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THE MARKET SHARE OF PRIMARY AGRICULTURAL CO-OPERATIVES IN THE MARKETING OF FARMING REQUISITES*

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1. Introduction

Agricultural co-operatives play an important role in the marketing of farming requisites in the Republic of South Africa. However, owing to a lack of statistics their market share in the total retail turnover¹ of farming requisites cannot be accurately determined, consequently statements in this connection are based on broad estimates. The Institute for Co-operatives, for instance, puts the co-operative market share in farming requisites at 78 per cent (1972).² This body, however, is of the opinion that the actual share may be less than the figure given. In order to clarify the matter, an attempt is made below to determine the agricultural co-operative market share in the turnover in farming requisites more accurately. For this purpose it is necessary that the total turnover in farming requisites in the Republic of South Africa and that of primary agricultural co-operatives be calculated separately.

2. Determination of the total turnover in requisites

Certain statistics on the expenditure on farming requisites are published annually by the Department of Agriculture and Fisheries.³ However, these statistics are insufficient to calculate the total farming requisites turnover, since they reflect only expenditure on the five most important production goods and the annual gross capital formation in agriculture.⁴

The Division of Agricultural Marketing Research of the Department does have unpublished statistics concerning annual farming expenditure on intermediate inputs and services, but this figure includes expenditure which has no connection with farming requisites, while capital investment in the erection of fixed improvements and the purchases of capital equipment are not included. The figure

must therefore be adjusted to obtain total expenditure on farming requisites only.

Details of the items included in farming expenditure and the amounts spent on them in 1977/78 are given in Table 1.

It is clear from Table 1 that farming expenditure on intermediate inputs and services amounted to R1 321,4 million for 1977/78. In order to be able to determine the actual expenditure on farming requisites alone, the above-mentioned expenditure must be adjusted as follows:

- (a) The amounts which *do not represent farming requisites* must first be deducted from the total amount. The important items at expenditure here are farming services, insurance, land tax, licences, insurance, third-party insurance, water rates and other expenditure.
- (b) The item *machinery and implements: spares and repairs* includes, besides farming requisites (spares and lubricants), servicing costs, and it must therefore be reduced by this amount. According to the Department, the ratio between *servicing*, (labour) and *spares plus lubricants* (requisites) is 25 : 75 per cent.

After farming expenditure has been adjusted to make provision for the above-mentioned factors, capital investment in fixed improvements, machinery, tractors and implements must be added in order to be able to determine the total expenditure on farming requisites. Here, too, it is not correct to add the total amount invested in fixed improvements since remuneration of building labour has been included in the total. On the basis of the Department's index figures capital investment in fixed improvements is also divided in a ratio of 75 to 25 per cent between building material and services, and only the building material component is included. Therefore, the total amount which was spent on farming requisites in the RSA in 1977/78 is that set out in Table 2 in the light of the above-mentioned corrections.

* Based on a D. Com. thesis by J.A.H. Davel, University of Pretoria.

TABLE 1 - Farming expenditure on intermediate inputs and services (a) for the period 1977/78 b

Item	Expenditure	
	Amount	Percentage of total
	R million	
Packing material	71,2	5,4
Building and fencing material c	71,6	5,4
Fertilisers	268,8	20,3
Dips and sprays	72,0	5,5
Machinery and implements: spares and repairs	166,4	12,6
Fuel	198,3	15,0
Stock feed	334,9	25,3
Seed and plants	48,5	3,7
Farming services	35,8	2,7
Insurance	7,1	0,5
Third party	5,1	0,4
Licences	10,8	0,8
Land tax	8,9	0,7
Electricity	12,0	0,9
Water rates	3,9	0,3
Other expenditure	6,1	0,5
TOTAL	1 321,4	100,0

a. Salaries and wages to own employees excluded.

b. As obtained from the unpublished register of farming expenditure on intermediate inputs and services, 1977/78, Department of Agriculture and Fisheries, Division of Agricultural Marketing Research

c. Only for the maintenance and repair of existing fixed improvements.

It is clear from Table 2 that 90,1 per cent of the farming expenditure on intermediate inputs and services and 90,3 per cent of the total capital investment in 1977/78 went to farming requisites. This indicates how important farming requisites were in the total expenditure of the agricultural production branch in 1977/78.

Figures for turnover in farming requisites at intervals of five years from 1962/63 until 1977/78 were calculated on the basis of the same method as set out above and are shown in Table 3.

Significant structural differences appear from Table 3. *In the first place* it is significant that the index figure for total farming expenditure increased in the first five-year interval by 40 points (from 100 to 140), and in the last five-year interval by 307 points (from 201 to 508). This indicates that expenditure by the agricultural production branch on these items increased 7,7 times (307/40) as much

from 1972/73 to 1977/78 as from 1962/63 to 1967/68.

Secondly, from a comparison of the two columns of index figures it appears that the turnover in farming requisites increased more rapidly than total farming expenditure. In the first five-year interval, for example, the index for total expenditure increased by 40 points while that for farming requisites increased by 45 points. In the second five-year interval the difference was 17 (218 and 201) and in the last interval 36 (544 and 508). This means that farming now account for a relatively larger part of total farming expenditure than in the past.

TABLE 2 - Farming expenditure on intermediate inputs and services, capital investment and the total turnover in farming requisites, 1977/78

Item	Farming expenditure		Capital investment		Total turnover in farming requisites
	Amount	% of total	Amount	% of total	
	R million		R million		R million
Total expenditure	1 321,4a	100,0	536,7b	100,0	-
less: amounts that do not represent farming requisites	131,3c	9,9	52,3d	9,7	-
Farming requisites	1 190,1(A)	90,1	484,4(B)	90,3	(A)+(B)=1 674,5

a. Farming expenditure on intermediate inputs and services, see Table 1.

b. Capital investment in fixed improvements, tractors, machinery and implements. Source: Department of Agriculture and Fisheries, Division of Agricultural Marketing Research, *Abstract of Agricultural Statistics*, 1981, p. 89. The amounts for 1978 are provisional.

c. R89,7 million for farming services, insurance, third-party insurance, licences, land tax, electricity, water rates and other expenditure plus R41,6 million spent on spares and repairs, see Table 1.

d. Building labour.

TABLE 3 - Total farming expenditure on capital investment, intermediate inputs and services, and the total turnover in farming requisites for 1962/63, 1967/68, 1972/73 and 1977/78

Years	Total farming expenditure a		Total turnover in farming requisites b		(B) as percentage of (A)
	Amount	Index Base year: 1962/63=100	Amount	Index Base year: 1962/63=100	
	A R milj		B R milj		
1962/63	360,7	100	307,8	100	85,3
1967/68	504,2	140	445,7	145	88,4
1972/73	724,5	201	670,9	218	92,6
1977/78	1 832,9	508	1 674,5	544	91,4

a. As calculated from the unpublished registers of farming expenditure on intermediate inputs and services and the published statistics on capital investment in fixed improvements, tractors, machinery and implements: *Abstract of Agricultural Statistics*, 1981, *op cit.*, p. 89.

b. Calculated from total farming expenditure, column (A), and according to the explanation given here.

3. The market share of primary agricultural co-operatives in the total turnover in farming requisites

The total turnover in farming requisites having been estimated, the market share of primary agricultural co-operatives, can be determined. To do this it is necessary to explain the published statistics on agricultural co-operatives' turnover in farming requisites beforehand and, where necessary, to adjust them.

- (a) The first problem experienced with the co-operative statistics is that the published farming requisites turnover of agricultural co-operatives includes the turnover of both primary and central co-operatives.⁶ This figure consequently represents a double counting of farming requisites. This happens because both the wholesale turnover between central and primary co-operatives and the turnover in the same stock between primary co-operatives and their members are included in the total turnover. In order to overcome this problem, the central co-operatives' wholesale turnover in farming requisites was deducted from the total turnover to determine the turnover of primary agricultural co-operatives alone.
- (b) According to the published statistics of the Registrar of Co-operative Societies, sales of products processed by the Co-operatives themselves are not regarded as farming requisites turnover. Items such as self-processed seed, meal and stock-feed are

regarded as product turnover.

- (c) All components and lubricants that are handled by the co-operatives' own workshops are included in the service turnover of such co-operatives by the Registrar of Co-operative Societies and are thus not regarded as farming requisites.

Both the approaches discussed in (b) and (c) result in the farming requisites turnover of primary agricultural co-operatives being understated. In an attempt to determine what the "lost" turnover is it was found that the turnover of workshops in spares and lubricants is insignificant in relation to the total co-operative turnover in farming requisites. It was not possible to determine the turnover in self-processed agricultural products, but it must be accepted that processed stock-feed, meal and seed would have a slight influence on the total turnover.

The total farming requisites turnover of primary agricultural co-operatives is, therefore, actually slightly higher than the figure given by the Registrar of Co-operative Societies.

Table 4 gives figures for the total farming requisites turnover in the Republic of South Africa and that of primary agricultural co-operatives for the years 1962/63, 1967/68, 1972/73 and 1977/78.

From Table 4 it appears, firstly, that the market share of primary agricultural co-operatives in the total turnover of farming requisites increased in real terms from 42,5 per cent in 1962/63 to 56,1 per cent in 1977/78. This represents an average

TABLE 4 - Total farming requisites turnover in the Republic of South Africa and that of primary agricultural co-operatives for the years 1962/63, 1967/68, 1972/73 and 1977/78

	YEARS							
	1962/63		1967/68		1972/73		1977/78	
	Amount	Percentage of total	Amount	Percentage of total	Amount	Percentage of total	Amount	Percentage of total
	R million		R million		R million		R million	
Farming requisites turnover of								
Primary agricultural co-operatives a	130,7	42,5	207,6	46,6	334,2	49,8	939,7	56,1
Other suppliers of farming requisites b	177,1	57,5	238,1	53,4	336,7	50,2	734,8	43,9
Total	307,8	100,0	445,7	100,0	670,9	100,0	1 674,5	100,0

a. As calculated from the unpublished statistics on the farming requisites turnover of central agricultural co-operatives and published statistics on agricultural co-operatives' turnover in farming requisites.

b. As calculated from the total turnover in farming requisites less the turnover of primary agricultural co-operatives. See Table 3 for the total turnover in farming requisites.

increase of 1,87 per cent per year for the fifteen-year period 1962/63 to 1977/78. The largest increase occurred in the five-year interval when the agricultural co-operative market share increased by an average of 2,4 per cent per annum. The market share of the primary agricultural co-operatives of 49,8 per cent in 1972/73 is also considerably lower than the 78 % estimated by the Institute for Co-operatives for the same period. The reason for this is that the Institute takes the total agricultural co-operative turnover in farming requisites (primary as well as central agricultural co-operatives) as base and expresses it as a percentage of only the most important production goods and durable production means purchased in 1972.

Secondly, it appears from Table 4 that the turnover of *other suppliers* of farming requisites decreases as the agricultural co-operative market share increases. It would be a mistake, however, to conclude from this that other suppliers such as manufacturers and wholesalers are less involved in the overall trade in farming requisites. The data in Table 4 refer specifically to the retail turnover and not to the manufacture and distribution of and the intermediate trade in farming requisites in general.

The data from Table 4 are presented graphically as follows in Figure 1.

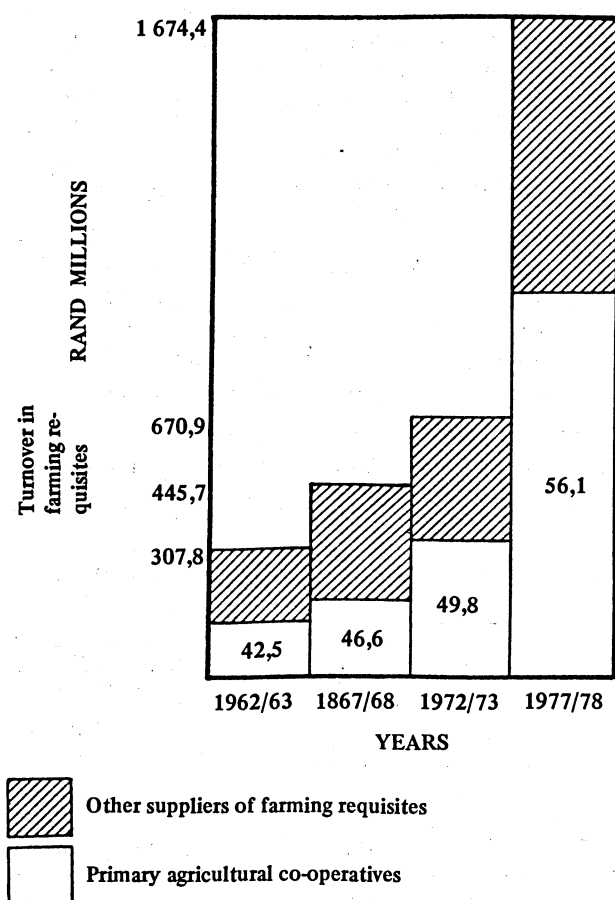


FIG. 1 - The growth of the market share of primary agricultural co-operatives in the total turnover of farming requisites, 1962/63 to 1977/78

Although there are no directly comparable statistics for most other countries, it would appear from the available statistics that the market share of primary agricultural co-operatives in the Republic of South Africa compares favourably with those in other countries. For example, the co-operative market share in farming requisites in the United States of America increased from 12 to 16 per cent in the period 1950/51 to 1970/71,⁹ which is considerably lower than the 46,6 per cent in 1967/68 and 49,8 per cent in 1972/73 for the Republic of South Africa. In France, agricultural co-operatives supplied 45 per cent¹⁰ of the most important farming requisites in 1963, while 21 per cent of all stock feed and 17 per cent of all fertiliser that was marketed in England in 1965 was supplied by agricultural co-operatives.¹¹ In Switzerland more than 50 per cent of the market share in machinery, seed and feed was in the hands of agricultural co-operatives in 1960.¹²

4. Reasons for the growth of the primary agricultural co-operatives' market share in farming requisites

As the preceding discussion shows, the market share in farming requisites of primary agricultural co-operatives is growing, in both absolute and relative terms. The growth in absolute terms can be ascribed to the fact that the agricultural production branch has become more capital intensive and, as far as production is concerned, has to rely more on purchased inputs. In relative terms the agricultural co-operatives are steadily increasing their market share in the total turnover in farming requisites. This feature can be ascribed to various factors, the three following being apparently the most important:

Firstly, agriculture having become more capital intensive, the farmer was no longer able to finance himself in buying his farming requisites. To an increasing extent he had to turn to external financing sources for credit facilities. In this connection the Land Bank plays an important role in the Republic of South Africa in that production credit is channelled to farmers via agricultural co-operatives for the purchase of production means. This, coupled with the fact that agricultural Co-operatives have created their own credit facilities, contributed to farmers turning to an increasing extent to their co-operatives for the purchase of farming requisites. A *second* reason is to be found in the decline in the number of independent rural retailers. These general retailers made a large contribution to the marketing of farming requisites to the agricultural production branch. For various reasons which are irrelevant here¹³ the number of independent retailers decreased over the years and their function as regards the marketing of farming requisites was largely taken over by the agricultural co-operatives.

The *third* reason which can be advanced is the improvement in the management of agricultural co-operatives in general and managerial practices in

particular. During the past 15 years most of the agricultural co-operatives developed from relatively small rural institutions into large business undertakings and therefore acquired a more dynamic image.¹⁴ Their turnover began increasing owing to the better managerial potential, better service and improved marketing methods. These, together with the co-operatives' favourable credit facilities, resulted in an increasing number of suppliers and manufacturers of farming requisites turning to agricultural co-operatives as a marketing channel for their products. To co-operatives' relative market share in farming requisites consequently increased *vis-à-vis* that of their competitors.

5. Concluding remarks

An investigation into the market share of primary agricultural co-operatives in the total turnover in farming requisites was necessary because statements about this were based mainly on broad estimates. In order to be able to calculate the primary agricultural co-operative market share, it was necessary to determine the total turnover in farming requisites in the Republic of South Africa. Adjustments were made in the available statistics and from these it appears that the total 1977/78 turnover in farming requisites amounted to R1 674,5 million. After judicious adjustments had been made in the co-operative statistics, the primary agricultural co-operative market share in farming requisites could be calculated. From these calculations it was found that primary agricultural co-operatives' market share in the total turnover in farming requisites rose from 42,5 per cent (130,7 million) in 1962/63 to 56,1 per cent (R939,7 million) in 1977/78. This increase represents an average annual increase of 1,87 per cent for the fifteen-year period under review. Reasons for the above-mentioned market share growth of primary agricultural co-operatives are amongst others, the availability of favourable credit facilities to members and the general improvement in agricultural co-operatives' managerial practices and marketing methods.

REFERENCES

1. Unless it appears otherwise from the context, "turnover" refers to retail turnover.
2. South African Institute for Co-operatives, *Koöperatiewe bestuurspraktyke in Suid-Afrika*, P.U. vir C.H.O., Potchefstroom, 1978, p. 5.
3. Referred to as the Department.
4. In this connection see various editions of the *Abstract of Agricultural Statistics*, Division of Agricultural Marketing Research, Department of Agriculture and Fisheries.
5. This ratio is used by the Department for index calculations. At first glance it appears that the servicing component is too low in relation to the spares. The reason for this is that in many cases farmers do this work themselves and only the parts and lubricants are purchased. The ratio has been checked using the statistics available from the Registrar of Co-operative Societies and found to be accurate.
6. Central and primary co-operatives' turnovers in farming requisites are added together to calculate the total turnover.
7. The average annual increases are calculated as follows:

$$100 \propto = \left(\frac{P_n}{P_o} \right)^{\frac{1}{n}} - 1$$

where: $100 \propto$ = average annual compound growth as a percentage
 P_o = the market share in the base year and
 P_n = the market share n years later.
8. The Institute itself, however, qualifies its figure by stating: "This is merely an estimate. The actual share of co-operatives is possibly less than 78 per cent" (translated Institute for Co-operatives, *Koöperatiewe bestuurspraktyke*, op. cit., p.5).
9. Swanson, B.L., "Role and trends of farmer co-operatives in the United States," in *Year Book of Agricultural Co-operation*, 1975, Basil Blackwell, Oxford, 1975, p. 63.
10. Meyer, A.S., *Moderne landboukoöperasies in ekonomiese perspektief*, National Book Printers Limited, Elsies River, Cape, 1974, p. 93.
11. Ibid., p. 91.
12. Smith, L.P.F., *The Evolution of Agricultural Co-operation*, Basil Blackwell, Oxford, 1961, p. 14.
13. For a discussion of the position of the independent general retailers in the Republic of South Africa see, amongst others: Marx, S., *Enkele kommersiële en ander bedryfsekonemiese aspekte van die onafhanklike algemene kleinhandelaars in die plattelandse gebiede van die Republiek van Suid-Afrika*, 1970/71, (Unpublished, D. Com. thesis, University of Pretoria, Pretoria, 1972), pp. 7-12.
14. This trend is also visible in the United States of America and is summarised as follows in the words of Gaston: "Today's large co-ops serve their members by changing with the times and by adopting sophisticated strategy", Gaston, W.W., "The big business of farm cooperatives", in *Harvard Business Review*, Vol. 56, Sept/Oct. 1978, p. 122.