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Contents

	Page
I. EDITORIAL	
Farm Records - an aid to better management	1
II. ARTICLES	
1. Subsistence and commercial farming	3
2. The marketing of livestock in the North-Eastern Cape	9
III. STATISTICS	14
IV. TRENDS IN THE AGRICULTURAL SECTOR	22

The marketing of livestock in the North-Eastern Cape *

by

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Agriculture constitutes the most important sector of the North-Eastern Cape regional economy. The transport system of this area is therefore largely aimed at accommodating the marketing of agricultural products produced in this region. The marketing of livestock in this area will therefore be investigated in order to determine how this can be made more efficient either by making better use of the existing transport system or by improving it.¹⁾

THE ESTABLISHMENT OF A CENTRAL ABATTOIR

In view of the fact that the area is supplying a considerable number of slaughter-stock to distant controlled meat markets, the possibility of establishing a central abattoir in the area was considered.

In this way the area's greatest problem in marketing livestock, namely the distance from the market, could be eliminated. The Abattoir Commission, however, declares itself in favour of locating abattoirs in areas with a concentration of consumers as distinct from abattoirs in production areas²⁾. The deciding factors against the establishment of abattoirs in production areas are the following:

- (a) Railage on meat exceeds that raised on the live animal;
- (b) by-products are much better utilized in large industrial centres;
- (c) labour and aid services are less readily available in a production area with a rural setting - it must be borne in mind that an abattoir is another form of a factory, which puts high demands to a community;

* Advice offered by Mr Schalk du Toit at the time of drafting this article, is hereby acknowledged. The writer, however, assumes full responsibility for the article.

- 1) Du Toit, P.J.D. - An analysis of the transport system in the North-Eastern Cape. Research Report No.1, ISEN. Bloemfontein, U.O.F.S., 1968, pp.191-205.
- 2) Abattoir Commission. Report of commission of inquiry into abattoir- and related matters. R.P.48/1964. Pretoria, Government Printer, 1964, as quoted by Roelofse, C.J. Marketing of slaughter-stock and meat in the Republic of South Africa. M.Comm. thesis, Stellenbosch, University of Stellenbosch, 1967, pp.281-282.

- (d) the trade prefers fresh meat, particularly fresh offal;
- (e) the marketing channels for fresh meat in its present form cannot handle the production of scattered abattoirs;
- (f) it will result in a duplication of existing cold storage space; and,
- (g) coupled with these factors, it is also necessary for the economic functioning of an abattoir that it should be of a minimum economic size and that an even input preferably at full capacity be maintained throughout.

These decisive factors are unfavourable as far as the North-Eastern Cape is concerned. A meat-processing factory already exists in Aliwal North, the main town in the region, but no large-scale expansion in this field can be recommended in the light of the above-mentioned factors.

LOSS OF WEIGHT OF SLAUGHTER-STOCK DURING MARKETING

It is alleged that loss of weight is the main problem besetting slaughter-stock transported over great distances, as in the case of the North-Eastern Cape. This problem was therefore investigated with the aid of available research data in order to determine to what extent this is the case and how it can be remedied.

Each day of starving causes lambs to lose about 1.5 per cent in carcass weight.³⁾ The corresponding loss of weight in the case of cattle is about 1.7 per cent for a transport period of four days⁴⁾. Starke draws the following conclusions:

- (a) The longer the period of starving, the greater the loss in live weight; this, however, is caused mainly by a decline in the contents of the digestive tracts, which is of no economic value;
- 3) Starke, J.S. Weight decrease of slaughter-stock during transport. Pamphlet no.288, Department of Agriculture, Pretoria, Government Printer, 1948.
 - 4) Hirzel, R. Livestock and Meat Industries Control Board, Pretoria - file V.63/11, 1965. Personal communication of experiment undertaken with cattle from S.W.A. and slaughtered in Walvis Bay and Cape Town, respectively.

- (b) This decrease is at its highest during the first day of transport; and
- (c) No deterioration in the grade of meat takes place.

Weight loss in slaughter-stock therefore plays a minor economic role. The main single factor delaying the slaughter of stock in controlled areas is, however, not solely due to transport. It often happens that slaughter-stock arrives at the market within two days of the date of loading but is only slaughtered some days later. This happens because the supply of stock offered for slaughter is too heavy and must therefore be left over. The problem may therefore be solved by organising the marketing of livestock according to available market information. It must, however be borne in mind that the present marketing scheme tends towards peak offerings of slaughter-stock over weekends. In other words stock for slaughter during a specific week already arrives the previous weekend. Producers are fully aware of this tendency, but in actual practice it is nevertheless the case at all markets. One of the reasons for this is that the transport of stock does not always occur according to schedule, thus aggravating this tendency.

PATTERN OF MARKETING

The North-Eastern Cape is an important supplier of meat. Apart from having the densest sheep population in the country, this area is also well-stocked with cattle, particularly on the eastern side of the mountains. It constitutes a sub-region of the Eastern Cape which supplies from 9 to 12 per cent of the sheep and 5 to 8 per cent of the cattle slaughtered in controlled areas of the Republic (yearly average for the two years ended 30 June 1962).⁵⁾

Small stock is mainly marketed in Johannesburg (52 per cent of the total) and Durban (23 per cent of the total). Farmers in the Elliot, Maclear and Barkly East districts market their livestock mainly in Durban, whilst Johannesburg is the most important market for farmers in other districts.⁶⁾ Cattle on the other hand, are generally sent to markets in Cape Town, Johannesburg and Port Elizabeth. These markets receive respectively 31, 25 and 23 per cent of the total number marketed. Durban can be regarded as the natural market for slaughter-stock from the North-Eastern Cape on account of its size and its proximity by road. By rail, however, it can unfortunately only be reached via Bloemfontein. The marketing of slaughter-stock in Durban and Pietermaritzburg has consequently been analysed further.

These two markets can be reached in three different ways, viz.:

- (i) By rail via Bloemfontein to Durban (888 miles from Barkly East);
- (ii) by road to Matatiele (180 miles from Barkly East) and from there by rail to Durban (a total distance of 441 miles); and
- (iii) by road via Matatiele to Durban (390 miles from Barkly East).

The marketing of small stock from the North-Eastern Cape in Durban and Pietermaritzburg has been analysed. The number of small stock consigned from this region by rail to Durban varies from 5 to 16 per cent of the total number slaughtered - in 1965/66 it came to 57 000. In Pietermaritzburg 13 000 head of small stock from these parts were slaughtered. Apart from the total of 70 000 small stock consigned by rail to these two markets, a further 39 000 from the Barkly East/Maclear region was sent by road to Matatiele and further by rail. Private conveyers took more than three-quarters of this number to Matatiele where they were reloaded and further sent by rail. In total some 109 000 head of small stock from the North-Eastern Cape (15 per cent of the total number slaughtered in Durban and Pietermaritzburg) was marketed in Durban and Pietermaritzburg (see Table 1). Nine per cent of the total came from Barkly East, Elliot, Lady Grey and Maclear.

The number of slaughter-stock transported by road to Matatiele and then by rail to these two markets, has increased subsequently. Small stock conveyed from Maclear by the S.A.R. road motor service increased from 8 625 head in 1965/66, to 13 932 head from October, 1966, till September, 1967. Over the same period the number of cattle transported had increased from virtually nil to 1 116.

MARKETING COSTS

Marketing costs of sheep from Barkly East, and of cattle and sheep from Maclear to Durban, Johannesburg and Cape Town, are now analysed further (see Table 2).

These forwarding stations and markets are the most important in the marketing of livestock from the North-Eastern Cape.

The producer is interested in the net price, realised for his slaughter-stock which is determined by selling prices and marketing costs. Most of the livestock is marketed in controlled areas and for this reason the investigation has been restricted to these areas. In this investigation, the overall marketing costs are regarded as the cost of transportation (loading and other handling charges excluded) and fixed marketing costs, namely the agent's commission and expenses, slaughter and abattoir fees, levies and insurance⁷⁾ (see Table 2).

5) Abattoir Commission. Report of commission of inquiry into abattoir and related matters. 48/1964. Pretoria, Government Printer, 1964.
 6) Kotzé, H.A. An economic study of the North-Eastern Cape, with special reference to agriculture. D.Sc. Agric. thesis. Bloemfontein, University of the O.F.S., 1966, p.118.

7) Roelofse, C.J., Op.cit., p.207.

TABLE 1 - Marketing pattern of small stock from the North-Eastern Cape in Durban and Pietermaritzburg, 1965/66

A. Small stock marketed in Durban-Pietermaritzburg from March, 1965, to February, 1966

Origin	Number	As percentage of total ⁴⁾
From regions 57 and 61 by rail	41 413	5.6
From region 62 by rail	29 008	3.9
From Maclear and Barkly East by road via Matatiele	38 898	5.3
Total from the North-Eastern Cape	109 319	14.8
Total	737 448	100

Source: The Meat Board in Durban and Pietermaritzburg

B. Small stock dispatched from the North-Eastern Cape to Durban and Pietermaritzburg from April, 1965, to March, 1966

Station	Total number of small stock dispatched	Small stock dispatched to Durban and Pietermaritzburg		
		As percentage of total dispatched	Number	As percentage of grand total slaughtered in Durban and Pietermaritzburg
Barkly East: By rail	19 417	32	6 213	6
By road	5 434	100	5 434	5
Total: Barkly East section	132 115	17	22 975	22
Total: Burgersdorp section	150 636	13	18 826	18
Total: Jamestown section	31 509	15	4 726	4
Maclear: By rail	12 443	0	0	0
By road	33 464	100	33 464	31
Total: Maclear section	143 487	42	58 743	56
Total: North Eastern Cape	457 747	23	106 270	100

Source: South African Railways

Note: The regions consist of the following districts:

Region 57: Albert and Aliwal North

Region 61: Dordrecht, Indwe and Molteno

Region 62: Barkly East, Elliot, Lady Grey, Herschel and Maclear

Region 64: Bizano, Flagstaff, Insikisi, Matatiele, Mt. Ayliff, Mt. Currie, Mt. Fletcher, Mt. Frere and Tabankulu

Small stock conveyed by road from Maclear, falls under region 62, but if conveyed by road to Matatiele and further by rail, it falls under region 64

TABLE 2 - Transport and other marketing costs of small stock from Barkly East and Maclear, 1968

Origin	Kind of slaughter-stock	Form of transport	DURBAN				JOHANNESBURG				CAPE TOWN				
			Distance	Marketing costs per lb carcass weight			Distance	Marketing costs per lb carcass weight			Distance	Marketing costs per lb carcass weight			
				Fixed market-ing costs	Trans- port costs	Total market-ing costs		Fixed market-ing costs	Trans- port costs	Total market-ing costs		Fixed market-ing costs	Trans- port costs	Total market-ing costs	
miles	c	c	c	miles	c	c	c	miles	c	c	c				
Barkly East	Sheep	Railways	741	2.25	1.93	4.18	541	2.25	1.53	3.78					
		Railways	741	2.65	2.40	5.05	541	2.65	1.91	4.56					
		SAR road motor service to Matatiele	180		1.26										
	Lambs	Sheep	Railway to Durban	261		0.81									
			Total	441	2.25	2.07	4.32								
			Private conveyer to Matatiele	180		1.37									
		Lambs	Sheep	Railway to Durban	261		0.81								
				Total	441	2.25	2.18	4.43							
				Direct private transport	390	2.25	2.97	5.22							
			Lambs	Sheep	SAR road motor service to Matatiele	180		1.57							
					Railway to Durban	261		1.00							
					Total	441	2.65	2.57	5.22						
Lambs				Sheep	Private conveyer to Matatiele	180		1.71							
					Railway to Durban	261		1.00							
					Total	441	2.65	2.71	5.36						
Maclear	Cattle	Direct private transport	390	2.65	3.70	6.35									
		Railway	888	1.14	1.25	2.39	646	1.14	1.05	2.19	885	1.14	1.25	2.39	
		SAR road motor service to Matatiele	88		0.83										
		Railway to Durban	261		0.48										
		Total	349	1.14	1.31	2.45									
		Private conveyer to Matatiele	88		0.88										
		Railway to Durban	261		0.48										
		Total	349	1.14	1.36	2.50									
		Sheep	Cattle	Direct private transport	298	1.14	2.98	4.12							
	SAR road motor service to Matatiele			88		0.62									
	Railway to Durban			261		0.81									
	Sheep		Cattle	Total	349	2.25	1.43	3.68							
				Private conveyer to Matatiele	88		0.82								
				Railway to Durban	261		0.81								
			Lambs	Cattle	Total	349	2.25	1.63	3.88						
					Direct private transport	298	2.25	2.79	5.04						
					SAR road motor service to Matatiele	88		0.77							
	Lambs	Sheep	Railway to Durban	261		1.00									
Total			349	2.65	1.77	4.42									
Private conveyer to Matatiele			88		1.02										
Lambs		Sheep	Railway to Durban	261		1.00									
			Total	349	2.65	2.02	4.67								
			Private transport direct	298	2.65	3.47	6.12								

Source: Roelofse, C. J. Marketing of slaughter-stock and meat in the Republic of South Africa, (unpublished M. Comm. thesis, University of Stellenbosch, Stellenbosch, 1967), p. 207. South African Railways, Official Tariff Book, No. 28, 14th July, 1963 as amended on 15th August, 1966 (No. 83, Special Summaries of Amendments), Government Printer, Pretoria. Survey by ISEN, Bloemfontein, February, 1966.

Note: Fixed marketing costs include agent's commission and fees, slaughter and abattoir fees, levies and insurance. Average carcass weights for the season 1964/65 were taken as basis, i.e., 426 lb for cattle, 36.5 lb for sheep and 29.3 lb for lambs (see Roelofse, C.J., *op.cit.* p. 197). Tariffs for transport of slaughter-stock are as follows:

Barkly East to Matatiele: S. A. R. road motor service: R110.50 for a load of 240 sheep, i.e. 46c per sheep for 180 miles.
Private conveyer: R75 for a load of 150 sheep or 12 cattle, i.e. 50c per sheep or R6.25 per cattle-unit for 180 miles.
Maclear to Matatiele: S. A. R. road motor service: R53.78 for a load of 240 sheep, i.e. 22.4c per sheep for 88 miles and R3.52 per cattle-unit for 88 miles.
Private conveyer: R45 for a load of 150 sheep or 12 cattle, i.e. 30c per sheep or R3.75 per cattle-unit for 88 miles

It is assumed that the tariff per unit per mile in the case of direct conveyance to Durban will be equal to that presently charged by private conveyers.

Marketing expenses are 0.40c and 0.49c per lb carcass weight less in the case of sheep and lambs respectively, if livestock is transported by rail from Barkly East and marketed in Johannesburg and not in Durban. The alternative route by road to Matatiele and further by rail to Durban has also been investigated. As against the railway route via Bloemfontein, marketing expenses are 0.14c per lb carcass weight more in the case of sheep when S.A.R. road motor service is used. It costs 0.25c more if the service of private conveyers are used. The possibility of private conveyers obtaining the right to transport sheep directly to Durban, was also considered. In this case, marketing costs for sheep and lambs respectively will be 1.04c and 1.30c per lb carcass weight more than in the case of railway transport via Bloemfontein.

The same investigation was carried out in connection with the transport of cattle from Maclear. Marketing costs of cattle are 20c more in Cape Town than in Johannesburg. Many cattle are now also being marketed in Durban. They are transported via Matatiele and costs are 0.06c per lb carcass weight more than by rail via Bloemfontein. Should a private conveyer be used, the marketing costs would be 0.11c more and if cattle could have been transported directly to Durban it would have cost 1.73c per lb carcass weight more. The same applies when marketing sheep and lambs from Maclear. Transport by a private conveyer to Matatiele costs 0.20c per lb carcass weight more than by S.A.R. road motor service, whereas direct private conveyance to Durban would cost 1.36c per lb carcass weight more than when transported by S.A.R. road motor service and then further by rail.

Marketing costs of slaughter-stock conveyed by road and rail from Barkly East and Maclear to Durban, are from 0.26c to 0.80c per lb carcass weight more than in the case of railway transport to Johannesburg. When marketed according to the first-mentioned method, however, livestock arrives a few days earlier at the market. By employing the third alternative, i.e. direct transport of slaughter-stock by private conveyance, marketing costs will be from 1.44c and 1.93c per lb carcass weight more, but delivery is then effected within a day, which is much quicker than the other two methods. In spite of higher transport costs, farmers prefer to market their slaughter-stock in the shortest possible time. The main advantage gained, is a lessening of uncertainty about prices. A shorter period of

influx and more accurate determining of the length of this period allow for a better control over the supply of slaughter-stock and limits price declines resulting from over-supplied markets. There has been no study of short term price fluctuations whereby it could have been established what advantages might accrue by letting the point of time of marketing over the short term be determined by ruling prices and actual supply of slaughter stock at a controlled market. A fluctuation of 5 per cent (1.1c on a price of 22c per lb) around the average weekly price of meat is, however, quite possible and should in most cases (together with a more stable price) more than compensate for the higher transport costs.

Farmers from the North-Eastern Cape and East Griqualand will naturally derive the most benefit from this. The loss of income to the Railways resulting from a decrease in the number of slaughter-stock offered for transport, will be cancelled out by more orderly marketing of slaughter-stock from this area.

At present, private conveyers are allowed to transport livestock only as far as Matatiele. There it is reloaded for further transport by rail. A few farmers do transport their own slaughter-stock directly to urban markets, but in most cases the turnover of a farmer's concern does not justify the purchase of a big lorry for transport. Should private conveyers be allowed to take livestock right up to Pietermaritzburg and Durban, it would, in view of the elimination of short term price fluctuations, be of great advantage to the marketing of slaughter-stock in general, and for this region's meat producers in particular.

There is a definite possibility of transporting slaughter-stock from the Barkly East, Elliot and Maclear districts by means of a large-scale road transport system to controlled areas like Durban and Pietermaritzburg. Meat producers will greatly benefit from this, particularly as regards the more rapid and orderly marketing of their slaughter-stock. Improvement of the road system, as well as gaining the consent of the Road Transport Committee to transport slaughter-stock as far as controlled markets in Natal, will thus contribute much towards more efficient marketing of slaughter-stock in the North-Eastern Cape. In this way, a judicious marketer is placed in a better position to satisfy requirements of the demand for meat.