.13	1.11	0.34	0.88	2.19	0.46

Source: Department of Finance (1985, 1986, 1987, 1988 and 1989).

Agricultural and rural development policy

Different policies applied to white commercial agriculture and to black small-scale farmers in the former 'homelands'. Three clearly defined approaches to agricultural development in the former homelands can be identified. These include betterment planning to the late 1970s, centrally managed project farming and farmer settlement projects during the 1970s and 1980s, and the more broad-based farmer support programmes supported by the Development Bank of Southern Africa during the period under review (see Bromberger and Antonie, 1993; Christodoulou and Vink, 1990; Ellis-Jones, 1987; van Rooyen, 1993; van Rooyen *et al.*, 1987).

The 1970s were the time of the large-scale, centrally managed estate project farms (Christodoulou and Vink, 1990). This was particularly the case with industrial crops 'where large units were desirable' (van Wyk, 1970). The project farming approach obtained a further boost with the establishment in 1973 of an agricultural division in the Bantu Investment Corporation. According to Bromberger and Antonie (1993), Christodoulou and Vink (1990) and Christodoulou *et al.* (1993), it appears that substantial financial losses were the norm with these schemes. Further, the distribution of benefits was limited in relation to total need and to aggregate resources available for development. Although higher levels of resource use, production and wage employment were achieved through these 'modern' farming enterprises managed by parastatal companies and consultants, little was done to promote a class of self-employed farmers or to improve farming conditions for smallholders outside these schemes. Many of these schemes were later adjusted to settle selected persons as 'project farmers' operating under paternalistic control (van Rooyen, 1993). Occupiers of plots were strictly selected, and they had to farm according to direction and under supervision (van Wyk, 1970). Participation by so-called farmers was accommodated by using farmer committees to assist the project manager. These farmers, however, were little more than paid wage labourers with virtually no control over their production activities.

With time, disillusionment set in. The projects were capital-intensive, expensive to operate, often incurred losses, and rarely involved spillovers or linkages with the surrounding communities. They were viewed as 'islands of prosperity amidst an ocean of poverty' (Bromberger and Antonie, 1993). In acknowledging the limitations of such projects, an alternative approach to agricultural development was designed. The Farmer Support Programme (FSP) was introduced in 1986 (van Rooyen *et al.*, 1987; Singini and van Rooyen, 1995), trying to achieve a shift away from investment in projects to a programme that could provide access to support services for a large number of smallholders and rural households in a broad-based manner. An important motivation for this programme was the promotion of equitable

access to support services, resources and opportunities. The impacts of the farmer support programmes are analysed in Chapter 7.

Some effects of the changing farm policy

These changes in farm policy had significant effects on the agricultural sector as a whole, and on the different farming regions. Aggregate data show that the sector became more flexible in some parts of the country (see Chapter 11). This is highlighted by an improved aggregate debt service ratio along with financial difficulties for some groups of farmers; the increasing land-use intensity in high potential regions and 'over-cropping' in more marginal regions; the aggregate decline in farm size; shifts in the cropping pattern; and the relative absence of yield effects. The effects of these changes in farm policy can be traced through variables such as the financial position of farmers, changing land use patterns and farm size (see Chapter 6) and ecological considerations.

At the aggregate level the ability of farmers to service their debt improved from about the mid-1980s, although it is evident that the size of debt and the ability to service debt differed between regions and among farmers. One example is the successful use of credit to gear production by farmers in high-potential regions, especially where crops were produced for export. Others are the more extensive production systems followed by maize farmers in the Highveld, achieved by using fewer production inputs and higher rates of sequestration of farming enterprises in the lower-potential regions. Many of these changes were reflected in changing land use patterns.

The changing land use patterns in commercial farming manifested themselves differently in the different regions of the country. They were related to the policy changes discussed earlier through changes in relative product prices and factor costs, the cash flow position of farmers, shifts in tax incidence, and so forth. A theoretical analysis of the effects of the changes in farm policy over the past decade leads to the conclusion that a decline in average farm size was indeed possible. However, this would be the aggregate effect of a number of more specific micro-level and regional changes. According to Brand *et al.* (1992) policy effects that could lead to downward pressure on farm size include:

- a higher incidence of part-time farming and of land rentals resulting from the need to find other sources of capital and to use less capital;
- more intensive farming in high-potential areas as farmers exploit growing local and foreign markets;
- attempts to manage risk through mixed farming systems, that is, by more intensive management in the high-potential areas;
- the development of urban agriculture which, by definition, is suited to small-scale farming;

- distress selling of parcels of land in areas which have become vulnerable to the deregulation of controlled markets;
- the introduction of elements of labour legislation of farming which could result in innovations in the means of access to land, including farmer settlement, share-cropping, and sectional title arrangements.

On the other hand, there were a number of factors which could have put an upward pressure on average farm size, including:

- the declining use of production inputs such as fertilizer and agrochemicals, leading to more extensive farming;
- the switching from crop production to livestock ranching in the more marginal cropping areas, including planted pasture;
- the switching to lower yielding but more drought resistant crop cultivars;
- the expansion of the corporate farming sector.

Agriculture is a prime user of natural resources. Although it supplies food and fibre, foreign exchange, and employment opportunities to the South African economy, a high price has been paid in terms of the degradation of natural ecosystems. The imbalances created by biotic simplification (monoculture), lack of managerial expertise and agricultural policies are evident in many parts of the country. Studies by the Department of Agriculture showed that at least 9 million ha of arable land and 21 million ha of grazing land in the 'white' farming areas were subject to some or other form of wind or water erosion. Of this, some 11 million ha or 13 per cent of the total agricultural land in these farming areas had been damaged by mild or severe erosion. Much of the irrigation land became degraded through salination, while natural grazing land was seriously overstocked.

Changes in domestic support to South African agriculture

Helm and van Zyl (1994) calculated the total support received by South African agriculture during the period 1988/89 to 1993/94, using the Producer Subsidy Equivalent (PSE) measure. The results are shown in Table 2.11.

The total PSE was at its lowest during 1988/89, with market price support accounting for only 11 per cent of total assistance, the remainder being financed by taxpayers. Producer prices of sugar, rye, chicory, eggs, beef, sheep and dairy products were higher than the representative world prices. In 1989/90 market price support accounted for about 31 per cent of total assistance. The reduction in indirect income support was mainly due to the substantial reduction, and eventual termination, of the production input subsidy. In 1990/1, the total PSE again increased as a result of substantially higher domestic producer prices for certain products, together with a decline in world prices. Market price support accounted for about 46 per cent of total assistance.

Table 2.11 Total domestic support to South African agriculture (PSE)

Description	1988/9	1989/90	1990/1	1991/2	1992/3	1993/4
a) Value of production: Products with MPS*	11 321 897	13 454 158	13 784 297	15 736 341	12 872 328	16 467 791
b) Value of production: Products without MPS	5 231 386	5 965 538	6 910 111	7 497 910	11 193 516	11 860 609
c) Direct payments	113 549	115 621	119 871	91 674	89 075	79 803
d) Adjusted value of production (a + b + c) policy transfers to agriculture:	16 666 832	19 535 317	20 814 279	23 325 925	24 154 919	28 408 203
e) Market price support	216 819	701 428	1 308 831	2 321 722	2 448 684	2 119 873
f) Direct income support	367 977	335 768	332 025	250 019	2 616 106	386 477
g) Indirect income support	942 692	774 528	703 863	819 426	1 278 611	1 048 097
h) General services	422 001	446 259	503 761	512 940	1 155 325	564 305
i) Total PSE (e + f + g + h)	1 949 489	2 257 983	2 848 480	3 904 107	7 498 726	4 118 752
Percentage PSE (i/d × 100)	11.70	11.56	13.69	16.74	31.04	14.50

Note: *Market price support.

Changes in producer prices relative to world prices of agricultural products were once again the main reason for the higher market price support, together with the subsequent increase in the total PSE, in 1991/2. Market price support accounted for about 60 per cent of total assistance and was 37 per cent higher than the previous year. The large change in the percentage PSE in 1992/3 was the result of a huge once-off increase in direct income support to farmers, from R250m the previous year, to R2.6bn (Rimmer, 1993). This came in the form of a drought relief package, announced by the Government in 1992, which consisted of R2.4bn in debt relief. These payments are discussed in some detail in Chapter 8.

Effects on productivity in South African agriculture

The changes in agricultural policy also had some effect on total factor productivity (the ratio of aggregate output to an aggregate of all inputs combined) in South African agriculture. The results of TFP calculations by Thirtle *et al.* (1993c), which are reported in Chapter 4, show that between 1947 and 1991, the output index grew by nearly 350 per cent, or an average rate of 3 per cent per annum. During this period, the index of input use more than doubled, growing at 1.8 per cent per annum. However, input use grew at over 2.5 per cent per annum until 1979, but fell by 0.9 per cent per annum thereafter. This fall explains the recent growth in the TFP index. Over the full period, TFP grew at 1.3 per cent per annum, but accelerated to 2.88 per cent per annum from 1981.

These TFP results are useful in explaining the effects of agricultural policy. The growth rate in TFP is greater than would be expected on the basis of Liebenberg and Groenewald's (1990) preliminary study of productivity in grain production. The increasing rate of growth over the period is in accordance with van Zyl and Groenewald's (1988) perception that farmers' profits came under increasing pressure as inflation gathered pace. The rapid growth of productivity since 1983 is in agreement with the regional econometric study by van Schalkwyk and Groenewald (1992), which found evidence of substantial growth in output in some regions from 1981. The growth in productivity can be partly explained by the increasing competitive pressures within the industry as a result of the policy reversals and removal of price distortions caused by credit, tax and macro policies. These determinants are analysed in Parts Two and Three of this book, but Chapters 5 and 9 to 13 also show that new technologies generated by the research system played an increasingly important role in productivity growth and profits.

Thus, the study of TFP growth and growth in net farm income by van Zyl *et al.* (1993), which is reported in Chapter 5, calculated that total factor productivity grew at 4.63 per cent annually from 1983 to 1991, sufficient to counter a decline of 3.11 per cent in the terms of trade during the same period. The result was a growth of 6.24 per cent in real net farm income (NFI) (Table 2.12).

Table 2.12 Average annual growth rates in real net farm income, 1973-91 (%)

Period	Net Farm Income	TFP ¹	Terms of trade ²
1973-91	-1.06	1.48	-2.63
1973-83	-8.14	0.27	-3.27
1983-91	6.24	4.63	-3.11

¹TFP: Total Factor Productivity.

²Terms of trade: Output prices/input prices.

The financial position of farmers

Declining farm profitability as a result of the reversal of distortionary policies (and adverse weather conditions) caused severe cash-flow problems in agriculture (van Zyl and van Rooyen, 1991). Liquidity problems affected the financial standing of commercial agriculture in three ways: a) debt loads increased; b) loan arrears mounted; and c) sequestrations increased. The total debt of farmers increased substantially from the mid-1970s, as is shown in Table 2.13.

The decline in farm profitability also seems to have caused a substitution of short-term for long-term debt from 1970 until the mid-1980s. The ratio of short-term to total debt increased from 28.2 per cent in 1970 to 54.6 per cent in 1985, and peaked in 1991 at 57 per cent (World Bank, 1994). From Table 2.13 it can also be calculated that the share of total farm debt at commercial banks and cooperatives increased from 20 per cent and 8 per cent respectively in 1970 to 30 per cent and 25 per cent respectively in 1991, again indicating the switch to short-term debt.

The high growth rates of farm debt per annum for the period 1980 to 1985 (see Table 2.14), is attributable mainly to drought and general economic conditions, especially the increase in interest costs. Interest rates, drought, volume of field crop production, real GNP and the ratio of input to output prices have been shown to have had a relatively large impact on the real debt burden in the period from 1970 to 1985 (van Zyl, van der Vyver and Groenewald, 1987b).

In the mid-1980s, the South African Agricultural Union carried out a national survey on the financial situation of all farmers. The survey revealed that 49 per cent of farmers were financially sound at the end of 1983, but the percentage in this category was expected to fall below 39 per cent at the end of 1984. While the financial position of farmers older than 50 years was generally sound, 38 per cent of farmers aged between 25 and 35 years were in a critical financial position. This proportion increased to over 50 per cent by the end of 1984.

Table 2.13 Total nominal farming debt, 1970-92 (R million)

Year	Land Bank	Commercial Banks	Cooperatives	Dept. of Agriculture	Private persons	Other Institutions	Other Debt	Total debt
1970	295.8	281.8	113.4	136.2	242.9	286.9	45.0	1402.0
1971	345.8	272.4	127.9	154.1	231.7	279.2	49.6	1460.7
1972	360.0	275.2	145.8	159.5	234.5	291.0	50.2	1516.2
1973	368.3	373.4	158.8	154.6	290.0	317.5	62.1	1724.7
1974	389.8	384.0	197.8	148.6	292.0	310.8	62.5	1785.5
1975	429.1	454.5	247.4	151.2	327.3	324.1	70.0	2003.6
1976	478.8	485.4	344.3	149.5	369.4	393.2	77.0	2297.6
1977	507.8	560.3	462.2	150.1	414.7	426.2	85.7	2607.0
1978	537.0	620.2	556.3	156.0	452.2	453.4	95.0	2870.1
1979	592.4	690.9	654.3	164.3	485.6	523.2	107.6	3218.3
1980	675.6	801.5	866.9	180.0	579.9	612.3	122.4	3838.6
1981	855.9	1054.6	1129.7	201.8	601.3	833.2	162.2	4838.7
1982	988.5	1599.5	1367.6	247.3	634.0	774.6	174.0	5785.5
1983	1330.5	2253.8	1780.2	308.7	670.0	880.7	185.0	7408.9
1984	1923.0	2968.8	2233.7	443.3	720.0	999.5	207.0	9495.3
1985	2338.4	3315.3	2754.0	549.2	792.0	1128.2	240.5	11117.6
1986	2648.6	3436.6	3080.7	684.3	890.2	1420.3	251.4	12412.1
1987	2807.5	3355.2	3224.1	789.4	940.4	1500.0	263.7	12880.3
1988	2923.5	3477.7	3411.7	920.7	924.8	1295.0	407.5	13360.9
1989	3149.1	4650.0	3586.9	971.7	986.6	1160.0	405.5	14909.8
1990	3441.1	4949.6	3780.3	1013.1	1209.4	905.0	675.6	15974.1
1991	3512.5	5116.3	4300.8	1167.8	1301.9	800.0	727.6	16926.9
1992	3711.0	5181.8	3900.6	1348.6	1395.9	878.6	780.2	17196.7

Source: Abstract of Agricultural Statistics (RSA, 1995).

Table 2.14 Annual growth rates of debt from selected sources

Category	1980-90 (%)	1985-90 (%)
Land Bank	2.98	12.7
Agricultural co-operatives	1.0	10.29
Department of Agriculture	5.49	10.49
Private persons	-6.48	-6.66

Source: *Abstract of Agricultural Statistics* (RSA, 1995).

Many of these farmers left the industry, but the majority were kept on their farms through government intervention in the form of 'cheap' credit and debt relief to insolvent or near-insolvent farmers. In 1993, around 17 000 farmers still benefited from such assistance, provided through the Financial Assistance Schemes of the Department of Agriculture. If it is argued that these farmers are also the most inefficient, it can be said that the policy of blanket debt relief and subsidies only added to the financial unsustainability of the sector and the entrenchment of inefficiencies. During the 1980s, the state granted financial assistance in one form or another to some 27 000 farmers. Direct financial assistance to these farmers over the decade amounted to R1.73bn, while subsidies totalled R2.35bn.

The declining profitability in many parts of the agricultural sector would have produced substantial declines in farm incomes had it not been for state aid. However, in spite of this generous financial assistance, loan arrears increased as the farm financial crisis worsened. It also did not succeed in countering the structural decline of farm profitability since the early 1980s, and the debt burden worsened. An important component of the short-term credit (mainly at cooperatives) fell under a carry-over scheme for farm debt that was guaranteed by the government. This programme, initially introduced after the 1982/3 drought, became a permanent feature, escalated as a result of the 1991/2 drought when the guarantee required by the government rose from an initial R800 million in 1983 to R2.4bn in 1992.

The drought relief package announced by the Government in 1992 consisted of a R2.4bn debt relief (the guarantee referred to above) plus an additional R1bn drought relief amounting to a total of R3.4bn. This constituted a substantial recapitalization of the least efficient sub-sectors of the agricultural sector, namely the livestock and grain producers in the summer and winter rainfall areas. It is clear from this discussion that the approach of blanket debt relief was costly, and entrenched inefficiency and inequality in the commercial farming sector.

Conclusion

The evolution of South African agriculture during the twentieth century witnessed three major trends. First was a period of territorial and racial segregation at the beginning of the century. Second was a period of modernization of white agriculture through the adoption of modern mechanical and biological technology, resulting in consistent growth in output within a policy environment heavily favouring increased production by large-scale owner operated farms. This eventually led to the substitution of capital for labour, and resulted in a decline in the number of farm employees up to the early 1980s. The third trend was the reversal of the distortionary policies of the 1960s and 1970s, brought about by external as well as internal pressures on the sector. This chapter has paid particular attention to the changes in agricultural policy during the 1980s; it has also showed the effects of these changes on farming debt and total factor productivity growth.

The undoing of past legislation and policies started with a process of removing distortions such as subsidies and tax concessions, mainly as a result of fiscal pressures. The subsequent process of market liberalization and deregulation undid most of the protective and distortionary effects of the agricultural Marketing Act. The removal of the wide-ranging racially based laws since 1986 (the scrapping of the Pass Laws) and, in particular, since 1990 (the abolition of the Land Acts and the Group Areas Act); and the election of 1994, reversed all the racially based policies introduced earlier this century.

The policy changes in the commercial agricultural sector exerted considerable financial pressure on the sector, leading to increased bankruptcies during the mid-1980s and improved productivity to counter declining profitability in certain sub-sectors. The latter led to an improved financial situation for certain farmers, but still the majority depended on financial aid to remain in the industry. The costliness and unsustainability of continued financial assistance was highlighted in this chapter. The suspension of this policy, therefore, could be an important factor in contributing to a successful land reform programme, ensuring that only the efficient farmers remain in a newly restructured agricultural sector. We return to the issue of land reform and debt relief policy in the concluding chapter.

Despite the legislative and policy changes, it is still true to say that not much has changed in terms of improved equality and improved living conditions for the rural poor. The unequal ownership of land and the major effect of the past policies persists, and unless this is changed, it is unlikely that the conditions of the poor, of whom many reside in rural areas, will improve.